

DATED

**THE INSTITUTE FOR
APPRENTICESHIPS AND TECHNICAL
EDUCATION**

and

PEARSON EDUCATION LIMITED

**CONTRACT FOR THE PROVISION
OF SERVICES IN RELATION TO THE
CONSTRUCTION: DESIGN,
SURVEYING AND PLANNING
T LEVEL TECHNICAL
QUALIFICATION**

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THIS CONTRACT is made on

BETWEEN:

- (1) **THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION** of Sanctuary Buildings, 20 Great Smith Street, London SW1P 3BT ("**Authority**"); and
- (2) **PEARSON EDUCATION LIMITED**, a company registered in England and Wales (company registration number: **00872828**), whose registered office is at **Hailey Court, Jordan Hill Business Park, Oxford, OX2 8EJ** ("**Supplier**"),

each a "**Party**" and together the "**Parties**".

BACKGROUND TO THIS CONTRACT:

- (A) On **3rd December 2023** the Authority advertised in the Find a Tender Service (FTS) (reference **2023/S 000-035661**) inviting prospective suppliers to submit proposals for the design development and delivery of the technical education qualification element for the **Design, Surveying and Planning T Level**.
- (B) On the basis of the Supplier's response to the advertisement and a subsequent tender process, the Authority selected the Supplier as its preferred supplier of the TQ.
- (C) The Parties have agreed to contract with each other in accordance with the terms and conditions set out below. As well as the delivery stage, this Contract covers the Development Phase and a Pre-Delivery Phase.

OPERATIVE TERMS:

1 Contract start, formation and interpretation

- 1.1 This Contract is legally binding from the Effective Date until it ends in accordance with clause 15 (*Ending or extending this Contract*).
- 1.2 This Contract is formed by the Core Terms and the Schedules and the Supplier must comply with all of its obligations set out in both the Core Terms and the Schedules, provided always that in the event of any conflict between the provisions of the Core Terms and the Schedules and/or the Annexes, or between any of the Schedules and/or the Annexes, the conflict shall be resolved according to the following descending order of priority:

- 1.2.1 the Core Terms, Schedule 1 (*Definitions and Interpretation*), and Schedule 6 (*Pricing Schedule*);
 - 1.2.2 Schedule 2 (*Service Requirements*), Schedule 4 (*Co-operation*) and their respective Annexes; and
 - 1.2.3 the remaining Schedules and their respective Annexes.
- 1.3 The Parties shall interpret this Contract using Schedule 1 (*Definitions and Interpretation*).

2 Appointment and exclusivity

- 2.1 The Authority hereby appoints the Supplier as the provider of the Services in relation to the TQ during the Term.
- 2.2 As part of such appointment, the Supplier has the exclusive right to offer the TQ in England to Students for TQ courses for the Cohort for the Academic Years commencing at each of 1 August 2025, 1 August 2026, 1 August 2027, 1 August 2028, 1 August 2029 and, where the Authority gives written notice to the Supplier to extend this Contract pursuant to clause 15.2 (*Ending or extending this Contract*), for each of the Cohorts for the Academic Years commencing during an Extension Period, as the case may be, namely 1 August 2030, 1 August 2031, 1 August 2032 (each an **"Exclusive Cohort"**).
- 2.3 Subject to the Supplier's compliance with the provisions of this Contract, the Authority shall not, during the Term, authorise any third party to provide goods and/or services equivalent to the Services in relation to the whole or any part of an Exclusive Cohort.
- 2.4 The Supplier acknowledges and agrees that during the Term the Authority may, subject to clause 2.3, authorise a third party to provide goods and/or services equivalent to the Services in relation to the TQ in England to students in cohorts outside the Exclusive Cohort, notwithstanding the continuation of the Services under this Contract in respect of any Exclusive Cohort.

- 2.5 The Supplier shall, subject to clause 15 (*Ending or extending this Contract*), be responsible for providing the Services to Students who are within an Exclusive Cohort until the later of the end of their TQ and 2 years following the end of the final Academic Year of the TQ for the Exclusive Cohort of which such Student was part.
- 2.6 Unless otherwise agreed with the Authority in writing, the TQ shall be offered by the Supplier on the basis that teaching of the TQ by Providers for each Exclusive Cohort will commence in September of the relevant Academic Year (accepting that Students may, subject to applicable Supplier and Provider rules, commence their study of the relevant TQ later than the teaching commencement date).

3 How the Services must be supplied

- 3.1 The Supplier must provide the Services:
- 3.1.1 in full compliance with the Service Requirements and the Supplier's Response, provided always that:
 - (i) the fact that the Supplier has complied with the Supplier's Response shall not limit the Supplier's obligation to satisfy the Service Requirements; and
 - (ii) the fact that the Supplier has satisfied the Service Requirements shall not limit the Supplier's obligation to comply with the Supplier's Response;
 - 3.1.2 to a professional standard;
 - 3.1.3 with reasonable skill and care;
 - 3.1.4 using Good Industry Practice;
 - 3.1.5 in accordance with its own policies, processes and quality control measures to the extent that these do not conflict with this Contract;
 - 3.1.6 in accordance with any agreed timings set out in this Contract;
 - 3.1.7 in accordance with Law;
 - 3.1.8 in accordance with the Conditions of Recognition;

3.1.9 in a manner that ensures that neither it, nor any of the Supplier Staff:

- (i) brings the Authority, the Department or the ESFA into disrepute by engaging in any act or omission which is reasonably likely to diminish the trust that the public places in any or all of them; and/or
- (ii) engages in any act or omission which is reasonably likely to bring the T Levels Programme into disrepute,

in either case, regardless of whether or not such act or omission is related to the Supplier's obligations under this Contract; and

3.1.10 in accordance with (and in a manner consistent with enabling the Supplier and the T Level Awarding Organisations to achieve the aims set out in) Schedule 4 (*Co-operation*).

3.2 The Supplier must:

3.2.1 co-operate and, where appropriate, consult with the Stakeholders and the Authority's third party suppliers, including but not limited to the Former Supplier, on all aspects connected with the delivery of the Services; and

3.2.2 ensure that Supplier Staff comply with any reasonable instructions of the Authority in relation to the Services.

Ofqual Recognition

3.3 The Supplier must have in place from the Effective Date and maintain throughout the Term, Ofqual Recognition.

3.4 The Supplier must comply with each Condition of Recognition throughout the Term.

Impact of approval by the Authority

3.5 The Supplier agrees and accepts that except for confirmation of a Variation pursuant to clause 28 (*Changing this Contract*), which expressly changes the Supplier's obligations or liabilities or the Authority's rights under this Contract, no review, comment, authorisation to proceed (as contemplated by clause 5.11.1) or approval by the Authority (including any IfATE Approval) in connection with any Product and/or Service (including in respect of the Supplier's Response, the Implementation and

Delivery Plan, the Resource Plan and any documents or information submitted by the Supplier in order to obtain IfATE Approval) shall operate to exclude or limit the Supplier's obligations or liabilities or the Authority's rights under this Contract, and:

3.5.1 the Supplier retains sole responsibility for ensuring that the TQ (including the Products and Services) meets and continues to meet all relevant Service Requirements (as they may be amended from time to time in accordance with this Contract) throughout the Term; and

3.5.2 the Supplier acknowledges and accepts that any review, comment, authorisation to proceed or approval (including any IfATE Approval) do not constitute or imply any warranty from the Authority or Ofqual in respect of the TQ.

4 Pricing and payments

4.1 In exchange for the provision of the Services (including the supply of the Products), the Supplier must invoice:

4.1.1 the Authority for the relevant Charges, which, in the case of:

- (i) the Development Charge, shall be invoiced by the Supplier at the time and in the manner set out in clauses 5.11.1(ii), or 5.13.1(ii) (*Developing the TQ and achieving IfATE Approval*) (as applicable));
- (ii) that part of the Charges referred to in limb (b) of the definition of Charges, shall, unless otherwise agreed by the Authority, be invoiced by the Supplier on IfATE Approval of the relevant TQ Change; and
- (iii) that part of the Charges referred to in limb (c) of the definition of Charges, shall be invoiced by the Supplier as set out in the relevant Variation; and

4.1.2 the Approved Providers for the Fees pursuant to the applicable Provider Contract.

4.2 The Supplier acknowledges and agrees that:

- 4.2.1 in no circumstances shall the Authority, the Department or ESFA have any liability to the Supplier in respect of the Fees. The Authority is not liable if any Provider (or other third party) fails to pay any fees or other costs (including the Fees) due from them to the Supplier; and
 - 4.2.2 save as permitted by the relevant Provider Contract, the Supplier shall not be entitled to levy any costs and/or charges and/or require any further and/or additional payment in respect of the provision of the Services (including the supply of any Products) to any Approved Provider (and/or any Student) other than the Fees.
- 4.3 All Fees and Charges:
 - 4.3.1 exclude VAT, which is payable on provision of a valid VAT invoice to the applicable payor; and
 - 4.3.2 include all costs payable by the Authority and/or any Provider (as the case may be) in connection with the Services (including the supply of the Products).
- 4.4 The Authority must pay the Supplier:
 - 4.4.1 in respect of the Development Charge, the relevant Interim Milestone Payment or the Final Milestone Payment (as the case may be); or
 - 4.4.2 in respect of any other Charges arising under clause 8 (*TQ Changes*) or clause 28 (*Changing this Contract*), the amount of any such Charges due under such clause 8 (*TQ Changes*) or clause 28 (*Changing this Contract*),

in each case, within 30 days of receipt by the Authority of a valid, undisputed invoice, in cleared funds to the account as notified by the Supplier to the Authority.
- 4.5 A Supplier invoice is only valid if it includes this Contract reference and purchase order number (if any) and other details reasonably requested by the Authority.
- 4.6 If there is a Dispute between the Parties as to the amount invoiced by the Supplier to the Authority, the Authority must pay the undisputed amount. The Supplier cannot suspend the provision of the Services (including the supply of the Products) unless the Supplier is entitled to terminate this Contract for a failure to pay undisputed sums in

accordance with clause 15.5 (*When the Supplier can end this Contract*). Any disputed amounts shall be resolved through the Dispute Resolution Procedure.

- 4.7 If a payment of an undisputed amount is not made by the Authority by the due date, then the Authority shall pay the Supplier interest at the interest rate specified in the Late Payment of Commercial Debts (Interest) Act 1998.
- 4.8 The Supplier can issue a written Reminder Notice to the Authority (in accordance with clauses 29.129.1 and 29.2 (*How to communicate about this Contract*)) if the Authority does not pay an undisputed invoice on time.
- 4.9 The Authority may retain or set-off payment of any amount owed to it by the Supplier if notice and reasons are provided.
- 4.10 The Supplier must ensure that all Subcontractors are paid, in full, within 30 days of receipt of a valid, undisputed invoice. If this does not happen, the Authority can publish the details of the late payment or non-payment. The Supplier must also ensure that any Sub-Contract it enters into contains provisions which have the same effect as clauses 4.4, 4.6, 4.7 and this clause 4.10.
- 4.11 The Supplier has no right of set-off, counterclaim, discount or abatement unless a court orders this.

Indexation of Fees and Rate Card rates

- 4.12 The Supplier shall be entitled to adjust the Fees and the Rate Card rates which apply in respect of any Academic Year following the Academic Year in which the TQ is launched in accordance with the provisions of clause 4.13 to reflect the impact of inflation.
- 4.13 Where the Supplier wishes to adjust the Fees and/or Rate Card rates in accordance with clause 4.12:
 - 4.13.1 the Supplier shall notify the Authority in writing of the proposed percentage adjustment in the existing Fees and/or Rate Card rates and the resulting new Fees and/or Rate Card rates by the end of February in the Academic Year prior to the Academic Year in respect of which the adjustment is to apply ("**Calculation Date**");

- 4.13.2 the proposed percentage adjustment to the relevant then current Fees or Rate Card rates must be no greater than the percentage increase in the preceding 12 months of the UK Consumer Price Index most recently published by the UK Office of National Statistics prior to the Calculation Date; and
- 4.13.3 the proposed adjustment calculated in accordance with this clause 4.13 shall not operate to adjust the Fees or Rate Card rates for the then current Academic Year, but shall operate to adjust the Fees or Rate Card rates as applicable with effect from the immediately following Academic Year.
- 4.14 In addition to any changes to the Entry Fee by virtue of clause 4.13, the Entry Fee may be subject to change from time to time, in accordance with the provisions set out in Schedule 6A.
- 4.15 Except as set out in clause 4.13, neither the Charges, the Fees nor any other costs, expenses, fees or charges shall be adjusted to take account of any inflation, change to exchange rate, change to interest rate or any other factor or element which might otherwise increase the cost to the Supplier or Subcontractors of the performance of their obligations under this Contract.

5 Developing the TQ and achieving IfATE Approval

- 5.1 The Supplier shall develop the TQ to meet the Service Requirements and in accordance with the terms of this Contract.

Requirement for IfATE Approval

- 5.2 The Supplier acknowledges and accepts that:
 - 5.2.1 the Supplier shall not make the whole or any part of the Initial TQ Deliverables available to Eligible Providers and/or Approved Providers for delivery to Students until IfATE Approval has been granted; and
 - 5.2.2 the Supplier shall, where possible, (and in each case with the prior written consent of the Authority) share draft versions of the Initial TQ Deliverables and Guide Standard Exemplification Materials, with Eligible Providers and/or Approved Providers to support their preparations to deliver the TQ.

General development obligations

5.3 The Supplier must:

- 5.3.1 design and develop the TQ in accordance with paragraphs 2.1 and 2.2 of Part 1 of the Service Requirements and in order to meet the Milestones;
- 5.3.2 consult with:
 - (i) the Authority, the Department, ESFA and the Route Panels; and
 - (ii) a representative sample of Providers and Employers,in the design and development of the TQ (including as contemplated by paragraph 2.1.4 of the Service Requirements);
- 5.3.3 take into account any input received from the Route Panel, and where applicable, the T Level Panels in the design and development of the TQ, and consult as appropriate with the T Level Panels and/or the Route Panel prior to the first Interim Milestone;
- 5.3.4 co-operate (as required) and work collaboratively with the Authority to achieve IfATE Approval of the TQ;
- 5.3.5 take into account the Technical Qualifications Service Requirements Explanatory Note together with any guidance as issued by the Authority from time to time in the design and development of the TQ, and provide input when reasonably requested by the Authority to support the development and updating of such Technical Qualifications Explanatory Note; and
- 5.3.6 submit to the Authority an updated Implementation and Delivery Plan and Resource Plan within 5 Working Days from the Effective Date.

Development support from the Authority

- 5.4 The Supplier Authorised Representative and/or senior representatives of the Supplier's development team as appropriate will meet monthly (or more frequently if deemed necessary by the Authority) with the Authority Authorised Representative and/or representatives of the Authority's Commissioning & Development Team, at a time and

location to be advised by the Authority, following the Effective Date until IfATE Approval of the TQ (each a “**TQ Development Meeting**”) to review progress on TQ development, address key risks and identify solutions to any barriers to progress. The Authority shall issue an agenda in advance of each TQ Development Meeting. In the event that the development of the TQ is materially delayed against the Milestones and/or the dates given in the Implementation and Delivery Plan, on a written request by the Authority the Supplier’s Chief Executive Officer or an equivalently senior individual shall attend the next TQ Development Meeting.

5.5 The Supplier shall:

5.5.1 not less than 5 Working Days prior to each TQ Development Meeting, submit the Development Phase Report to the Authority in respect of the relevant month, together with, without prejudice to paragraph 2.5 of Part 1 of the Service Requirements:

(i) updated versions (meeting all of the requirements of the relevant Product Description) of the following Products:

- (A) the Implementation and Delivery Plan;
- (B) the Resource Plan;
- (C) the Risk Register; and
- (D) the Issues Log; and

(ii) as requested by the Authority from time to time, the then current versions of the following:

- (A) the TQ Specification;
- (B) the Assessment Strategy;
- (C) the TQ Specimen Assessment Materials;
- (D) the Guide Standard Exemplification Materials;
- (E) the Provider Approval Criteria;
- (F) the Submission Issues Log;

(G) Employer & Provider Engagement Strategy; and

(H) any draft version of the Key Dates Schedule that the Supplier intends shall (if Approved) become the Key Dates Schedule for the purposes of this Contract from time to time,

it being understood that the Supplier will not be in breach of this clause 5.5.1 if the relevant item is still being developed and the Milestone for its completion has not been reached as at the date of the relevant TQ Development Meeting; and

5.5.2 provide a verbal summary at each such TQ Development Meeting of the progress of development of the TQ as against the Implementation and Delivery Plan and Resource Plan and any identified risks to the on time delivery of the TQ and proposed resolutions.

5.6 The Authority shall provide minutes setting out an accurate summary of each such TQ Development Meeting within 5 Working Days of each such meeting.

Submission process

5.7 The Supplier shall, on or prior to the applicable Submission Date, make all Submissions to the Authority necessary in respect of IfATE Approval in accordance with paragraphs 2.1 and 2.2 of Part 1 and Annex 7 to the Service Requirements.

5.8 The Supplier shall ensure that all Submissions made in accordance with clause 5.7 meet all of the requirements for each Submission as set out in paragraph 2.1 of Part 1 and Annex 7 to the Service Requirements. Unless notified otherwise by the Authority in writing, the Supplier shall continue its ongoing work in relation to the Initial TQ Deliverables following each Submission whilst such Submission is being considered by the Authority and/or Ofqual. For the avoidance of doubt, this means that the Supplier, following each Submission for each Interim Milestone, shall not await notification from the Authority in accordance with Clause 5.11 below before continuing work on the Initial TQ Deliverables required for any subsequent Milestone.

5.9 The Supplier shall submit to the Authority for Approval, a final version of the Guide Standard Exemplification Materials in accordance with paragraph 2.1 of Part 1 and Annex 7 to the Service Requirements.

- 5.10 The Supplier shall respond promptly to the Authority to any requests from the Authority for further information to support any Submission and/or the IfATE Approval process.
- 5.11 In respect of each Interim Milestone, the Authority and, if relevant, Ofqual will consider each Submission made in accordance with clause 5.7 and 5.8 and, within a timeframe which should allow the TQ to be developed in time for delivery in accordance with this Contract:
- 5.11.1 if the Authority considers that the Submission (or Re-Submission (as the case may be)) meets all of the requirements of paragraphs 2.1 and 2.2 of Part 1 and Annex 7 to the Service Requirements for the relevant Interim Milestone, the Authority shall:
- (i) confirm in writing to the Supplier that such requirements have been met; and
 - (ii) where the relevant Interim Milestone attracts an Interim Milestone Payment, pay to the Supplier (in accordance with clause 4 (*Pricing and payments*)) the applicable Interim Milestone Payment; or
- 5.11.2 if (1) the Authority does not consider that the Submission (or Re-Submission (as the case may be)) meets all of the requirements of paragraphs 2.1 and 2.2 of Part 1 and Annex 7 to the Service Requirements for the relevant Interim Milestone and/or (2) the Supplier has outstanding issues still to be addressed / additional information still to be provided in relation to any previous Interim Milestones (including in relation to any previous Interim Milestones that do not attract an Interim Milestone Payment), the Authority may withhold payment to the Supplier of the applicable Interim Milestone Payment (if any) and shall:
- (i) notify the Supplier of the issues that need to be addressed and/or the additional information that needs to be provided (and, acting reasonably, the date by which such issues need to be addressed and/or such information needs to be provided) and whether the Authority will be withholding payment of the applicable Interim Milestone Payment (if any), and the Supplier shall promptly address such issues and resubmit the relevant documentation and/or provide such additional information (a “**Re-Submission**”) to the

Authority on or prior to the date notified by the Authority, following which clause 5.11.1 or this clause 5.11.2 will apply to such Re-Submission; or

(ii) notify the Supplier:

(A) that notwithstanding the failure of the Submission (or Re-Submission (as the case may be)) to meet all of the requirements of paragraphs 2.1 and 2.2 of Part 1 and Annex 7 to the Service Requirements for the relevant Interim Milestone, the Supplier shall continue with the design and development of the TQ without having to make a Re-Submission, provided that the relevant issues are addressed by any timescales specified by the Authority and in any event no later than by the Final Approval Milestone Date; and

(B) whether the Authority will be withholding payment of the applicable Interim Milestone Payment (if any), following which the Supplier shall promptly address the issues identified / further information required, as part of its ongoing development of the TQ in accordance with the timescales specified by the Authority. If the Authority is withholding payment of any applicable Interim Milestone Payment, subject to the Supplier having addressed the issues identified in accordance with the required timescales (and in any event no later than by the Final Approval Milestone Date), clause 5.11.1(ii) will apply.

5.12 The Supplier acknowledges and agrees that owing to the meeting dates scheduled for the IfATE Approval process, any delay in making the Final Submission to the Authority by the Final Approval Milestone Date may cause a delay of several weeks for IfATE Approval. Accordingly, failure by the Supplier to make the Final Submission in accordance with clause 5.7 and/or 5.8 by the Final Approval Milestone Date, other than due to a breach of this Contract by the Authority, shall be a Critical Service Failure.

5.13 In respect of the Final Approval Milestone, the Authority and, if relevant, Ofqual will consider the Final Submission made by the Supplier in accordance with clause 5.7 and

5.8 and, within a timeframe which should allow the TQ to be developed in time for delivery in accordance with this Contract:

5.13.1 if the Authority considers that the Final Submission (or Final Re-Submission (as the case may be)) meets the requirements for IfATE Approval, then the Authority shall:

- (i) confirm to the Supplier in writing that the TQ has IfATE Approval and that, subject (if applicable) to clause 7.2 (*Interaction with Providers*) and clause 14.3.1 (*What may happen if there are issues with your provision of the Services*), the Supplier is authorised to proceed to make the TQ available to Approved Providers for delivery to Students in accordance with clause 6 (*Operating the TQ*); and
- (ii) pay to the Supplier (in accordance with clause 4 (*Pricing and payments*)) the Final Milestone Payment, together with any outstanding Interim Milestone Payments or;

5.13.2 if the Authority considers that the Final Submission (or Final Re-Submission (as the case may be)) does not meet the requirements for IfATE Approval, then the Authority shall either

- (i) notify the Supplier in writing of the issues that need to be addressed and/or the additional information that needs to be provided and the Supplier shall within 10 Working Days (or such longer timeframe as is agreed in writing by the Authority) address such issues and resubmit the relevant documentation and/or provide such additional information, following which this clause 5.13 will apply to such Final Re-Submission or
- (ii) take any other steps available to it under the contract.

5.14 The Supplier acknowledges and accepts that the Authority will share, as it deems necessary, with Ofqual, the Department, ESFA, and the Route Panel:

5.14.1 all Submissions (including any Final Submission) and/or Re-Submissions (including any Final Re-Submissions) submitted by the Supplier under clause 5.7 and/or clause 5.13;

- 5.14.2 any information required by the Authority pursuant to clause 5.10;
 - 5.14.3 any information required by Ofqual for the Regulation of the TQ or to perform the statutory functions of Ofqual; and/or
 - 5.14.4 any other information it holds in relation to the Supplier,
- and the provisions of clause 19 (*What must be kept confidential*) will not prevent any disclosure or sharing of documentation and/or information by the Authority under this clause 5.14.

6 Operating the TQ

- 6.1 Following IfATE Approval the Supplier must (subject to clause 7.2 (*Interaction with Providers*) and clause 14.3.1 (*What may happen if there are issues with your provision of the Services*)) make the TQ (including (as applicable) the Products) available to Approved Providers for delivery to Students and provide the Services (other than the Initial Development Services) in accordance with the Service Requirements.
- 6.2 The Supplier shall meet all KPIs in the delivery of the Services (other than the Initial Development Services).
- 6.3 The Supplier must comply with the current version of any Key Dates Schedule in respect of the making available of the TQ and the performance of the Services (other than the Initial Development Services).
- 6.4 The Supplier must provide materials and Student Information to the Authority in accordance with paragraphs 5, 8 and 10 of Part 1 of the Service Requirements to enable the Authority to keep a record in the event such materials and/or information is required for the transfer of Services to a Replacement Supplier.
- 6.5 The Supplier shall promptly provide to the Authority such materials relating to the TQ and Student Information as are requested in writing by the Authority to enable work by or on behalf of the Authority and/or Ofqual to ensure the ongoing maintenance between Cohorts of the grades and standards of the TQ and the wider T Level Programme.
- 6.6 The Supplier shall actively promote the TQ to Eligible Providers.

7 Interaction with Providers

7.1 The Supplier shall, in accordance with the requirements set out in paragraph 3 of Part 1 of the Service Requirements, operate a procedure to receive applications for Provider Approval from Eligible Providers that wish to make the TQ available to Students, and where the relevant Provider Approval Criteria are met to grant Provider Approval and notify the Approved Providers accordingly. The Supplier acknowledges and agrees that:

7.1.1 it shall not be entitled or permitted to:

- (i) charge any additional costs, charges and/or fees arising out of or in connection with the implementation and operation of such procedure and/or the granting of Provider Approval; and/or
- (ii) impose any additional requirements (other than a Provider Contract) on any Eligible Provider and/or Approved Provider (as applicable) as a condition to and/or consequence of the grant of Provider Approval;

7.1.2 only an Eligible Provider shall be eligible to be granted Provider Approval by the Supplier in respect of the TQ; and

7.1.3 subject to clause 7.1.2 and without prejudice to paragraph 3.1.1 of Part 1 of the Service Requirements, the Supplier shall promptly grant Provider Approval to Eligible Providers who meet the Provider Approval Criteria following receipt of their application for Provider Approval.

7.2 The Supplier shall review and assess Approved Providers on an ongoing basis in accordance with paragraph 3.1.2 of Part 1 of the Service Requirements to ensure that they continue to meet the requirements for Provider Approval to make the TQ available to Students and, subject to the provisions of paragraphs 3.2 to 3.5 (inclusive) of Part 1 of the Service Requirements, where an Approved Provider no longer meets the Provider Approval Criteria, the Supplier shall revoke such Provider Approval.

7.3 The Supplier shall ensure that:

7.3.1 prior to any Eligible Provider making the TQ available to Students:

- (i) the Eligible Provider is an Approved Provider;
- (ii) a binding Provider Contract is in place with the relevant Approved Provider; and

7.3.2 the Provider Services shall only be provided to an Approved Provider during the term of, and subject to the provisions of, the applicable Provider Contract.

7.4 Without prejudice to paragraph 5 of Part 1 of the Service Requirements, the Supplier shall promptly register a Student for the TQ following receipt by the Supplier of an application for registration of that Student from an Approved Provider.

7.5 The Supplier shall, on written request by the Authority, promptly provide a copy of each Provider Contract to the Authority and to the Department and/or the ESFA.

7.6 The Supplier shall retain copies of all documentation and information in relation to arrangements with Eligible Providers and Approved Providers, including all such documentation and/or information arising out of or in connection with:

7.6.1 the application for and/or the grant of Provider Approval referred to in clause 7.1; and

7.6.2 the ongoing monitoring of Approved Providers by the Supplier referred to in clause 7.2,

and without prejudice to the generality of the definition of IfATE Data, such documentation and information shall form part of the IfATE Data to which the provisions of clause 18 (*Data protection and information*) shall apply.

7.7 The Supplier shall make available the Additional Services and provide the Additional Services on request by Approved Providers in accordance with paragraphs 5, 6, and 9 of Part 1 of the Service Requirements.

7.8 The Supplier shall be permitted to offer and provide additional products and/or services in each case related to the TQ to Approved Providers (and Students), provided always that:

7.8.1 such additional products and services are not identical to, or performing an equivalent function in relation to the TQ to, the whole or any part of the

Products and/or the Services (including the Additional Services) and offered and/or provided on alternative terms and/or conditions (including as to timing or quality) to those terms and conditions which would apply pursuant to this Contract to the applicable Products and/or Services;

7.8.2 without prejudice to clause 7.1.1(ii) and the requirements of Schedule 17 (*Provider Contract Requirements*), the Supplier shall not, other than the Provider Contract, impose any condition on any Eligible Provider (including any Approved Provider) and/or Student to purchase such additional products and/or services as a condition to and/or consequence of:

- (i) the grant of any Provider Approval; and/or
- (ii) the proper performance of any of the Services (and/or the supply of any Products); and

7.8.3 the Supplier shall not (in making available such products and/or services available and/or in respect of the terms on which such products and/or services are made available) favour one Provider and/or group of Providers or one Student and/or group of Students over another.

7.9 *The Supplier shall comply with Schedule 17 (Provider Contract Requirements) in respect of its contracts with Approved Providers in relation to the TQ.*

8 TQ Changes

8.1 The Supplier acknowledges and agrees that the Authority may request changes to the TQ and that the Authority may publish revised Outline Content from time to time.

8.2 The Supplier must ensure that the Approved Initial TQ Deliverables reflect the version of the Former Supplier's TQ Specification as at the Effective Date ("**Initial Content Date**") and that the Approved Initial TQ Deliverables reflect any TQ Change requested by the Authority before IfATE Approval.

8.3 The Supplier must make any TQ Change reasonably requested by the Authority to reflect any changes to the Former Supplier's TQ Specification or ,if relevant, the Outline Content following the Initial Content Date subject to the terms of this clause 8.

- 8.4 The Authority may carry out annual reviews in each Academic Year where a new Cohort is commencing the TQ in the following Academic Year to identify any potential TQ Changes required by the Authority. The Authority may prepare and submit to the Supplier by the relevant dates prescribed by the TQ Content Updating Schedule in each such Academic Year up to two annual guidance notes setting out the output of the Authority's reviews in relation to Inclusive TQ Changes and Exclusive TQ Changes respectively. Where the Authority identifies any potential TQ Change (in an annual guidance note or otherwise), the Authority shall promptly notify the Supplier in writing of details of the potential TQ Change.
- 8.5 Without prejudice to paragraphs 2.5 and 2.6 of Part 1 of the Service Requirements which shall apply in addition to any annual review, the Supplier shall carry out an annual review of the TQ once in each Academic Year, taking into account the output of any Authority annual guidance note(s) pursuant to clause 8.4 and any additional updates the Supplier has proposed to the TQ (to the extent that such updates have not otherwise been Approved pursuant to paragraph 2.5 or 2.6 of Part 1 of the Service Requirements), to identify any potential TQ Changes required to ensure ongoing compliance of the TQ with the Service Requirements. Where the Supplier identifies any potential TQ Change, the Supplier shall promptly notify the Authority in writing of details of the potential TQ Change.
- 8.6 Where a TQ Change is an Exclusive TQ Change, the Parties shall follow the Variation procedure set out in clause 28 (*Changing this Contract*) in respect of the relevant Exclusive TQ Change. The Charges relating to such Exclusive TQ Change shall be agreed between the Parties as part of the Impact Assessment for the relevant Variation, each Party acting reasonably and promptly, prior to the Supplier commencing work on the Exclusive TQ Change. The relevant Charges shall:
- 8.6.1 be a reasonable cost for implementing the Exclusive TQ Change in the circumstances;
 - 8.6.2 take into account and be calculated using:
 - (i) for personnel related costs and other relevant charges which are set out in the Rate Card, the applicable Rate Card rates; and

- (ii) reasonable charges for any non-personnel related costs which are not included in the Rate Card and which will be incurred by the Supplier to implement the Exclusive TQ Change; and

8.6.3 be consistent with the costs applicable to any relevant costed change scenario set out in Schedule 6 (*Pricing Schedule*) or, where no costed change scenario for the applicable TQ Change is set out in Schedule 6 (*Pricing Schedule*), be calculated on the same basis and using the same logic and inputs as those which applied to determine the costs for the costed change scenarios, as such logic and inputs may be amended only to the extent as is necessary to reflect the TQ Change in question.

8.7 Where the TQ Change is an Inclusive TQ Change, the Supplier shall implement such Inclusive TQ Change at the cost of the Supplier and there shall be no additional Charges or Fees as a result of such Inclusive TQ Change.

8.8 The Supplier shall obtain the Authority's prior written agreement before implementing any TQ Change which, in the case of an Exclusive TQ Change, shall be in the form of an executed Variation to this Contract. Following such agreement the Supplier shall, unless otherwise agreed with the Authority, implement:

8.8.1 Inclusive TQ Changes such that the updated TQ is ready for teaching to new Students in the next Academic Year following the date of such agreement; and

8.8.2 Exclusive TQ Changes such that the updated TQ is ready for teaching to new Students in the second Academic Year following the date of such agreement,

provided that in each case that the Supplier shall continue to make available the version of the TQ prior to such TQ Change as is necessary to support continuing Students who commenced their studies on such version of the TQ prior to the implementation of such TQ Change.

8.9 The Supplier shall consult with a representative sample of relevant Employers and take into account the output of consultation with such Employers as appropriate in relation

to any TQ Change in accordance with the Service Requirements and shall provide the Authority with evidence of such consultation.

- 8.10 If the Supplier makes any Inclusive TQ Changes, the Supplier must resubmit the TQ documentation including any Products (as amended to reflect the TQ Change in question) to the Authority for agreement by the relevant date prescribed by the TQ Content Updating Schedule, unless otherwise agreed with the Authority, before (where applicable) making the relevant revised version of the TQ available to Approved Providers for delivery to Students.
- 8.11 If the Supplier makes any Exclusive TQ Changes, the Supplier must resubmit the TQ documentation including any Products (as amended to reflect the TQ Change in question) to the Authority for IfATE Approval by the relevant date prescribed by the TQ Content Updating Schedule, unless otherwise agreed with the Authority, before (where applicable) making the relevant revised version of the TQ available to Approved Providers for delivery to Students and the provisions of clause 5.13 shall apply to such amended TQ documentation as if references to the “Final Submission” (or “Final Re-Submission” (as the case may be)) in that clause 5.13 are references to the “TQ documentation including any Products (as amended to reflect the TQ Change in question)”; reference to the “Final Approval Milestone” is a reference to the “TQ Change in question”; and references to payment refer to payment of any charges agreed in the applicable Variation.
- 8.12 Unless otherwise agreed with the Authority in writing, any agreed or approved (as the case may be) updates to the TQ must (where applicable) be made available to Approved Providers by the Supplier by the relevant date prescribed by the TQ Content Updating Schedule.

9 Record keeping, monitoring and reporting

- 9.1 Without prejudice to clause 5.5 (*Developing the TQ and achieving IfATE Approval*) and clause 7.6 (*Interaction with Providers*), the Supplier shall:
- 9.1.1 monitor and report (in an Operational Delivery Report) its performance of the Services (other than the Initial Development Services) in accordance with Schedule 15 (*Monitoring of Performance*) and the Parties agree that the provisions of such Schedule 15 (*Monitoring of Performance*) shall apply to determine (amongst other things) the process following (and the outcome

of) such monitoring and reporting (including in relation to the carrying out of the Performance Review Meeting and the requirement for and consequences of any KPI Improvement Plan); and

- 9.1.2 comply with the record keeping and reporting obligations set out in paragraphs 5, 8 and 10 of Part 1 of the Service Requirements.
- 9.2 The Supplier must allow, and must ensure that any Key Subcontractor allows, any Auditor access to the Supplier's or Key Subcontractor's premises and/or systems (including IT systems), as relevant, to Audit everything to do with this Contract and/or to obtain any information required in relation to any investigation by Ofqual.
- 9.3 The Supplier must provide, and must ensure that any Key Subcontractor provides, information to the Auditor and reasonable co-operation at the Auditor's request to enable any Audit to be undertaken.
- 9.4 The Supplier must create and maintain throughout the Term a full and accurate version control log recording all TQ Changes made during the Term.
- 9.5 The Supplier shall maintain and shall promptly, following a written request by the Authority, provide to the Authority, the following:
 - 9.5.1 the Supplier's detailed and up to date cost model for the provision of the Services under this Contract including a future projection for the remaining Term;
 - 9.5.2 details of the income received by the Supplier through the provision of the Services during the Term to date, including a breakdown by service and customer and a future projection for the remaining Term; and
 - 9.5.3 the Supplier's calculation of the overall level of profit it has achieved during the Term to date through the Services provided under this Contract.

10 Staff Transfer

- 10.1 The Parties agree that:
 - 10.1.1 where the commencement of the provision of the Services or any part of the Services results in one or more Relevant Transfers, Schedule 21 (Staff Transfer) shall apply; and

- 10.1.2 Schedule 12 (Exit Management) shall apply on the expiry or termination of the Services or any part of the Services.

11 Supplier Staff and Subcontracting

Supplier Staff

- 11.1 The Supplier Staff involved in the performance of this Contract must:
- 11.1.1 be appropriately trained and qualified; and
 - 11.1.2 be vetted using Good Industry Practice and, in the case of Supplier Staff referred to in paragraph 2.2 of Schedule 7 (*Staff (including Key Personnel)*), in accordance with paragraph 2 of Schedule 7 (*Staff (including Key Personnel)*).
- 11.2 If any default, acts, omissions, negligence and/or statements of any of the Supplier Staff involved in the performance of this Contract result in a Default, the Supplier is liable to the Authority for that Default.
- 11.3 Where the Authority decides (on reasonable grounds) that one of the Supplier's Staff is not suitable to work on this Contract, the Supplier must, subject to clause 11.1, promptly replace them with a suitably qualified alternative.
- 11.4 If requested by the Authority, the Supplier must replace any person whose acts or omissions have caused the Supplier to breach clause 31 (*Preventing fraud, bribery and corruption*).

Subcontracting

- 11.5 The Supplier shall comply with the provisions of Schedule 8 (*Supply Chain (including approved Subcontractors)*) in respect of the appointment (including any proposed appointment) and/or management of any Subcontractor (including any Key Subcontractor).
- 11.6 Sub-contracting any part of this Contract shall not relieve the Supplier of any obligation or duty attributable to the Supplier under this Contract.

12 Rights and protection

- 12.1 The Supplier warrants and represents that:

- 12.1.1 it has full capacity and authority to enter into and to perform this Contract;
 - 12.1.2 this Contract is executed by its authorised representative;
 - 12.1.3 it is a legally valid and existing organisation incorporated in the place it was formed;
 - 12.1.4 there are no known legal or regulatory actions or investigations before any court, administrative body or arbitration tribunal pending or threatened against it or its Affiliates that might affect its ability to perform this Contract;
 - 12.1.5 it maintains all necessary rights, authorisations, licences and consents to perform its obligations under this Contract;
 - 12.1.6 it does not have any contractual obligations which are likely to have a material adverse effect on its ability to perform this Contract;
 - 12.1.7 it is not subject to an Insolvency Event; and
 - 12.1.8 all statements made, and documents submitted, as part of the procurement of the Services (including in the Supplier's Response) are true and accurate.
- 12.2 The warranties and representations in clause 12.1 are repeated each time the Supplier provides the Services and/or supplies any Products under this Contract.
- 12.3 The Supplier indemnifies the Authority in full against all Losses suffered or incurred by the Authority arising out of or in connection with third party claims that result from the provision of the Services including the supply of the Products.
- 12.4 All claims indemnified under this Contract (including for the avoidance of doubt any indemnified IPR Claim) must use the process set out in clause 30 (*Dealing with claims*).
- 12.5 The Authority can, even if it has made a claim in respect of the breach, still terminate this Contract for breach of any warranty or indemnity where it is entitled to do so.
- 12.6 If the Supplier becomes aware of a representation or warranty that becomes untrue or misleading, it must immediately notify the Authority.

13 Intellectual Property Rights

Vesting, ownership and licences of rights in TQ materials

- 13.1 The Supplier agrees to deliver such materials, and to assign or licence all IPR in such materials, as it creates, identifies for use, or uses as part of or for the Operation of the TQ to which the Authority and/or a Replacement Supplier with Relevant Competence would reasonably require access:
- 13.1.1 for the Authority to carry out its activities in relation to the T Level and TQ, including the approval, oversight and maintaining the integrity of the T Level and TQ;
 - 13.1.2 for the transfer of the Operation of the TQ to a Replacement Supplier; and
 - 13.1.3 for the Replacement Supplier to Operate (including maintaining the integrity of, modifying and developing) the TQ,
- in a seamless, Transparent manner; and
- 13.1.4 to compete openly and effectively any future competition or tender for the Operation of the TQ or a Replacement TQ.
- 13.2 Without limiting the generality of clause 13.1:
- 13.2.1 the Supplier agrees to assign to the Authority all IPR in the Key Materials (including in Products) in accordance with the TQ Assignment and Licence;
 - 13.2.2 the Supplier agrees to licence the Authority, with the right to sublicense, all IPR in the Ancillary Materials, in accordance with the TQ Assignment and Licence; and
 - 13.2.3 in respect of any IPR in Key Materials, to the extent that the same are not at the relevant time vested absolutely in the Authority, the Supplier agrees to license the Authority, with the right to sublicense, such IPR in Key Materials, in accordance with the TQ Assignment and Licence.
- 13.3 Except as set out above or otherwise expressly provided in this Contract:

- 13.3.1 the Authority shall not by virtue of this Contract acquire title to or rights in any Background IPR owned by the Supplier or any third party; and
- 13.3.2 the Supplier shall not by virtue of this Contract acquire title to or rights in any Background IPR owned by the Authority or licensed by any third party to the Authority.
- 13.4 Without prejudice to the other provisions of this Contract, the assignments and licences referred to in clause 13.2 shall be subject to the terms of the TQ Assignment and Licence (during and after the Term), including the warranties and representations set out in the TQ Assignment and Licence. The Authority and the Supplier will enter into the TQ Assignment and Licence in the form set out in Schedule 14 (*Form of Assignment and Licence*) on the Effective Date.

Rights granted to the Supplier

- 13.5 The Authority hereby grants to the Supplier a non-exclusive worldwide, royalty free licence with the right to sublicense, subject to, and in accordance with, the terms of this Contract, to use:
 - 13.5.1 the Former Supplier's TQ Specification and, if relevant, the Outline Content;
 - 13.5.2 the IfATE Data; and
 - 13.5.3 any Authority Background IPR in other materials specifically identified for use in the provision of the Services in accordance with this sub-clause,during the Term, solely in relation to the provision of the Services.
- 13.6 The Authority hereby grants to the Supplier, in so far as any relevant Intellectual Property Rights have been assigned to the Authority or are otherwise at the time vested in the Authority in accordance with clause 13.2 a worldwide, royalty free licence, with the right to sublicense, to use and exploit the IPR in the Key Materials during the Term in relation to the TQ subject to, and in accordance with, the relevant terms of this Contract.
- 13.7 Subject to clause 13.8, the licence to the Supplier under clause 13.6 shall be exclusive during the Term solely in respect of use of the Key Materials for the provision of the Services in respect of the Exclusive Cohorts.

Rights retained by the Authority for its activities related to the provision of the Services

13.8 The Authority will retain:

13.8.1 (for the avoidance of doubt) the non-exclusive right to use the Key Materials in its administration, approval and oversight of the TQ and other T Level technical education qualifications and to make the same available to others (such as Ofqual) to do the same; and

13.8.2 the right to use the Key Materials, and for any Future Supplier or potential Future Supplier to use the Key Materials:

(i) for competing or tendering for the delivery and Operation of the TQ and/or any Replacement TQ, where such competition or tender is for such delivery and Operation during any Transition Period and/or following expiry or termination of this Contract (ie the End Date); and

(ii) to deliver and Operate the TQ and/or any Replacement TQ, during any Transition Period; and

13.8.3 the right to sub-license others to exercise the rights set out in this clause 13.8.

Confirmation of rights, marking and branding of Materials

13.9 The Supplier shall, on any copy of any materials in which copyright belongs to the Authority, prominently mark such material with a notice saying: "Copyright in this [DOCUMENT/section of DOCUMENT] belongs to, and is used under licence from, the Institute for Apprenticeships and Technical Education [DATE]" or such other notice as the Authority may reasonably require by notice to the Supplier from time to time. Without prejudice to any rights granted to the Authority under this Contract, in the case of each Deliverable the Supplier shall deliver a certificate in the form annexed to the TQ Assignment and Licence confirming that ownership in the IPR in that Deliverable is vested in the Authority, or where it asserts that IPR in the Deliverable or certain parts of it do not vest in the Authority, identifying specifically those parts and the scope of rights it asserts the Supplier has in respect of the same.

- 13.10 The Supplier may use its name, logos, trade marks and/or other signs which refer to the Supplier on Key Materials and Ancillary Materials and other materials used in the Operation of the TQ or to promote the TQ which are of the type set out in the T Level Branding Guidelines, provided that any such use shall be strictly as set out in the T Level Branding Guidelines. Without prejudice to the last sentence, the Supplier shall, on notice from the Authority, provide representative samples of all such use, and, if the notice so requests, provide such samples a reasonable period in advance of any proposed such use together with a period (not being less than 7 Working Days) for comment. The Authority may notify the Supplier within such period of any comments, including any requirements it has in respect of such use, and, the Supplier shall take reasonable account of any such comments and comply with any reasonable requirements of the Authority so notified.
- 13.11 The Supplier shall not use its name, logos, trade marks and/or other signs which refer to the Supplier, in a trade mark manner or as any designation of origin, on any material referred to in clause 13.10 or otherwise in connection with its Operation of T Levels or T Level technical education qualifications (including the TQ), except as provided in clause 13.10 or otherwise with the specific Approval of the Authority; and in any event any use of its name, logos, trade marks and/or other signs which refer to the Supplier in connection with the T Level or T Level technical education qualifications (including the TQ) shall not be such as to make, suggest or imply any connection between the Authority or any T Levels or any T Level technical education qualifications and the Supplier, or endorsement by the Authority or the Department, other than as arises under this Contract or any other contract for the supply of T Level technical education qualifications.
- 13.12 The Supplier shall:
- 13.12.1 apply to all Key Materials and Ancillary Materials provided to any third party, the Authority's name and logo in such manner as is reasonably prescribed from time to time in writing by the Authority; and
 - 13.12.2 use in respect of the TQ, including, unless otherwise agreed with the Authority, on all Key Materials and Ancillary Materials, such descriptive name (for example in the form: "[technical qualification] in Construction") as is determined by the Authority or proposed by the Supplier and agreed by the Authority,

provided that such use shall at all times be in strict accordance with the other provisions of this Contract, the T Level Trade Mark Licence, and any style guides or other instructions issued from time to time by the Authority.

Supplier's operation of other qualifications

13.13 The Supplier shall not, within or outside England, offer or promote any qualification other than the TQ as:

- 13.13.1 being the TQ (or any other technical qualification forming part of a T Level) or T Level (or part of a T Level);
- 13.13.2 being identical in terms of content and assessment requirements to the TQ (or any other technical qualification forming part of a T Level) or T Level and/or including identical components to the TQ (or any other technical qualification forming part of a T Level) or T Level; or
- 13.13.3 demonstrating the same level of occupational competence as the TQ (or any other technical qualification forming part of a T Level) or T Level,

provided always that nothing in this Contract shall prevent the Supplier from offering or promoting the technical qualification element of a T Level under a separate contract with the Authority in connection with the making available of that technical qualification.

13.14 The Supplier may only re-use the whole of the TQ in an un-amended or materially un-amended form, other than as part of the Services during the Term, as follows:

- 13.14.1 in the Operation of qualifications for any of the Devolved Administrations, with the specific Approval of the Authority;
- 13.14.2 in the Operation of qualifications in England intended for and only marketed to students who are not in the category known as "16 to 19 year old", with the specific Approval of the Authority; and
- 13.14.3 in the Operation of qualifications outside the UK, save in any jurisdictions the Authority excludes by notice to the Supplier,

provided in each case that the name "T Level" is not used in the qualification or any marketing or promotion of the qualification, and that it is at all times clear and made

clear to students and other third parties that the qualification does not form and cannot be used as any part of a T Level.

- 13.15 Subject to clauses 13.13 and 13.14, nothing in this Contract or the TQ Assignment and Licence shall restrict or prevent the Supplier from continuing to offer and update its existing qualifications (including technical qualifications), from offering new technical qualifications, or from using elements of the Key Materials in the operation of qualifications other than the TQ.

Dealing with intellectual property claims

- 13.16 If there is an IPR Claim, the Supplier indemnifies the Authority against all Losses suffered or incurred by the Authority as a result.
- 13.17 Where a Party acquires ownership of IPR incorrectly under this Contract it must do everything reasonably necessary to complete a transfer in writing assigning the IPR to the other Party on request and at its own cost.
- 13.18 Clause 13.16 shall not apply to the extent that the IPR Claim is caused by the Authority's use of the relevant IPR in breach of the terms of this Contract.
- 13.19 In the event that any Third Party IPR is included in the Key Materials, Ancillary Materials, or other Deliverables under this Contract, the Supplier shall ensure that it has or acquires sufficient rights to any such Third Party IPR to enable it to enter into any applicable assignments and to grant any applicable licences under this Contract.

Portability of the TQ

- 13.20 The Supplier shall, where possible, ensure that its design and development of the TQ enables the transfer of the materials described in clause 13.1 to a Future Supplier without requiring use by such Future Supplier of any underlying proprietary system or platform which does not form part of the Key Materials or Ancillary Materials.

14 What may happen if there are issues with your provision of the Services

- 14.1 The Supplier must notify the Authority promptly in writing if:
- 14.1.1 it becomes aware of any problem or complaint from any individual or organisation in relation to the making available and/or operation of the TQ;

- 14.1.2 it makes any changes to its management, governance, organisational and/or operational structure or capacity from that which is set out in the Supplier's Tender which shall or may be material to the provision of the Services;
- 14.1.3 it undergoes or proposes to undergo (or, without prejudice to clause 15.7 (*When Sub-Contracts can be ended*)) becomes aware that a Subcontractor has undergone or proposes to undergo) a change of Control;
- 14.1.4 there is a material adverse change in the financial circumstances of the Supplier, the Supplier becomes aware of a material adverse change in the financial circumstances, or the Supplier has (or anticipates that it may have) insufficient funding to adequately resource its obligations under this Contract;
- 14.1.5 it becomes aware of any circumstances relating to the Supplier or any Subcontractor which shall or may bring into disrepute and/or diminish the trust that the public places in the Authority, the Department or the ESFA and/or the T Levels Programme (including any Conflict of Interest (as contemplated by clause 36 (*Conflict of interest*))) and/or any child protection and/or data handling issues and/or incidents);
- 14.1.6 it becomes aware of any issue which shall or may have an adverse impact on Students studying for the TQ;
- 14.1.7 it is required, pursuant to the Conditions of Recognition, to notify Ofqual of any event that has occurred (or is likely to occur) which it has cause to believe could have an "Adverse Effect" (as defined in the Conditions of Recognition);
- 14.1.8 any of the circumstances in clause 15.7 (*Ending or extending this Contract*) occur; or
- 14.1.9 a Critical Service Failure occurs.

14.2 If:

- 14.2.1 the Supplier has failed to make the Submission for the relevant Interim Milestone on or prior to the Submission Date for that relevant Interim Milestone;
- 14.2.2 the Authority reasonably believes that:
- (i) the Supplier is not likely to achieve IfATE Approval by the Final Approval Milestone Date;
 - (ii) the Authority is likely to need to withdraw IfATE Approval;
 - (iii) Ofqual is likely to need to withdraw Ofqual Recognition;
- 14.2.3 the Authority has obtained information giving rise to reasonable concerns about the ability of the Supplier to deliver the Services and the Authority has provided such information to the Supplier and given the Supplier a reasonable opportunity (in the circumstances) to respond to such information and any such response fails to address such concerns to the satisfaction of the Authority;
- 14.2.4 the Supplier fails, in the opinion of Ofqual, to comply with any Condition of Recognition;
- 14.2.5 the Supplier is under investigation and/or subject to regulatory enforcement by Ofqual or has had any direction issued by Ofqual in respect of it;
- 14.2.6 the Supplier fails to comply with and/or implement (as the case may be) the whole or any part of the Implementation and Delivery Plan in any material respect;
- 14.2.7 the Supplier fails to deliver the Services in accordance with the Resource Plan in any material respect;
- 14.2.8 the circumstances referred to in paragraph 2.3.2 of Schedule 15 (*Monitoring of Performance*) occur;
- 14.2.9 a Supplier Termination Event has occurred; and/or

14.2.10 any act or omission of the Supplier in relation to the TQ in breach of this Contract occurs which shall or may have a material adverse impact on Students and/or the TQ including any such act or omission which:

- (i) gives rise to prejudice to Students or potential Students; or
- (ii) adversely affects:
 - (A) the ability of the Supplier to undertake the development, delivery or award of the TQ in accordance with its Conditions of Recognition;
 - (B) the standards of the TQ which the Supplier makes available or proposes to make available; or
 - (C) public confidence in the TQ,

the Authority may issue written notification of Designated Action to the Supplier, following which the Supplier shall comply with the Designated Action in accordance with any timeframe stated in such notification. In the event that, for any reason, the Supplier is unable to comply with the Designated Action notification, the Supplier shall promptly notify the Authority and shall explain the reason why it is unable to so comply.

14.3 In the event of a Critical Service Failure, in addition to the rights of the Authority under clause 14.2 (*What may happen if there are issues with your provision of the Services*) and 15.3 (*Ending or extending this Contract*), the Authority may by serving written notice on the Supplier:

14.3.1 suspend and/or restrict any elements (in full or part) of the Services for the remainder of the Term, including a permanent prohibition or restriction on the Supplier from providing the Services (including making the TQ and/or any Products available to Approved Providers):

- (i) to Cohorts (including any Exclusive Cohort) in respect of which Students are already registered for the TQ; and/or
- (ii) in respect of any further Cohorts (including any Exclusive Cohort);

- 14.3.2 reduce the Term by one or more periods of 12 months as specified in such notice and accordingly remove one or more Cohorts from the Exclusive Cohorts; and/or
- 14.3.3 require the Supplier to comply with specified performance improvement conditions in relation to the Services, failing which the Term will reduce by one or more periods of 12 months as specified in such notice and the final Cohort will then be removed from the Exclusive Cohorts.
- 14.4 Nothing in this Contract (and no action by the Authority) shall be construed so as to limit or restrict the ability of Ofqual to take action under its statutory powers and in the event of any Dispute arising out of or in connection with Ofqual Recognition and/or any Condition of Recognition the provisions of clause 38.7 (*Resolving disputes*) will apply.
- 14.5 The Supplier shall provide (and shall procure that its Subcontractors provide) all information and cooperation as is required by the Authority to enable the Authority to investigate any alleged breach by the Supplier of its obligations under this Contract.
- 14.6 The Authority may withdraw IfATE Approval by notice in writing to the Supplier in circumstances where the requirements for IfATE Approval are no longer met by the Supplier. The Authority shall notify the Supplier in advance in writing of its proposal to withdraw IfATE Approval and shall provide a reasonable opportunity for the Supplier to make representations in relation to such proposal, and the Authority shall take such representations into account in determining whether to proceed to withdraw IfATE Approval.

15 Ending or extending this Contract

- 15.1 This Contract ends on the End Date.

Extending this Contract

- 15.2 The Authority can extend this Contract for an Extension Period by giving the Supplier written notice prior to the start of the Academic Year in which the final Exclusive Cohort commences the TQ.

When the Authority can end this Contract

- 15.3 If a Supplier Termination Event occurs, the Authority has the right to immediately terminate this Contract by issuing a Termination Notice to the Supplier, unless the Supplier Termination Event occurs as a result of a breach of this Contract by the Authority, but only insofar as the Authority's breach is not itself caused by a breach by the Supplier of the Supplier's obligations under this Contract.
- 15.4 Nothing in Clause 38 (Resolving Disputes) shall prevent or restrict the Authority from exercising its rights under clause 15.3.

What happens if this Contract ends

- 15.5 Where the Authority terminates this Contract, all of the following apply:
- 15.5.1 the Supplier shall apply to Ofqual, in accordance with the instructions of the Authority, for its Ofqual Recognition in respect of the TQ to be withdrawn;
 - 15.5.2 the accumulated rights of the Authority are not affected;
 - 15.5.3 the Authority grants to the Supplier a non-exclusive worldwide, royalty free irrevocable licence to use the IfATE Data solely to the extent that such IfATE Data consists of: (i) information relating to the identities of Providers and persons engaged by them, which it shall be entitled to use for any purpose; and (ii) Student Related Data provided that no individual Student can be identified from such Student Related Data, which it shall be entitled to use for research purposes in order to develop or improve upon any Supplier qualification (including material prepared, and training provided, in support of such qualification);
 - 15.5.4 the Supplier must promptly return (or, where required by the Authority, delete) the IfATE Data except where required to retain copies by Law, the Conditions of Recognition, or for the purposes of exercising its rights under the licence granted under clause 15.4.3;
 - 15.5.5 the Supplier must promptly return any of the Authority's property provided to it under this Contract;
 - 15.5.6 the Supplier must at no cost to the Authority reasonably co-operate in the re-procurement and/or handover of the Services (including to a Replacement Supplier);

15.5.7 the Supplier must comply with the relevant provisions of Schedule 12 (*Exit Management*); and

15.5.8 this clause 15.4 and the following clauses survive the termination of this Contract: clauses 9, 12.3, 13, 16, 18, 19, 20, 22, 38 and 39 and any clauses and/or Schedules which are expressly or by implication intended to continue.

When the Supplier can end this Contract

15.6 The Supplier can terminate this Contract by issuing a Termination Notice if the Authority fails to pay any Charges which have fallen due under this Contract and which are directly payable by the Authority within 30 days of the date of a Reminder Notice issued by the Supplier in respect of such sum.

15.7 If the Supplier terminates this Contract under clause 15.5:

15.7.1 the Authority must promptly pay all outstanding Charges referred to in clause 15.5 to the Supplier; and

15.7.2 clauses 15.4.1 to 15.4.8 shall apply.

When Sub-Contracts can be ended

15.8 At the Authority's request, the Supplier must terminate (or procure the termination of (as the case may be)) any Sub-Contracts in any of the following events:

15.8.1 there is a change of Control of the relevant Subcontractor which is not pre-approved in writing by the Authority and which the Authority believes shall or may have an adverse impact on the Services;

15.8.2 the acts or omissions of the relevant Subcontractor have caused or materially contributed to a right of the Authority to terminate this Contract;

15.8.3 a Supplier Termination Event is caused or contributed to by the relevant Subcontractor or where any analogous events referred to in limbs (b), (d), (e), (f), (g), (h), (j) or (l) of the definition of Supplier Termination Event occurs in respect of the Subcontractor; or

- 15.8.4 the relevant Subcontractor sub-contracts any of its obligations in relation to the Services in breach of the requirements of this Contract.

16 How much each Party can be held responsible for

- 16.1 Subject to the following provisions of this clause 16 each Party's total aggregate liability under this Contract (whether in tort, contract or otherwise) for each claim or series of connected claims is no more than £1,000,000.

- 16.2 No Party is liable to the other for:

- 16.2.1 any indirect, special or consequential Loss; or

- 16.2.2 loss of profits, turnover, savings, business opportunities or damage to goodwill (in each case whether direct or indirect), provided always that, subject to clause 16.1, the Supplier acknowledges that the Authority may, amongst other things, recover from the Supplier the following Losses incurred by the Authority, the Department and/or the ESFA, to the extent that they arise as a result of a Default by the Supplier:

- (i) any additional operational and/or administrative costs and expenses, including costs relating to time spent by or on behalf of the Authority in dealing with the consequences of the Default;
- (ii) any wasted expenditure or charges;
- (iii) the additional cost of procuring Replacement Services for the remainder of the Contract Period, which shall include any incremental costs associated with such Replacement Services above those which would have been payable under this Contract;
- (iv) any compensation or interest paid to a third party by the Authority; and
- (v) any fine or penalty pursuant to Law and any costs in defending any proceedings which result in such fine or penalty.

- 16.3 The Authority does not give any warranty or undertaking as to the relevance, completeness, accuracy or fitness for purpose of any data information and/or documentation disclosed by or on behalf of the Authority prior to or after the Effective

Date and neither the Authority nor any of its employees or agents shall be liable (howsoever arising) for any inaccuracy, omission, unfitness for purpose or inadequacy of any kind whatsoever in any such data information and/or documentation.

16.4 Nothing in this Contract shall operate to exclude or limit the liability of either Party in relation to the following:

16.4.1 its liability for death or personal injury caused by its negligence, or that of its employees, agents or subcontractors;

16.4.2 bribery or fraud or fraudulent misrepresentation by it or its employees; or

16.4.3 any liability that cannot be excluded or limited by Law.

16.5 Each Party must use its reasonable endeavours to mitigate any Losses which it suffers under or in connection with this Contract, including where any such Losses are covered by an indemnity.

16.6 When calculating the Supplier's liability under clause 16.1, Losses covered by Required Insurances will not be taken into consideration.

17 Insurance

17.1 Without prejudice to its obligations to the Authority under this Contract, including its indemnity obligations, the Supplier shall take out and maintain at its own cost, or procure the taking out and maintenance of, the Required Insurances. The Supplier shall ensure that each of the Required Insurances is effective no later than the date on which the relevant risk commences.

17.2 The Required Insurances shall be maintained in accordance with Good Industry Practice and (so far as is reasonably practicable) on terms no less favourable than those generally available to a prudent contractor in respect of risks insured in the international insurance market from time to time.

17.3 The Required Insurances shall be taken out and maintained with insurers who are: (a) of good financial standing; (b) appropriately regulated; and (c) of good repute in the international insurance market.

- 17.4 The Supplier shall not take any action or fail to take any action or (insofar as is reasonably within its power) permit anything to occur in relation to it which would entitle any insurer to refuse to pay any claim under any of the Required Insurances.
- 17.5 Where the Supplier has failed to purchase any of the Required Insurances or maintain any of the Required Insurances in full force and effect, the Authority may elect (but shall not be obliged) following written notice to the Supplier to purchase the relevant Required Insurances, and the Authority shall be entitled to recover the reasonable premium and other reasonable costs incurred in connection therewith as a debt due from the Supplier.
- 17.6 The Supplier shall upon the Effective Date and within 15 Working Days after the renewal or replacement of each of the Required Insurances, provide evidence, in a form satisfactory to the Authority, that the Required Insurances are in full force and effect and meet in full the requirements of this clause 17. Receipt of such evidence by the Authority shall not in itself constitute acceptance by the Authority or relieve the Supplier of any of its liabilities and obligations under this Contract.
- 17.7 The Supplier shall ensure that the public and products liability policy forming part of the Required Insurances shall contain an indemnity to principals clause under which the Authority shall be indemnified in respect of claims made against the Authority in respect of death or bodily injury or third party property damage arising out of or in connection with the Services and for which the Supplier is legally liable.

18 Data protection and information

- 18.1 Each Party shall comply with the Data Protection Legislation.
- 18.2 The Supplier must ensure that Personal Data is Processed in accordance with Schedule 9 (*Data Handling and Security Management*).
- 18.3 The Supplier must not remove any ownership or security notices in or relating to the IfATE Data.
- 18.4 The Supplier must make accessible back-ups of all IfATE Data, stored in an agreed off-site location. The Supplier must send the Authority copies every six Months of the Ancillary Materials and the Key Materials (in each case to the extent that these have not already been provided to the Authority), and any further information falling within

the definition of IfATE Data as may be requested by the Authority in writing from time to time.

- 18.5 The Supplier must ensure that any Supplier system holding any IfATE Data, including back-up data, is a secure system that complies with the Security Policy and the relevant provisions of Schedule 9 (*Data Handling and Security Management*).
- 18.6 If at any time the Supplier suspects or has reason to believe that the IfATE Data provided or generated under this Contract is corrupted, lost or sufficiently degraded, then the Supplier must notify the Authority and immediately suggest remedial action.
- 18.7 If the IfATE Data is corrupted, lost or sufficiently degraded so as to be unusable the Authority may either or both:
 - 18.7.1 tell the Supplier to restore or get restored IfATE Data as soon as practical but no later than 5 Working Days from the date that the Authority receives notice, or the Supplier finds out about the issue, whichever is earlier; and/or
 - 18.7.2 restore the IfATE Data itself or using a third party.
- 18.8 The Supplier must pay each Party's reasonable costs of complying with clause 18.7 unless the Authority is at fault.
- 18.9 The Supplier:
 - 18.9.1 must provide the Authority with all IfATE Data in an agreed open format within 10 Working Days of a written request;
 - 18.9.2 must have documented processes to guarantee prompt availability of IfATE Data if the Supplier stops trading;
 - 18.9.3 must securely destroy all Storage Media that has held IfATE Data at the end of life of that media using Good Industry Practice;
 - 18.9.4 must securely erase all IfATE Data and any copies it holds when asked to do so by the Authority unless required by Law to retain it; and
 - 18.9.5 indemnifies the Authority against any and all Losses suffered or incurred by the Authority if the Supplier and/or any Key Subcontractor breaches this clause 18 and/or any Data Protection Legislation.

19 What must be kept confidential

Confidential Information

- 19.1 Each Party must, subject to the following provisions of this clause 19;
- 19.1.1 keep all Confidential Information it receives confidential and secure;
 - 19.1.2 not disclose, use or exploit the Confidential Information disclosed by the Disclosing Party without the Disclosing Party's prior written consent, except for the purposes anticipated under this Contract; and
 - 19.1.3 immediately notify the Disclosing Party if it suspects unauthorised access, copying, use or disclosure of the Confidential Information.
- 19.2 Notwithstanding clause 19.1, a Party may disclose Confidential Information which it receives from the Disclosing Party in any of the following instances:
- 19.2.1 where disclosure is required by applicable Law or by a court with the required jurisdiction, if the Recipient Party (to the extent that it is permitted to do so by such applicable Law or by such court) notifies the Disclosing Party in advance of disclosure of the full circumstances, the affected Confidential Information and extent of the disclosure;
 - 19.2.2 if the Recipient Party already had the information without obligation of confidentiality before it was disclosed to it by the Disclosing Party;
 - 19.2.3 if the information was given to it by a third party without obligation of confidentiality;
 - 19.2.4 if the information was in the public domain at the time of the disclosure;
 - 19.2.5 if the information was independently developed without access to the Confidential Information of the Disclosing Party;
 - 19.2.6 to its auditors or for the purposes of regulatory requirements;
 - 19.2.7 on a confidential basis, to its professional advisers on a need-to-know basis;

- 19.2.8 to the Serious Fraud Office where the Recipient Party has reasonable grounds to believe that the Disclosing Party is involved in activity that may be a criminal offence under the Bribery Act 2010; and/or
- 19.2.9 where disclosure is permitted in accordance with Schedule 4 (*Co-operation*).
- 19.3 The Supplier may disclose Confidential Information on a confidential basis to Supplier Staff on a need-to-know basis to allow the Supplier to meet its obligations under this Contract. The Supplier must ensure that the Supplier Staff enter into a direct confidentiality agreement with the Authority at the Authority's request.
- 19.4 The Authority may disclose Confidential Information in any of the following cases:
 - 19.4.1 on a confidential basis to the employees, agents, consultants and contractors of the Authority;
 - 19.4.2 on a confidential basis to any Crown Body, any successor body to a Crown Body or any company that the Authority transfers or proposes to transfer all or any part of its business to;
 - 19.4.3 where permitted by the Apprenticeships, Skills, Children and Learning Act 2009, (including to the Department, ESFA or Ofqual and as contemplated by clause 5.15 (*Developing the TQ and achieving IfATE Approval*));
 - 19.4.4 if the Authority (acting reasonably) considers disclosure necessary or appropriate to carry out its public functions;
 - 19.4.5 where requested by Parliament;
 - 19.4.6 under clauses 4.10 (*Pricing and payments*) and 20 (*When information can be shared*); or
 - 19.4.7 save for Exit Information, where the information was generated as part of the provision of the Services.
- 19.5 For the purposes of clauses 19.2 to 19.4 references to disclosure on a confidential basis means disclosure under a confidentiality agreement or arrangement including terms as strict as those required in this clause 19.

Student Related Data

19.6 The Supplier must:

19.6.1 keep all Student Related Data confidential and secure;

19.6.2 immediately notify the Authority if it suspects unauthorised access, copying, use or disclosure of the Student Related Data.

19.7 The Supplier shall not store, copy, disclose, or use the Student Related Data except as necessary for the performance by the Supplier of its obligations under this Contract or as otherwise expressly authorised in writing by the Authority.

Transparency Information and other disclosures

19.8 Transparency Information and any information which is exempt from disclosure by clause 20 (*When information can be shared*) is not Confidential Information.

19.9 The Supplier must not make any press announcement or publicise this Contract or the output of the Services (including the Student Related Data) without the prior written consent of the Authority and must take all reasonable steps to ensure that Supplier Staff do not either.

20 When information can be shared

20.1 The Supplier acknowledges that:

20.1.1 the Transparency Reports; and

20.1.2 the content of this Contract, including any changes to this Contract agreed during the Term, except for (i) any information which is exempt from disclosure in accordance with the provisions of the FOIA, which shall be determined by the Authority; and (ii) Commercially Sensitive Information,

(together the “**Transparency Information**”) is not Confidential Information.

20.2 The Supplier must tell the Authority within 48 hours if it receives a Request For Information.

20.3 Within the timescales required by the Authority, the Supplier must give the Authority full co-operation and information needed so the Authority can:

20.3.1 publish the Transparency Information; and

20.3.2 comply with any Request for Information.

20.4 The Supplier acknowledges that the Authority may be required under the FOIA and EIRs to disclose information (including Confidential Information and Commercially Sensitive Information) without consulting or obtaining consent from the Supplier. However, to the extent that it is permitted to do so (in accordance with the Secretary of State's section 45 Code of Practice on the Discharge of the Functions of Public Authorities under Part 1 of the FOIA), the Authority shall, in relation to any Request for Information relating to Confidential Information or Commercially Sensitive Information of the Supplier:

20.4.1 notify the Supplier of such Request for Information as soon as is reasonably practicable; and

20.4.2 allow the Supplier to make representations in relation to any exemptions the Supplier considers may apply to the disclosure of its information under the Request for Information and take such representations into account when making its decision of what it will disclose.

20.5 Notwithstanding any other provision in this Contract, the Authority shall be responsible for determining in its absolute discretion whether any Commercially Sensitive Information and/or any other information is exempt from disclosure in accordance with the FOIA and/or the EIRs.

21 Invalid parts of this Contract

If any part of this Contract is held to be void or otherwise unenforceable by any court of competent jurisdiction, such part shall to the extent necessary to ensure that the remaining provisions of this Contract are not void or unenforceable be deemed to be deleted and the validity and/or enforceability of the remaining provisions of this Contract shall not be affected.

22 No other terms apply

The provisions incorporated into this Contract are the entire agreement between the Parties. This Contract replaces all previous statements and agreements whether written or oral. No other provisions apply.

23 Other people's rights in this Contract

- 23.1 The Department may enforce any of the Authority's rights under this Contract in relation to which the Department is to benefit. The Department's consent is not required to amend this Contract.
- 23.2 Save as provided in clause 23.1 or expressly stated in this Contract, no third parties shall be entitled to enforce any term of this Contract.

24 Circumstances beyond either Party's control

- 24.1 Any Party affected by a Force Majeure Event is excused from performing its obligations under this Contract while the inability to perform continues, if it both:
- 24.1.1 provides a Force Majeure Notice to the other Party; and
 - 24.1.2 uses all reasonable measures to reduce the impact of the Force Majeure Event.
- 24.2 The Authority can terminate this Contract if the provision of the Services is materially affected by a Force Majeure Event which lasts for 90 days continuously.
- 24.3 Where the Authority terminates under clause 24.2:
- 24.3.1 each Party must cover its own Losses; and
 - 24.3.2 subject to clause 24.3.1, clause 15.4 applies.
- 24.4 Neither Party can rely on clause 24.1 where the inability to perform its obligations arises, directly or indirectly, due to the exit from the European Union by the United Kingdom.
- 24.5 The Supplier may not rely on clause 24.1 to the extent that the inability to perform its obligations arises directly or indirectly out of a failure by the Supplier to comply with its Business Continuity Plan.

25 Relationships created by this Contract

- 25.1 This Contract does not create a partnership, joint venture or employment relationship. The Supplier must represent itself accordingly and ensure the Supplier Staff do so.

26 Giving up contract rights

- 26.1 A partial or full waiver or relaxation of the terms of this Contract by one Party is only valid if it is stated to be a waiver in writing to the other Party.

27 Transferring responsibilities

- 27.1 The Supplier must not assign, transfer or otherwise dispose of its rights, obligations and/or liabilities under the whole or any part of this Contract without Approval.
- 27.2 The Authority can assign, novate or transfer this Contract or any part of it to any Crown Body, public sector body or private sector body which performs the functions of the Authority.
- 27.3 The Supplier must enter into a novation agreement in the form that the Authority specifies where the Authority wishes to exercise its rights under clause 27.2.
- 27.4 The Supplier can terminate this Contract novated under clause 27.2 to a private sector body where an Insolvency Event occurs in respect of that private sector body.
- 27.5 The Supplier remains responsible for all acts and omissions of the Supplier Staff as if they were its own.

28 Changing this Contract

- 28.1 If any change is required which is an Inclusive TQ Change, clause 8 (*TQ Changes*) shall apply in relation to such change, and this clause 28 shall not apply to any Inclusive TQ Change.
- 28.2 Either Party can request a Variation to this Contract, including the addition or removal of one or more Occupational Specialist Components.
- 28.3 The Supplier cannot unreasonably withhold or delay their consent to a Variation to this Contract.
- 28.4 The Supplier must provide an Impact Assessment either:
- 28.4.1 with the Variation Form, where the Supplier requests the Variation; or
- 28.4.2 within the time limits included in a Variation Form where the Authority requests the Variation.

- 28.5 If the Variation cannot be agreed or resolved by the Parties, the Authority can either:
- 28.5.1 agree that this Contract continues without the Variation; or
 - 28.5.2 treat such failure as a Dispute which shall be addressed through the Dispute Resolution Procedure.
- 28.6 A Variation of this Contract is only effective if agreed in writing and signed by both Parties.
- 28.7 If there is a General Change in Law, the Supplier must bear the risk of the change and is not entitled to ask for an increase to the Charges and/or the Fees in respect of that change.
- 28.8 If there is a Specific Change in Law or one is likely to happen during the Contract Period, the Supplier must give the Authority notice of the likely effects of the Specific Change in Law as soon as reasonably practical. The Supplier must also say if it thinks any Variation is needed either to the Services, the Products and/or this Contract and provide evidence:
- 28.8.1 that the Supplier has kept costs as low as possible and/or maximised any cost savings (as the case may be) including any Subcontractor costs; and
 - 28.8.2 of how it has affected or will affect the Supplier's costs and/or those of any Subcontractor.
- 28.9 Any Variation because of a Specific Change in Law must be implemented using clauses 28.1 to 28.6.
- 28.10 If another awarding organisation has a contract with the Authority for the provision of services similar to the Services to deliver a different technical qualification as part of the T Levels Programme and that other awarding organisation suffers a Supplier Termination Event following which its contract with the Authority is terminated or the relevant contract is otherwise lawfully terminated, the Supplier agrees that the Authority shall have the option to request that the Supplier takes over the delivery of that different technical qualification and any related services as a Variation, which will be implemented using clauses 28.1 to 28.6. The Charges and Fees relating to such a Variation shall be agreed between the Parties as part of the Impact Assessment for

the relevant Variation, each Party acting reasonably and promptly, prior to the Supplier commencing work on the Variation. The relevant Charges and Fees shall:

- 28.10.1 be a reasonable cost for implementing the Variation in the circumstances;
- 28.10.2 take into account the charges and fees that the other awarding organisation was charging in relation to that different technical qualification prior to suffering the Supplier Termination Event; and
- 28.10.3 take into account and be calculated using:
 - (i) for personnel related costs and other relevant charges which are set out in the Rate Card, the applicable Rate Card rates; and
 - (ii) reasonable charges for any non-personnel related costs which are not included in the Rate Card and which will be incurred by the Supplier to implement the Variation; and
 - (iii) the same basis and the same logic used by the Supplier to determine the relevant costs, Charges and Fees for the Services.

29 How to communicate about this Contract

- 29.1 All notices under this Contract must be in writing and are considered effective on the Working Day of delivery as long as delivered before 5:00 pm on a Working Day. Otherwise the notice is effective on the next Working Day. Unless expressly stated in this Contract or otherwise communicated in writing by the Authority, an email is not effective notice unless also sent by post or delivered by hand on the same day. For the avoidance of doubt, this clause 29.1 does not apply to a Variation, which must be implemented in accordance with clauses 28.2 to 28.6.
- 29.2 Subject to clause 29.1, notices to the Authority must be sent to the Authority Authorised Representative's address and email address, and all notices must be copied to the Authority's Head of Commercial Delivery Management [REDACTED] and the Authority's Head of Legal [REDACTED]
- 29.3 Subject to clause 29.1, notices to the Supplier must be sent to the Supplier Authorised Representative's address and email address.

- 29.4 This clause does not apply to the service of legal proceedings or any documents in any legal action, arbitration or dispute resolution.

30 Dealing with claims

- 30.1 If a Beneficiary is notified of or otherwise becomes aware of a Claim then it must notify the Indemnifier as soon as reasonably practical and no later than 10 Working Days after such notification or date of first awareness.
- 30.2 At the Indemnifier's cost the Beneficiary must both:
- 30.2.1 allow the Indemnifier to conduct all negotiations and proceedings to do with a Claim; and
 - 30.2.2 give the Indemnifier reasonable assistance with the Claim if requested.
- 30.3 The Beneficiary must not make admissions about the Claim or enter into any agreement or compromise in relation to the Claim without the prior written consent of the Indemnifier which cannot be unreasonably withheld or delayed.
- 30.4 The Indemnifier must consider and defend the Claim diligently using competent legal advisors and in a way that does not damage the Beneficiary's reputation (or, in the case of the Authority as a Beneficiary, the reputation of the Authority, the Department and/or the ESFA or the wider T Levels Programme).
- 30.5 The Indemnifier must not settle or compromise any Claim without the Beneficiary's prior written consent which it must not unreasonably withhold or delay.
- 30.6 Each Beneficiary must take all reasonable steps to minimise and mitigate any losses that it suffers because of the Claim.
- 30.7 If the Indemnifier pays the Beneficiary money under an indemnity and the Beneficiary later recovers money which is directly related to the relevant Claim, the Beneficiary must immediately repay the Indemnifier the lesser of either:
- 30.7.1 the sum recovered minus any legitimate amount spent by the Beneficiary when recovering this money; or
 - 30.7.2 the amount the Indemnifier paid the Beneficiary for the Claim.

31 Preventing fraud, bribery and corruption

31.1 The Supplier must not during the Term:

- 31.1.1 commit a Prohibited Act or any other criminal offence in regulations 38(8), 38(9) and/or 38(10) of the Regulations; and/or
- 31.1.2 do or allow anything which would cause the Authority, including any of its employees, consultants, contractors, subcontractors or agents to breach any of the Relevant Requirements or incur any liability under them.

31.2 The Supplier must during the Term:

- 31.2.1 create, maintain and enforce adequate policies and procedures to ensure it complies with the Relevant Requirements to prevent a Prohibited Act and require its Subcontractors to do the same;
- 31.2.2 keep full records to show it has complied with its obligations under this clause 31 and give copies to the Authority on request; and
- 31.2.3 if required by the Authority, within 20 Working Days of the Effective Date, and then annually, certify in writing to the Authority, that it has complied with this clause 31, including compliance of Supplier Staff, and provide reasonable supporting evidence of this on request, including its policies and procedures.

31.3 The Supplier must immediately notify the Authority if it becomes aware of any breach of clauses 31.1 or 31.2, or has any reason to think that it, or any of the Supplier Staff, has either:

- 31.3.1 been investigated or prosecuted for an alleged Prohibited Act;
- 31.3.2 been debarred, suspended, proposed for suspension or debarment, or is otherwise ineligible to take part in procurement programmes or contracts because of a Prohibited Act by any Crown Body;
- 31.3.3 received a request or demand for any undue financial or other advantage of any kind related to this Contract; or

- 31.3.4 suspected that any person or Party directly or indirectly related to this Contract has committed or attempted to commit a Prohibited Act.
- 31.4 If the Supplier notifies the Authority as required by clause 31.3, the Supplier must respond promptly to the Authority's further enquiries, co-operate with any investigation and allow the Audit of any relevant books, records and documentation.
- 31.5 In any notice the Supplier gives under clause 31.4 it must specify the:
 - 31.5.1 Prohibited Act;
 - 31.5.2 identity of the party who it thinks has committed the Prohibited Act; and
 - 31.5.3 action it has decided to take.

32 Equality, diversity, human rights and modern slavery

- 32.1 The Supplier must perform its obligations under this Contract (including those in relation to the Services), in accordance with:
 - 32.1.1 all applicable equality Law (whether in relation to race, sex, gender reassignment, religion or belief, disability, sexual orientation, pregnancy, maternity, age or otherwise); and
 - 32.1.2 any other requirements and instructions which the Authority reasonably imposes related to equality Law.
- 32.2 The Supplier must perform its obligations under this Contract (including those in relation to the Services) giving consideration to the Authority's Equity, Diversity and Inclusion toolkit as published on the Authority's website or provided to the Supplier from time to time.
- 32.3 The Supplier must take all necessary steps, and inform the Authority of the steps taken, to prevent anything that is considered to be unlawful discrimination by any court or tribunal, or the Equality and Human Rights Commission (or any successor organisation) when working on this Contract.
- 32.4 The Supplier must use Good Industry Practice to ensure that there is no slavery or human trafficking in its supply chains and must notify the Authority immediately if it

becomes aware of any actual or suspected incidents of slavery or human trafficking in its supply chains.

- 32.5 The Supplier must at all times conduct its business in a manner that is consistent with any anti-slavery policy of the Authority and shall provide to the Authority any reports or other information that the Authority may request as evidence of the Supplier's compliance with this clause 32.4 and/or as may be requested or otherwise required by the Authority in accordance with any Authority anti-slavery policy.

33 Health and safety

- 33.1 The Supplier must perform its obligations meeting the requirements of:

- 33.1.1 all applicable Law regarding health and safety;
- 33.1.2 the Authority's current health and safety policy, as provided to the Supplier, to the extent that Supplier Staff are located at any Authority premises in the course of performing the Services under this Contract.

34 Environment

- 34.1 The Supplier must ensure that Supplier Staff are aware of and comply with the Environmental Policy.

35 Tax

- 35.1 The Supplier must not breach any tax or social security obligations and must enter into a binding agreement to pay any late contributions due, including where applicable, any interest or any fines.
- 35.2 Where the Supplier or any Supplier Staff are liable to be taxed or to pay National Insurance contributions in the UK relating to payment received under this Contract, the Supplier must both:
- 35.2.1 comply with the Income Tax (Earnings and Pensions) Act 2003 and all other statutes and regulations relating to income tax, the Social Security Contributions and Benefits Act 1992 (including IR35) and National Insurance contributions; and

- 35.2.2 indemnify the Authority against any Income Tax, National Insurance and social security contributions and any other liability, deduction, contribution, assessment or claim arising from or made during or after the Term in connection with the provision of the Services by the Supplier or any Supplier Staff.

36 Conflict of interest

- 36.1 The Supplier must take action to ensure that neither the Supplier nor the Supplier Staff are placed in the position of an actual or potential Conflict of Interest.
- 36.2 The Supplier must promptly notify and provide details to the Authority if a Conflict of Interest happens or is expected to happen.
- 36.3 The Authority can terminate this Contract immediately by giving notice in writing to the Supplier or take any steps it thinks are necessary where there is or may be an actual or potential Conflict of Interest.

37 Reporting a breach of this Contract

- 37.1 As soon as it is aware of it, the Supplier and Supplier Staff must report to the Authority any actual or suspected breach of:
- 37.1.1 Law; or
- 37.1.2 clauses 31 to 36 (inclusive).
- 37.2 The Supplier must not retaliate against any of the Supplier Staff who in good faith report a breach listed in clause 37.1 to the Authority or a Prescribed Person.

38 Resolving disputes

- 38.1 If there is a Dispute, nominated senior representatives of each Party who have authority to settle the Dispute will, within 28 days of a written request from the other Party, meet in good faith to resolve the Dispute.
- 38.2 If the Dispute is not resolved at that meeting, the Parties can attempt to settle it by mediation using the Centre for Effective Dispute Resolution (“CEDR”) Model Mediation Procedure current at the time of the Dispute. If the Parties cannot agree on a mediator, the mediator will be nominated by CEDR. If either Party does not wish to use, or

continue to use mediation, or mediation does not resolve the Dispute, the Dispute must be resolved using clauses 38.3 to 38.5.

38.3 Unless the Authority refers the Dispute to arbitration using clause 38.4, the Parties irrevocably agree that the courts of England and Wales have the exclusive jurisdiction to:

38.3.1 determine the Dispute; and/or

38.3.2 grant interim remedies, or any other provisional or protective relief.

38.4 The Supplier agrees that the Authority has the exclusive right to refer any Dispute to be finally resolved by arbitration under the London Court of International Arbitration Rules current at the time of the Dispute. There will be only one arbitrator. The seat or legal place of the arbitration will be London and the proceedings will be in English.

38.5 The Authority has the right to refer a Dispute to arbitration even if the Supplier has started or has attempted to start court proceedings under clause 38.3, unless the Authority has agreed to the court proceedings or participated in them. Even if court proceedings have started, the Parties must do everything necessary to ensure that the court proceedings are stayed in favour of any arbitration proceedings if they are started under clause 38.4.

38.6 The Supplier cannot suspend the performance of this Contract during any Dispute.

38.7 To the extent that a Dispute relates to whether or not the Supplier has complied with a Condition of Recognition and/or requirement of Ofqual Recognition, the Parties agree that they shall request that Ofqual shall make the final decision as to whether the requirements of that Condition of Recognition and/or Ofqual Recognition have been met and any such decision by Ofqual shall be binding on both Parties.

39 Which law applies

This Contract and any issues arising out of, or connected to it, are governed by English law.

Signed by

PEARSON EDUCATION LTD

[Redacted signature]

[Redacted signature]

[Redacted signature]

Signed by

THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION

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Schedule 1

Definitions and Interpretation

1 Interpretation

- 1.1 In this Contract, unless the context otherwise requires, capitalised expressions shall have the meanings set out in this Schedule 1 (*Definitions and Interpretation*) or the relevant Schedule in which that capitalised expression appears.
- 1.2 If a capitalised expression does not have an interpretation in this Schedule or any other Schedule, it shall, in the first instance, be interpreted in accordance with the common interpretation within the relevant market sector where appropriate. Otherwise, it shall be interpreted in accordance with the dictionary meaning.
- 1.3 In this Contract, unless the context otherwise requires:
- 1.3.1 the singular includes the plural and vice versa;
 - 1.3.2 reference to a gender includes the other gender and the neuter;
 - 1.3.3 references to a person include an individual, company, body corporate, corporation, unincorporated association, firm, partnership or other legal entity or Crown Body;
 - 1.3.4 references to a legal entity (other than the Supplier) shall include unless otherwise expressly stated any statutory successor to such entity and/or the relevant functions of such entity, and references to the Department shall include, where relevant, the ESFA;
 - 1.3.5 a reference to any Law includes a reference to that Law as amended, extended, consolidated or re-enacted from time to time;
 - 1.3.6 any reference to this Contract or to any other document shall include any variation, amendment or supplement to such document;
 - 1.3.7 the words “**including**”, “**other**”, “**in particular**”, “**for example**” and similar words shall not limit the generality of the preceding words and shall be construed as if they were immediately followed by the words “**without limitation**”;

- 1.3.8 references to “**writing**” include typing, printing, lithography, photography, display on a screen, electronic and facsimile transmission and other modes of representing or reproducing words in a visible form, and expressions referring to writing shall be construed accordingly;
- 1.3.9 references to “**clauses**” and “**Schedules**” are, unless otherwise provided, references to the clauses of and schedules to the Core Terms and references in any Schedule to parts, paragraphs, annexes and tables are, unless otherwise provided, references to the parts, paragraphs, annexes and tables of the Schedule in which these references appear;
- 1.3.10 references to “**paragraphs**” are, unless otherwise provided, references to the paragraph of the appropriate Schedules unless otherwise provided; and
- 1.3.11 the headings in this Contract are for ease of reference only and shall not affect the interpretation or construction of this Contract.

2 Definitions

- 2.1 In this Contract, unless the context otherwise requires, the following words shall have the following meanings:

“**Academic Year**” means 1 August to 31 July in the following calendar year;

“**Additional Service**” means each additional service listed in Schedule 6 (*Pricing Schedule*) and detailed in Annex 10 to the Service Requirements;

“**Affected Party**” means the party seeking to claim relief in respect of a Force Majeure Event;

“**Affiliates**” means in relation to a body corporate, any other entity which directly or indirectly Controls, is Controlled by, or is under direct or indirect common Control of that body corporate from time to time;

“**Ancillary Materials**” means all information and materials (other than Key Materials) to which the Authority and/or a Future Supplier would require access for use for the Portability Purposes, and any other materials which would be required on or to facilitate succession to a Future Supplier in a seamless manner in relation to the TQ offered or Operated by the Supplier. Ancillary Materials shall include, without limitation:

- (a) Student results including grades;

- (b) statistical analysis for grading (excludes the systems supporting the analysis);
- (c) lists of Providers;
- (d) marked Student evidence (with moderation outcomes);
- (e) documentation which provides an overview or analysis of Student performance (including chief examiner and chief moderator reports), which include but are not limited to, examples of student responses to assessment questions and/or tasks as well as narrative explaining why students did well/ less well on individual items/ components/ subcomponents);
- (f) data on Student credits;
- (g) data on Student appeals;
- (h) data on special considerations for Students;
- (i) the Assessment Strategy;
- (j) Student registrations;
- (k) draft materials in preparation for forthcoming assessments;
- (l) the Key Dates Schedule (in respect of forthcoming assessments);
- (m) lists, with contact details, of people contracted by the Supplier to perform or oversee activities which are necessary for the conduct and quality assurance of assessments for the TQ;
- (n) materials from completed assessments, such as completed Students' examination answer booklets; and
- (o) TQ Live Assessment Materials

“Approval” means the prior written consent of the Authority and “Approve” and “Approved” shall be construed accordingly;

“Approved Assessment Strategy” shall have the meaning given in Schedule 2 (*Service Requirements*);

“Approved Initial TQ Deliverables” means the Initial TQ Deliverables approved by the Authority in accordance with clause 5.13 (*Developing the TQ and achieving IfATE Approval*) or clause 8.10 or 8.11 (*TQ Changes*) (as the case may be) as such deliverables are reviewed and updated in accordance with this Contract;

“Approved Provider” means an Eligible Provider that has been granted Provider Approval in accordance with clause 7.1 (*Interaction with Providers*) and in respect of which such Provider Approval has not been revoked pursuant to clause 7.2 (*Interaction with Providers*);

“Approved Provider’s Quality Assurance Process” means the quality assurance process referred to in, and meeting the requirements of, the relevant part of the Product Description for the TQ Specification;

“Approved TQ Specification” means the TQ Specification approved by the Authority in accordance with clause 5.13 (*Developing the TQ and achieving IfATE Approval*) or clause 8.10 or 8.11 (*TQ Changes*) (as the case may be);

“Assessment Strategy” means the assessment strategy referred to in, and meeting the requirements of, the Product Description for the Assessment Strategy, which unless otherwise agreed in writing with the Authority must be consistent with the relevant details forming part of the Supplier’s Response;

“Assessors” means any assessor appointed by the Supplier to assess performance by Students in respect of the TQ Live Assessment Materials;

“Audit” means the Authority's right to:

- (a) verify the accuracy of the Charges and any other amounts payable by the Authority (including proposed or actual variations to them in accordance with this Contract);
- (b) verify the costs of the Supplier (including the costs of all Subcontractors and any third party suppliers) in connection with the provision of the Services (including the supply of the Products);
- (c) verify the Supplier's and each Subcontractor's compliance with the applicable Law;
- (d) identify or investigate actual or suspected breach of clauses 31 to **Error! Unknown switch argument.**, impropriety or accounting mistakes or any breach or threatened breach of security and in these circumstances the Authority shall have no obligation to inform the Supplier of the purpose or objective of its investigations;
- (e) verify the Supplier’s compliance with Schedule 9 (*Data Handling and Security Management*);

- (f) identify or investigate any circumstances which may impact upon the financial stability of the Supplier, or their ability to provide the Services including to supply the Products;
- (g) obtain such information as is necessary to fulfil the Authority's obligations to supply information for Parliamentary, ministerial, judicial or administrative purposes including the supply of information to the Comptroller and Auditor General;
- (h) review any books of account and the internal contract management accounts kept by the Supplier in connection with this Contract;
- (i) carry out the Authority's internal and statutory audits and to prepare, examine and/or certify the Authority's annual and interim reports and accounts;
- (j) enable the National Audit Office to carry out an examination pursuant to Section 6(1) of the National Audit Act 1983 of the economy, efficiency and effectiveness with which the Authority has used its resources;
- (k) verify the accuracy and completeness of any Management Information delivered or required by this Contract; and/or
- (l) obtain such information as is necessary to undertake a review and/or assessment of the performance of the whole or any part of the T Levels Programme;

“Auditor” means any, or any combination, of:

- (m) the Authority's internal and external auditors;
- (n) the Authority's statutory or regulatory auditors;
- (o) the Comptroller and Auditor General, its staff and/or any appointed representatives of the National Audit Office;
- (p) HM Treasury or the Cabinet Office;
- (q) any party formally appointed by the Authority to carry out audit or similar review functions; and
- (r) successors or assigns of any of the above;

“Authority Authorised Representative” means the person referred to in Schedule 20 as such or the representative appointed by the Authority from time to time in relation to this Contract as notified in writing (which may, in the case of this specific notification, be by email only) to the Supplier;

“Authority Procedural Review” means the Authority's procedural review process as published on the Authority's web site from time to time;

“Awarding Organisation” means a body recognised by Ofqual as a provider of certain qualifications;

“Background IPR” means any IPR owned by a party prior to the Effective Date or created or developed by a party independently of this Contract, but does not include IPR in Key Materials;

“Beneficiary” means a Party having (or claiming to have) the benefit of an indemnity under this Contract;

“Breach of Security” means the occurrence of:

- (s) any unauthorised access to or use of the Services and/or the Products, the sites from which the Services are delivered (and/or where the Products are developed, and/or stored) and/or any information and communication technology, information or data (including the Confidential Information and the IfATE Data) used by the Authority and/or the Supplier in connection with this Contract; and/or
- (t) the loss and/or unauthorised disclosure of any information or data (including the Confidential Information and the IfATE Data), including any copies of such information or data, used by the Authority and/or the Supplier in connection with this Contract,

in either case as may be more particularly set out in the Security Policy;

“Business Continuity Plan” means the business continuity and disaster recovery plan relating to this Contract, as set out in Schedule 10 (*Business Continuity*);

“Cabinet Office Statement” means the Cabinet Office Statement of Practice – Staff Transfers in the Public Sector 2000 (as revised 2013) as may be amended or replaced;

“Change in Law” means any change in Law which impacts on the provision of the Services (including the supply of the Products) and/or the performance of this Contract which comes into force after the Effective Date;

“Charges” means:

- (a) the Development Charge payable to the Supplier by the Authority in accordance with clause 4.1.1 (*Pricing and payments*);
- (b) in respect of any Exclusive TQ Change, the amount (exclusive of any applicable VAT) agreed or determined in respect of such Exclusive TQ Change in accordance with clause 8.6 (*TQ Changes*); and

- (c) in respect of any other Variation, the amount agreed pursuant to clause 28 (*Changing this Contract*) in respect of such Variation;

“Claim” means any claim for which it appears that a Beneficiary is, or may become, entitled to indemnification under this Contract;

“Cohort” means a group of Students who are registered by an Approved Provider with the Supplier to commence the TQ in the relevant Academic Year;

“Commercially Sensitive Information” means the Confidential Information listed in Schedule 18 (*Commercially Sensitive Information*) comprising of commercially sensitive information relating to the Supplier, its IPR or its business which the Supplier has indicated to the Authority that, if disclosed by the Authority, would cause the Supplier significant commercial disadvantage or material financial loss;

“Comparable Supply” means the supply of services to the Authority or another customer or client of the Supplier that are the same as or similar to the Services (including the supply of products that are the same as or similar to the Products) including services relating to qualifications in England outside the T Levels Programme;

“Conditions of Recognition” means the conditions of Ofqual Recognition imposed on the Supplier by Ofqual including any general level conditions, qualification level conditions, subject level conditions and special conditions;

“Confidential Information” means, subject to clause 19.8 (*What must be kept confidential*), any information, however it is conveyed, that relates to the business, affairs, developments, trade secrets, Know-How, personnel and suppliers of the Authority or the Supplier, including IPRs, together with information derived from the above, and any other information clearly designated as being confidential (whether or not it is marked as **“confidential”**) or which ought reasonably to be considered to be confidential. Confidential Information shall not include Student Related Data;

“Conflict of Interest” means a conflict between the financial or personal duties of the Supplier or the Supplier Staff and the duties owed to the Authority under this Contract, in the reasonable opinion of the Authority. This includes where:

- (a) the Supplier’s interests in any activity undertaken by the Supplier, on its behalf, or by an Affiliate of the Supplier have the potential to lead the Supplier to act contrary

to the Supplier's interests in the development, delivery and award of the TQ in accordance with the Conditions of Recognition;

- (b) a person who is connected to the development, delivery or award of the TQ by the Supplier has interests in any other activity which have the potential to lead that person to act contrary to his or her interests in that development, delivery or award in accordance with the Conditions of Recognition; or
- (c) an informed and reasonable observer would conclude that either of these situations was the case;

“Continuing Activities” means activities of the Supplier under this Contract in relation to the TQ which continue following the end of the second Academic Year for the final Exclusive Cohort, such as retakes, appeals, and ongoing records management;

“Contract” means this contract;

“Contract Month” means each calendar month, provided that:

- (a) the first Contract Month shall commence on and from the Effective Date and shall end on the last day of the calendar month in which the Effective Date occurs; and
- (b) the last Contract Month shall commence on and from the first day of the calendar month in which the End Date occurs and shall end on the End Date;

“Contract Period” means the period for which this Contract would remain in force (taking into account any current Extension Period) if not terminated earlier;

“Control” means the possession by a person, directly or indirectly, of the power to direct or cause the direction of the management and/or policies of the other person (whether through the ownership of voting shares, by contract or otherwise) and **“Controlled”** shall be construed accordingly;

“Controller” has the same meaning as in the GDPR;

“Core Terms” means the terms set out in the main body of this Contract;

“Critical Service Failure” means:

- (a) the Ofqual Recognition of the Supplier to make the TQ available to Approved Providers for delivery to Students is withdrawn;
- (b) a failure by the Supplier to make the Final Submission by the Final Approval Milestone Date or the failure of any Final Submission (or Final Re-Submission) to

- meet the requirements necessary to achieve IfATE Approval (in each case other than where such failure results from a breach of this Contract by the Authority);
- (c) a failure by the Supplier to make a Final Re-Submission within the time period required by clause 5.13.2(*Developing the TQ and achieving IfATE Approval*) (other than where such failure results from a breach of this Contract by the Authority);
 - (d) the Authority withdraws IfATE Approval (having previously awarded IfATE Approval) in accordance with this Contract;
 - (e) any failure by the Supplier to perform a Designated Action within the specified timeframe for that Designated Action (other than where such failure results from a breach of this Contract by the Authority);
 - (f) any Supplier Termination Event which has occurred in respect of the Supplier in its role as an Awarding Organisation for any part of the T Levels Programme outside this Contract;
 - (g) any Breach of Security which either (i) results in material personal data being lost or compromised or shared without authorisation; or (ii) is not notified to the Authority promptly (and in any event within one Working Day);
 - (h) the Supplier breaches its obligations relating to the confidentiality of assessment papers (prior to the relevant assessment date) and/or Student results (prior to the relevant publication date); and
 - (i) any other event, matter or circumstance which is expressed to be (or deemed to be) a Critical Service Failure in this Contract;

“Crown Body” means the government of the United Kingdom (including the Northern Ireland Assembly and Executive Committee, the Scottish Executive and the National Assembly for Wales), including government ministers and government departments and bodies, persons, commissions or agencies from time to time carrying out functions on its behalf;

“Data Protection Legislation” means:

- (a) the GDPR;
- (b) the Data Protection Act 2018 to the extent that it relates to processing of personal data and privacy; and
- (c) all applicable Law about the processing of personal data and privacy;

“Default” means any breach of the obligations of the Supplier (including abandonment of this Contract in breach of its terms) or any other default (including material default), act, omission, negligence or statement of the Supplier, of its Subcontractors or any Supplier Staff howsoever

arising in connection with or in relation to the subject-matter of this Contract and in respect of which the Supplier is liable to the Authority;

“Deliverable” means all information and data the Supplier creates, identifies for use, or uses as part of or for the Operation of the TQ, including Products and Management Information;

“Department” means the Secretary of State for Education;

“Designated Action” means an action which the Authority requires the Supplier to take within a specified timeframe to obtain and/or maintain IfATE Approval and/or to ensure ongoing compliance of the Supplier with the terms of this Contract and such action may include:

- (a) working in a prescribed way with Authority personnel and/or a third party appointed by the Authority to achieve certain specified performance and/or progress improvements;
- (b) taking appropriate remedial actions in the event that any Initial Development Services and/or interim Products provided during the Development Phase are not in line with the trajectory set out in the Implementation and Delivery Plan;
- (c) temporarily suspending and/or restricting any elements (in full or part) of the Services (including the supply of any Products);
- (d) complying with increased performance monitoring, provision of information and/or increased audit;
- (e) complying with any reasonable instructions of the Authority to help to mitigate actual and/or potential risks associated with delivery of the T Levels Programme; and/or
- (f) providing reasonable cooperation to other Awarding Organisations and third party suppliers of the Authority appointed in connection with the T Levels Programme;

“Development Charge” means the amount (exclusive of any applicable VAT) referred to as the “Qualification development charge” in Schedule 6 (*Pricing Schedule*);

“Development Phase” – The period between commencement of the Contract and the Approval of the TQ, being the period during which the TQ is developed by the Supplier.

“Development Phase Report” means the report referred to in the second row of the first column in the Table in Annex 9 to the Service Requirements and containing the information set out in the second row of the second column of that Table;

“Devolved Administration” means the government of Scotland, Northern Ireland and/or Wales;

“Disclosing Party” means the Party directly or indirectly providing Confidential Information to the other Party in accordance with clause 19 (*What must be kept confidential*);

“Dispute” means any claim, dispute or difference which arises out of or in connection with this Contract or in connection with the negotiation, existence, legal validity, enforceability or termination of this Contract, whether the alleged liability shall arise under English law or under the law of some other country and regardless of whether a particular cause of action may successfully be brought in the English courts;

“Dispute Resolution Procedure” means the dispute resolution procedure set out in clause 38 (*Resolving disputes*);

“Documentation” means descriptions of the Services (including the Products) and KPIs, technical specifications, user manuals, training manuals, operating manuals, process definitions and procedures, system environment descriptions and all such other documentation (whether in hardcopy or electronic form) that is required to be supplied by the Supplier to the Authority under this Contract as:

- (d) would reasonably be required by a competent third party capable of Good Industry Practice contracted by the Authority to develop, configure, build, deploy, run, maintain, upgrade and test the individual systems that are utilised to supply the Services or Products;
- (e) is required by the Supplier in order to supply the Services or Products; and/or
- (f) has been or shall be generated for the purpose of supplying the Services or Products;

“Early Exit” means any termination of this Contract that occurs prior to the Supplier achieving IfATE Approval;

“Effective Date” means the date on which the last Party to sign has signed this Contract;

“Effective Date of Variation” means the date on which the Variation Form comes into effect;

“EIRs” means the Environmental Information Regulations 2004;

“Eligible Provider” means any Provider referred to in the list referenced in Part 1 of Annex 8 to the Service Requirements in respect of the relevant Cohort, as such list may be updated from time to time by the Authority, or notified in writing to the Supplier in accordance with Part 2 of Annex 8 to the Service Requirements;

“Emergency Exit” means any termination of this Contract other than an Early Exit that is a:

- (g) termination of the whole or part of this Contract prior to the Expiry Date (as extended by any Extension Period); or
- (h) wrongful termination or repudiation of this Contract by either Party;

“Employee Liability” means all claims, actions, proceedings, orders, demands, complaints, investigations (save for any claims for personal injury which are covered by insurance) and any award, compensation, damages, tribunal awards, fine, loss, order, penalty, disbursement, payment made by way of settlement and costs, expenses and legal costs reasonably incurred in connection with a claim or investigation including in relation to the following:

- (i) redundancy payments including contractual or enhanced redundancy costs, termination costs and notice payments;
- (j) unfair, wrongful or constructive dismissal compensation;
- (k) a failure to comply with TUPE;
- (l) compensation for discrimination on grounds of sex, race, disability, age, religion or belief, gender reassignment, marriage or civil partnership, pregnancy and maternity or sexual orientation or claims for equal pay;
- (m) compensation for less favourable treatment of part-time workers or fixed term employees;
- (n) outstanding debts and unlawful deduction of wages including any PAYE and National Insurance in relation to payments made by the Authority or the Replacement Supplier to a Transferring Supplier Employee which would have been payable by the Supplier or the Subcontractor if such payment should have been made prior to the Service Transfer Date and also including any payments arising in respect of pensions;
- (o) claims whether in tort, contract or statute or otherwise;
- (p) any investigation by the Equality and Human Rights Commission or other enforcement, regulatory or supervisory body and of implementing any requirements which may arise from such investigation;

“Employer” means any employer who has or is likely to employ Students who have successfully obtained a T Level qualification;

“Employer and Provider Engagement Strategy” means a clear and detailed strategy detailing the approach to engaging with Employers and Providers in relation to the design, development, delivery, validation and update of the TQ and the Services, including the

approach to sharing early and/or amended drafts of the Initial TQ Deliverables and TQ Deliverables with Employers and Providers (as applicable);

"Employer Set Project Grade Exemplar Responses" means actual marked examples of Students' assessment evidence, selected after awarding, as referred to in Service Requirement 5.1, which; meet the requirements for grade A and grade E; are produced (and reviewed each Academic Year) in consultation with Employers; and are accompanied by an explanatory commentary;

"Employer Set Project Guide Exemplar Responses" means indicative guide examples of Students' assessment evidence as referred to in Service Requirement 5.1, which; the Supplier judges would be likely to meet the minimum requirements for grade A and grade E; are produced in consultation with Employers; and are accompanied by an explanatory commentary;

"End Date" means the earlier of:

- (a) the Expiry Date (as extended by any Extension Period implemented by the Authority under clause 15 (*Ending or extending this Contract*) or as reduced by the Authority in accordance with clause 14.3.2 (*What may happen if there are issues with your provision of the Services*); or
- (b) if this Contract is terminated before the date specified in (a) above, the date of termination of this Contract;

"Enhanced Entry Fee" shall have the meaning given in paragraph 2.3 of Schedule 6A (Adaptive Pricing);

"Entry Fee" shall have the meaning as referred to at subsection (a) of the definition of Fees;

"Entry Transition Period" means the period from the Effective Date of this Contract to the End Date of the Authority's Contract with the Former Supplier, eg from the point when the Supplier has been awarded a contract for provision of the TQ, but a contract with the Former Supplier remains in place for existing Students;

"Entry Transition Plan" means the plan produced as part of the Supplier's Tender, and included in Schedule 5 (*Supplier's Response*), where relevant, and updated by the Supplier as contemplated by Schedule 4 (*Co-Operation*);

"Environmental Policy" means to conserve energy, water, wood, paper and other resources, reduce waste and phase out the use of ozone depleting substances and minimise the release

of greenhouse gases, volatile organic compounds and other substances damaging to health and the environment, including any written environmental policy of the Authority;

“Equality and Human Rights Commission” means the UK Government body named as such as may be renamed or replaced by an equivalent body from time to time;

“ESFA” means the Education and Skills Funding Agency;

“Exclusive Cohort” has the meaning given in clause 2.2 (*Appointment and exclusivity*);

“Exclusive TQ Change” means:

- (q) the addition of one or more new Occupational Specialist Component(s) which are to be added to the TQ following the Initial Content Date; and/or
- (r) the removal of one or more Occupational Specialist Component(s); and/or
- (s) a TQ Change which is requested by the Authority as a result of revision to a relevant Standard arising out of a statutory review of such Standard by the Authority under section A2D3 of the Apprenticeships, Skills, Children and Learning Act 2009;

“Exemplification Materials” means the Guide Standard Exemplification Materials and the Grade Standard Exemplification Materials;

“Exit Information” has the meaning given to it in paragraph 3.2 of Schedule 12 (*Exit Management*);

“Exit Plan” means the plan produced and updated by the Supplier during the Term in accordance with paragraphs 1 and 2 of Schedule 12 (*Exit Management*);

“Expiry Date” means 2 years following expiry of the final Academic Year for the final Exclusive Cohort;

“Extension Entry Fee” shall have the meaning given in paragraph 3.1.2 of Schedule 6A (Adaptive Pricing);

“Extension Period” means a period equal to that required to provide the Services (including the supply of any Products) to extend the contract –

- (a) for one further Cohort, such period to commence at the start of the Academic Year immediately following the end of the Academic Year in which the fifth Exclusive Cohort commences the TQ; and, at the Authority’s discretion;

- (b) for a second further Cohort, such period to commence at the start of the Academic Year immediately following the end of the Academic Year in which the sixth Exclusive Cohort commences the TQ; and at the Authority's discretion;
- (c) for a third further Cohort, such a period to commence at the start of the Academic Year immediately following the end of the Academic Year in which the seventh Exclusive Cohort commences the TQ;

“Extension Review” shall have the meaning given in paragraph 1.1.2 of Schedule 6A (Adaptive Pricing);

“Fees” means:

- (a) in respect of the provision of the Provider Services (other than the Additional Services), the amount (exclusive of any applicable VAT) referred to as “Entry fee” in Schedule 6 (*Pricing Schedule*) payable per registered Student to the Supplier by the Approved Providers in accordance with clause 4.1.2 (*Pricing and payments*); and
- (b) the Additional Services, the amount (exclusive of any applicable VAT) applicable to the relevant Additional Service as set against that Additional Service in Schedule 6 (*Pricing Schedule*) payable to the Supplier by the Approved Providers in accordance with clause 4.1.2 (*Pricing and payments*);
- (c) in each case, as such fees are adjusted in accordance with clauses 4.12 and 4.13 (*Pricing and payments*);

“First Extension” shall have the meaning given in paragraph 3.1 of Schedule 6A (Adaptive Pricing);

“Final Approval Milestone” means the Milestone set out in the third row of the Table in Annex 7 to the Service Requirements;

“Final Approval Milestone Date” means the date set out against the Final Approval Milestone in the second column of the Table at Annex 7 to the Service Requirements;

“Final Milestone Payment” means an amount equal to 30% of the Development Charge;

“Final Re-Submission” means the relevant documentation and/or additional information that the Supplier is required to re-submit in accordance with clause 5.13.2 (*Developing the TQ and achieving IfATE Approval*);

“Final Submission” means the Submission applicable to the Final Approval Milestone;

“Final Updated Projection” shall have the meaning given in paragraph 3.1.1 of Schedule 6A (Adaptive Pricing);

“FOIA” means the Freedom of Information Act 2000 as amended from time to time and any subordinate legislation made under that Act from time to time together with any guidance and/or codes of practice issued by the Information Commissioner or relevant Government department in relation to such legislation;

“Force Majeure Event” means, subject to clause 24.4 (*Circumstances beyond either Party’s control*), any event outside the reasonable control of either Party affecting its performance of its obligations under this Contract arising from acts, events, omissions, happenings or non-happenings beyond its reasonable control and which are not attributable to any wilful act, neglect or failure to take reasonable preventative action by that Party, including acts of God, riots, war or armed conflict, acts of terrorism, acts of government, local government or regulatory bodies, fire, flood, storm or earthquake, or disaster but excluding any industrial dispute relating to the Supplier or the Supplier Staff or any other failure in the Supplier’s or a Subcontractor’s supply chain;

“Force Majeure Notice” means a written notice served by the Affected Party on the other Party stating that the Affected Party believes that there is a Force Majeure Event;

“Former Supplier” means the Awarding Organisation that is operating or operated the T Level technical education qualification under the Original Contract;

“Former Supplier’s TQ” means a technical education qualification forming part of the T Levels Programme which is replaced by the TQ which is the subject of this Contract;

“Former Supplier’s TQ Specification” means the Specification of Content, the Scheme of Assessment and the Approved Provider’s Quality Assurance Process, designed, developed and delivered by a Former Supplier that meets all of the requirements of the Product Description for the TQ Specification; including any TQ Changes required by the Authority notified to the Former Supplier;

“Future Supplier” means any Awarding Organisation appointed, at any point in the future and including any Replacement Supplier, to operate one or more T Level technical education qualifications by or at the direction of the Authority from time to time, and where the Authority is operating a T Level technical education qualification, shall also include the Authority;

“GDPR” means the General Data Protection Regulation (Regulation (EU) 2016/679);

“General Change in Law” means a Change in Law where the change is of a general legislative nature (including taxation or duties of any sort affecting the Supplier) or which also affects and/or relates to a Comparable Supply;

“Good Industry Practice” means standards, practices, methods and procedures conforming to the Law and the exercise of the degree of skill and care, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced person or body engaged within the relevant industry or business sector;

“Grade Standard Exemplification Materials” means the exemplification materials referred to in, and meeting the requirements of, the relevant part of the Product Description for the Exemplification Materials;

“Guide Standard Exemplification Materials” means the exemplification materials referred to in, and meeting the requirements of, the relevant part of the Product Description for the Exemplification Materials and Approved by the Authority;

“IfATE Approval” means approval by the Authority pursuant to section -A2D3 of the Apprenticeships, Skills, Children and Learning Act 2009 for the TQ to be made available to Approved Providers and/or Students based on the TQ meeting the requirements of paragraph 2.1 or 2.3 of Part 1 of the Services Requirements as applicable to the satisfaction of the Authority;

“IfATE Data” means:

- (a) the data, text, drawings, diagrams, images or sounds (together with any database made up of any of these) which are embodied in any electronic, magnetic, optical or tangible media, including any of the Authority's Confidential Information, and which:
 - (i) are supplied to the Supplier by or on behalf of the Authority; or
 - (ii) the Supplier is required to generate, process, store or transmit pursuant to this Contract;
- (b) any Personal Data for which the Authority is the Controller; or
- (c) Student Related Data;

“Impact Assessment” means an assessment of the impact of a Variation request completed in good faith, including:

- (d) details of the impact of the proposed Variation on the Services (including the supply of the Products) and the Supplier's ability to meet its other obligations under this Contract;
- (e) details of the cost of implementing the proposed Variation;
- (f) details of the ongoing costs required by the proposed Variation when implemented, including any increase or decrease in the Charges and/or the Fees (as applicable), any alteration in the resources and/or expenditure required by either Party and any alteration to the working practices of either Party;
- (g) a timetable for the implementation, together with any proposals for the testing of, the Variation; and
- (h) such other information as the Authority may reasonably request in (or in response to) the Variation request;

“Implementation and Delivery Plan” means the outline Implementation and Delivery Plan prepared by the Supplier as part of the Supplier's Response for implementation of the Services and supply of the Products (including to meet the Milestones) and which, as at the Effective Date, is set out in Schedule 3 (*Implementation*), as such plan is, subject to paragraph 2.5 of Part 1 of the Service Requirements, developed and amended from time to time to fully meet the requirements of the Product Description for the “Implementation and Delivery Plan”;

“Inclusive TQ Change” means any TQ Change that is not an Exclusive TQ Change;

“Indemnifier” means a Party from whom an indemnity is sought under this Contract;

“Information Commissioner” means the UK's independent authority which deals with ensuring information relating to rights in the public interest and data privacy for individuals is met, whilst promoting openness by public bodies;

“Initial Content Date” has the meaning given in clause 8.2 (*TQ Changes*);

“Initial Development Services” shall have the meaning given in paragraph 2.1 of Part 1 of the Service Requirements;

“Initial Projection” shall have the meaning given in paragraph 2.3 of Schedule 6A (*Adaptive Pricing*);

“Initial TQ Deliverables” means each of:

- (a) The TQ Specification;
- (b) TQ Specimen Assessment Materials;
- (c) the Provider Approval Criteria; and
- (d) the Assessment Strategy;

“Insolvency Event” means:

- (a) in respect of a company:
 - (i) a proposal is made for a voluntary arrangement within Part I of the Insolvency Act 1986 or of any other composition scheme or arrangement with, or assignment for the benefit of, its creditors; or
 - (ii) a shareholders' meeting is convened for the purpose of considering a resolution that it be wound up or a resolution for its winding-up is passed (other than as part of, and exclusively for the purpose of, a bona fide reconstruction or amalgamation); or
 - (iii) a petition is presented for its winding up (which is not dismissed within fourteen (14) Working Days of its service) or an application is made for the appointment of a provisional liquidator or a creditors' meeting is convened pursuant to section 98 of the Insolvency Act 1986; or
 - (iv) a receiver, administrative receiver or similar officer is appointed over the whole or any part of its business or assets; or
 - (v) an application order is made either for the appointment of an administrator or for an administration order, an administrator is appointed, or notice of intention to appoint an administrator is given; or
 - (vi) it is or becomes insolvent within the meaning of section 123 of the Insolvency Act 1986; or
 - (vii) being a “small company” within the meaning of section 382(3) of the Companies Act 2006, a moratorium comes into force pursuant to Schedule A1 of the Insolvency Act 1986; or
- (b) in respect of an individual or partnership, any event analogous to those listed in limbs (a) (i) to (vii) (inclusive) occurs in relation to that individual or partnership; or
- (c) any event analogous to those listed in limbs (a) (i) to (vii) (inclusive) occurs under the law of any other jurisdiction;

“Intellectual Property Rights” or “IPR” means:

- (i) copyright, rights related to or affording protection similar to copyright, rights in databases, patents and rights in inventions, semi-conductor topography rights, trade marks, rights in internet domain names and website addresses and other rights in trade or business names, goodwill, designs, Know-How, trade secrets and other rights in Confidential Information;
- (ii) applications for registration, and the right to apply for registration, for any of the rights listed at (a) that are capable of being registered in any country or jurisdiction; and
- (iii) all other rights having equivalent or similar effect in any country or jurisdiction;

“Interim Milestone” means each of the interim Milestones specified in the Table in Annex 7 to the Service Requirements;

“Interim Milestone Payment” means:

- (i) in respect of Interim Milestone 1, an amount equal to 30% of the Development Charge;
- (ii) in respect of the Interim Milestone 2, an amount equal to 40% of the Development Charge;

“IPR Claim” means any claim of infringement or alleged infringement (including the defence of such infringement or alleged infringement) of any IPR, used to provide the Services and/or supply the Products or otherwise provided and/or licensed by the Supplier (or to which the Supplier has provided access) to the Authority in the fulfilment of its obligations under this Contract;

“Issues Log” means the issues log referred to in, and meeting the requirements of, the Product Description for the Issues Log;

“Key Dates Schedule” means a schedule of key dates in relation to the roll-out and operation of the TQ and other technical education qualifications across the T Levels Programme including registration dates and deadlines, assessment dates, and dates for publication of results, which is based on the indicative key dates schedule in Annex 5 to the Service Requirements and is agreed in relation to the T Levels Programme between Awarding Organisations pursuant to Schedule 4 (Co-operation) and Approved by the Authority;

“Key Materials” means materials the IPR in which the Authority reasonably requires ownership of for the Portability Purposes. Examples of where the Authority may reasonably

require ownership of the IPR include because the Authority or a Future Supplier (or, where relevant, a potential Future Supplier) may need to copy or otherwise reproduce such materials (in whole or in part), to supply or communicate the same, or to be able control the use (in whole or in part) of such materials by third parties, or to authorise others to do so.

Key Materials shall include:

- (i) specifications of content for each TQ including core and all specialist components;
- (ii) assessment guidelines (for Providers);
- (iii) quality assurance requirements (for Providers);
- (iv) specimen assessment materials;
- (v) standards exemplification materials;
- (vi) supplementary specimen assessment materials;
- (vii) employer set project guide exemplar responses;
- (viii) employer set project grade exemplar responses;
- (ix) updates or redevelopments of specifications of content;
- (x) updates and redevelopments of any Key Materials; and
- (xi) any materials equivalent to the above to which a Skilled Future Supplier would reasonably require access for the Portability Purposes;

Key Materials shall not include:

- 1. Support Materials, insofar as they are not part of any of the expressly included items listed above;
- 2. question banks, insofar as they are not part of any of the expressly included items listed above and are not developed for the TQ; and
- 3. any systems and platforms used to support the delivery of the TQ, provided that the relevant TQ content or data held in or processed by such systems and/or platforms can be extracted without requiring further processing post-extraction (and the Supplier can demonstrate that they can be so extracted) to enable use of the relevant content and/or data by a Skilled Future Supplier in conjunction with a non-proprietary or generally commercially available system or platform;

“Key Personnel” means the individuals identified as such in the Annex to Schedule 7 (*Staff (including Key Personnel)*) as at the Effective Date or as amended from time to time in accordance with paragraph 1.2 of Schedule 7 (*Staff (including Key Personnel)*);

“Key Roles” means the roles stated in the Annex to Schedule 7 (*Staff (including Key Personnel)*) as at the Effective Date or as amended from time to time in accordance with paragraph 1.2 of Schedule 7 (Staff (including Key Personnel));

“Key Sub-Contract” means each Sub-Contract with a Key Subcontractor;

“Key Subcontractor” means any Subcontractor:

(a) which is relied upon to deliver any material part of the Services (including to supply any Products); and/or

(b) which, in the opinion of the Authority performs (or would perform if appointed) a critical role in the provision of all or any part of the Services (including the supply of any Products),

and which, as at the Effective Date, are listed in Annex 1 to Schedule 8 (Supply Chain (including approved Subcontractors));

“Know-How” means all ideas, concepts, schemes, information, knowledge, techniques, methodology, and anything else in the nature of know-how relating to the Services and/or the Products;

“KPI” means a key performance indicator applicable to the provision of the Services (including the supply of the Products), as set out in the first column of the Table attached at Annex 1 to Schedule 15 (*Monitoring of Performance*);

“KPI Improvement Plan” shall have the meaning given in paragraph 2.2 of Schedule 15 (*Monitoring of Performance*);

“Law” means any law, subordinate legislation within the meaning of Section 21(1) of the Interpretation Act 1978, bye-law, enforceable right within the meaning of Section 2 of the European Communities Act 1972, regulation, order, regulatory policy, mandatory guidance or code of practice, judgment of a relevant court of law, or directives or requirements with which the Supplier is bound to comply;

“Losses” means all losses, liabilities, damages, costs, expenses (including reasonable legal fees), disbursements, costs of investigation, litigation, settlement, judgment, interest and penalties whether arising in contract, tort (including negligence), breach of statutory duty, misrepresentation or otherwise and **“Loss”** shall be interpreted accordingly;

“Management Information” means the management information to be delivered to the Authority by the Supplier, as set out or referred to in Annex 9 to the Service Requirements;

“Mid-term Review” shall have the meaning given in paragraph 1.1.1 of Schedule 6A (Adaptive Pricing);

“Milestone” means an event or task to be performed as part of the provision of the Services (and/or the supply of the Products) by a specific date as described in the first column of the Table in Annex 7 to the Service Requirements;

“Moderation” means the Supplier assessment process designed to ensure that, where Approved Provider marking is undertaken in accordance with the Approved Assessment Strategy, such marking is scrutinised by a Moderator to ensure that it is in line with expected standards and Students’ marks are adjusted where necessary; and **“Moderate”** will be construed accordingly;

“Moderator” means a moderator, external to the Approved Provider, employed or engaged by the Supplier to moderate marking undertaken by assessors employed or engaged by the Approved Provider of Students’ performance in respect of the TQ Live Assessment Materials;

“Month” means a calendar month and **“Monthly”** shall be interpreted accordingly;

“National Insurance” means contributions required by the National Insurance Contributions Regulations 2012 (SI 2012/1868) made under section 132A of the Social Security Administration Act 1992;

“Notified Sub-contractor” means a Sub-contractor to whom Transferring Former Supplier Employees will transfer on a Relevant Transfer Date;

“Occupation” means a set of jobs where the main tasks and duties are characterised by a high degree of similarity, where a “job” is a role connected to a specific employment contract in a workplace;

“Occupational Map” means, for each Route, a map which groups Occupations according to where there is a requirement for shared technical knowledge, skills, and behaviours, and identifies the Occupations for which Standards exist;

“Occupational Standard” means the description of the Occupation and the outcomes (knowledge, skills and behaviours) which a Student will be expected to attain to successfully achieve competence in that Occupation, as approved and published by the Authority;

“Occupational Specialist Component” means each occupational specialist component of the TQ as referred to in the Former Supplier’s TQ Specification and/or if relevant, the Outline Content;

“Ofqual” means the Office of Qualifications and Examinations Regulation, a statutory body created under the Apprenticeships, Skills, Children and Learning Act 2009, as amended by the Education Act 2011, to regulate qualifications, examinations and assessments in England;

“Ofqual Recognition” means recognition of the Supplier by Ofqual in respect of the TQ under section 132 of the Apprenticeships, Skills, Children and Learning Act 2009;

“Ongoing Development Services” shall have the meaning given in paragraph 2.3 of Part 1 of the Service Requirements;

“Operate” in relation to a qualification means to provide the Services or a material part of the Services, or services replacing the Services or a material part of the Services, or of an equivalent character to the Services or a material part of the Services in relation to any other qualification (whether a TQ or not); and “Operation” and other cognate terms shall have a corresponding meaning;

“Operational Delivery Report” means the report referred to in the third row of the first column in the Table in Annex 9 to the Service Requirements and containing the information set out in the third row of the second column of that Table;

“Ordinary Exit” means any termination of this Contract (other than an Early Exit) that occurs as a result of the expiry of the Contract on the Expiry Date (as extended by any Extension Period);

“Original Contract” means the contract entered into between the Authority and the Former Supplier for the provision of Services (including the supply of any Products) for the TQ prior to the Effective Date of this Contract and remains in place until the end of the Entry Transition Period;

“Outline Content” means the outline content developed for the TQ by the Authority;

“Parliament” takes its natural meaning as interpreted by Law;

“Party” means the Authority or the Supplier and **“Parties”** means both of them where the context permits;

“Pathway” means a sub-set of a Route, which groups common sets of Occupations into a number of occupational clusters together;

“Performance Monitoring Methodology” means the required evidence and measurement methodology that is to be applied by the Supplier to assess its performance of the relevant part of the Services (including the supply of any Products) to which the KPI in question relates, as such evidence and measurement methodology are set out in the fifth and sixth columns (respectively) of the Table attached at Annex 1 to Schedule 15 (*Monitoring of Performance*);

“Performance Monitoring Period” means the period set out against the relevant KPI in the fourth column of the Table attached at Annex 1 to Schedule 15 (*Monitoring of Performance*);

“Performance Review Meeting” shall have the meaning given in paragraph 3.2 of Schedule 15 (*Monitoring of Performance*);

“Personal Data” means “personal data” (as defined in the GDPR) that are processed under this Contract;

“Portability Purposes” means in order:

- a) to secure a smooth transition to a Skilled Future Supplier;
- b) to enable the Authority to procure a Skilled Future Supplier (including inviting competition and/or tenders), and for a potential Skilled Future Supplier to compete openly and effectively in any future competition or tender for, delivery and/or Operation of the TQ currently delivered by the Supplier and/or a Replacement TQ;
- c) to enable a Skilled Future Supplier to deliver and/or Operate the TQ and/or a Replacement TQ; to enable the Authority and/or any Skilled Future Supplier to carry out or have carried out any Continuing Activities; and/or
- d) to enable a Skilled Future Supplier to supply, to Providers, the TQ and/or Replacement TQ and sufficient information and materials (including Support Materials) for Providers to deliver the TQ in a Transparent manner;

“Post-Results Services” means the Services described in and/or provided pursuant to paragraph 9 of Part 1 of the Service Requirements, including the Additional Services;

“Pre-Delivery Phase” means the period between the Approval of the TQ and the first teaching of the TQ by Providers, being the period during which Supplier and Providers prepare for delivery;

“Prescribed Person” means a legal adviser, an MP or an appropriate body which a whistleblower may make a disclosure to as detailed in 'Whistleblowing: list of prescribed people and bodies', 5 October 2019, available online at:

<https://www.gov.uk/government/publications/blowing-the-whistle-list-of-prescribed-people-and-bodies--2/whistleblowing-list-of-prescribed-people-and-bodies>;

“Processor” has the same meaning as in the GDPR and **“Processing”**; and **“Processed”** shall be interpreted accordingly;

“Product” means each product listed in the first column of the Table in Part 3 of the Service Requirements;

“Product Description” means the description of the Authority’s minimum requirement for the relevant Product set out in the second column of the Table in Part 3 of the Service Requirements, together with such further information, data and/or content as should reasonably be expected by the Supplier having regard to the Authority’s requirements under this Contract and the Supplier’s obligations under clause 3.1 (*How the Services must be supplied*);

“Prohibited Acts” means:

- (a) to directly or indirectly offer, promise or give any person working for or engaged by the Authority or any other public body a financial or other advantage to:
 - (i) induce that person to perform improperly a relevant function or activity; or
 - (ii) reward that person for improper performance of a relevant function or activity;
- (b) to directly or indirectly request, agree to receive or accept any financial or other advantage as an inducement or a reward for improper performance of a relevant function or activity in connection with this Contract; or
- (c) committing any offence:
 - (i) under the Bribery Act 2010 (or any legislation repealed or revoked by such Act); or
 - (ii) under legislation or common law concerning fraudulent acts; or
 - (iii) defrauding, attempting to defraud or conspiring to defraud the Authority or other public body; or

- (d) any activity, practice or conduct which would constitute one of the offences listed under (c) above if such activity, practice or conduct had been carried out in the UK;

“Provider” means an organisation that has a grant agreement and/or a contract in place with the ESFA to provide qualifications to Students or that provides such services on a privately funded basis;

“Provider Approval” means approval of the Eligible Provider in accordance with clause 7.1 (*Interaction with Providers*);

“Provider Approval Criteria” means the approval criteria referred to in, and meeting the requirements of, the Product Description for the Provider Approval Criteria;

“Provider Contract” means a contract between an Approved Provider and the Supplier in respect of the TQ meeting the requirements set out in Schedule 17 (*Provider Contract requirements*);

“Provider Services” means the Services, other than the Initial Development Services and the Ongoing Development Services;

“Rate Card” means the Supplier’s rate card as set out in Schedule 6 (*Pricing Schedule*);

“Reasonable Adjustments” shall have the meaning given in SR 2.4 of Service Requirement 2 (as defined in the Service Requirements);

“Recipient Party” means the Party which receives or obtains directly or indirectly Confidential Information;

“Reduced Entry Fee” shall have the meaning given in paragraph 2.4 of Schedule 6A (Adaptive Pricing);

“Reduced Extension Entry Fee” shall have the meaning given in paragraph 3.3 of Schedule 6A (Adaptive Pricing);

“Regulated” means the regulation by Ofqual of a qualification which has been Accredited and **“Regulation”** shall be authorised accordingly;

“Regulations” means the Concession Contracts Regulations 2016;

“Relevant Competence” means being a reasonably skilled and competent Awarding Organisation with access to appropriate tools, systems and platforms to operate technical qualifications;

“Relevant Employees” means those employees whose contracts of employment transfer with effect from the Relevant Transfer Date to the Authority or a Replacement Supplier by virtue of the application of TUPE;

“Relevant Requirements” means all applicable Law relating to bribery, corruption and fraud, including the Bribery Act 2010 and any guidance issued by the Secretary of State for Justice pursuant to section 9 of the Bribery Act 2010;

“Relevant Transfer” means a transfer of employment to which TUPE applies;

“Relevant Transfer Date” means in relation to a Relevant Transfer, the date upon which the Relevant Transfer takes place;

“Reminder Notice” means a written notice sent in accordance with clause 4.8 (*Pricing and payments*) given by the Supplier to the Authority providing notification that payment has not been received on time, which must be addressed to the Authority Authorised Representative, must set out the sum due, must reference this Contract and clause 4 (*Pricing and payments*) and attach a copy of the relevant valid invoice;

“Replacement Subcontractor” means a Subcontractor of the Replacement Supplier to whom Transferring Supplier Employees will transfer on a Service Transfer Date (or any Subcontractor of any such Subcontractor);

“Replacement Services” means any services (including the supply of products) which are the same as or substantially similar to any of the Services and which the Authority receives in substitution for any of the Services following the expiry or termination or Partial Termination of this Contract, whether those services are provided by the Authority internally and/or by any third party;

“Replacement Supplier” means any third party provider of Replacement Services appointed by or at the direction of the Authority from time to time, or where the Authority is providing Replacement Services on its own account, shall also include the Authority;

“Replacement TQ” means a technical education qualification forming part of the T Levels Programme to replace either: (i) the TQ which is the subject of this Contract; or (ii) the equivalent technical qualification which is the subject of a contract with a Future Supplier;

“Request for Information” means a request for information or an apparent request for information relating to this Contract or an apparent request for such information under the FOIA or the EIRs;

“Required Insurances” means the insurances that must be held by the Supplier as required by the Authority meeting the requirements set out in Schedule 19 (*Required Insurances*);

“Resource Plan” means the Resource Plan prepared by the Supplier as part of the Supplier’s Response in relation to the Supplier Staff that shall be utilised (and the manner in which such Supplier Staff shall be utilised) by the Supplier in the performance of the Services and which, as at the Effective Date, is set out in Schedule 3 (*Implementation*), as such plan is, subject to paragraph 2.5 of Part 1 of the Service Requirements, developed and amended from time to time to fully meet the requirements of the Product Description for the “Resource Plan”;

“Re-Submission” shall have the meaning given in clause 5.11.2(i) (*Developing the TQ and achieving IfATE Approval*);

“Risk Register” means the risk register referred to in, and meeting the requirements of, the Product Description for the Risk Register;

“Route” means the broadest category of Occupations in an Occupational Map, typically covering an industrial area;

“Route Panel” means the Authority’s panel responsible for managing the development of the TQ Specification, details of which can be found at:

<https://www.gov.uk/government/publications/t-level-panels-membership>;

“Scheme of Assessment” means the scheme of assessment referred to in, and meeting the requirements of, the relevant part of the Product Description for the TQ Specification;

“Security Policy” means the Authority’s security policy, in force as at the Effective Date (a copy of which has been supplied to the Supplier), as updated from time to time and notified to the Supplier;

“Serious Fraud Office” means the UK Government body named as such as may be renamed or replaced by an equivalent body from time to time;

“Services” means the services as described in the Service Requirements (including the Additional Services);

“Service Failure” shall have the meaning given in paragraph 2.2 of Schedule 15 (*Monitoring of Performance*);

“Service Requirements” means the Authority’s requirements for the Services (including the supply of the Products) as set out in Schedule 2 (*Service Requirements*);

“Service Transfer” means any transfer of the Services (or any part of the Services), for whatever reason, from the Supplier or any Subcontractor to a Replacement Supplier or a Replacement Subcontractor;

“Service Transfer Date” means the date of a Service Transfer;

“Skilled Future Supplier” means a Future Supplier with Relevant Competence;

“Social Value” means the additional social benefits that can be achieved in the delivery of the Contract, set out in the Supplier’s Response and/or Supplier’s Tender;

“Special Consideration” shall have the meaning given in SR 2.5 of Service Requirement 2 (as defined in the Service Requirements);

“Specific Change in Law” means a Change in Law that relates specifically to the business of the Authority and which would not affect a Comparable Supply where the effect of that Specific Change in Law on the Services and/or the Products and/or the performance of this Contract is not reasonably foreseeable at the Effective Date. Any change in any Condition of Recognition shall not be a Specific Change in Law;

“Specification of Content” means the specification of the content referred to in, and meeting the requirements of, the relevant part of the Product Description for the TQ Specification;

“Staffing Information” means in relation to all persons identified on the Supplier’s Provisional Supplier Personnel List or Supplier’s Final Supplier Personnel List, as the case may be, such information as the Authority may reasonably request (subject to all applicable provisions of the Data Protection Legislation), but including in an anonymised format:

- (a) their ages, dates of commencement of employment or engagement, gender and place of work;
- (b) details of whether they are employed, self-employed contractors or consultants, agency workers or otherwise;
- (c) the identity of the employer or relevant contracting Party;
- (d) their relevant contractual notice periods and any other terms relating to termination of employment, including redundancy procedures, and redundancy payments;
- (e) their wages, salaries, bonuses and profit sharing arrangements as applicable;
- (f) details of other employment-related benefits, including (without limitation) medical insurance, life assurance, pension or other retirement benefit schemes, share option schemes and company car schedules applicable to them;
- (g) any outstanding or potential contractual, statutory or other liabilities in respect of such individuals (including in respect of personal injury claims);
- (h) details of any such individuals on long term sickness absence, parental leave, maternity leave or other authorised long term absence;
- (i) copies of all relevant documents and materials relating to such information, including copies of relevant contracts of employment (or relevant standard contracts if applied generally in respect of such employees); and
- (j) any other Employee Liability Information” as such term is defined in regulation 11 of TUPE;

“Stakeholders” means the Authority, the Department, ESFA, Ofqual, Providers, Employers and members of the Route Panels;

“Standards” means the Occupational Standards, consisting of a description of the Occupation and the outcomes (knowledge, skills and behaviours) which a Student will be expected to attain to successfully achieve competence in that Occupation, as approved and published by the Authority;

“Storage Media” means the part of any device that is capable of storing and retrieving data;

“Student” means an individual undertaking (or who wishes to undertake) a formal programme of study with an Approved Provider for the T Level of which the TQ forms part;

“Student Information” means information or data relating to an individual Student whether or not the Student can be identified from that information or data;

“Student Related Data” means any information or data relating to Students (including any Student Information) and/or any Provider which is generated and/or acquired by and/or otherwise comes into the possession of the Supplier and/or any Supplier Staff as a result of the performance of the Supplier’s obligations under this Contract;

“Sub-Contract” means any contract or agreement (or proposed contract or agreement), pursuant to which a third party:

- (a) provides the Services and/or supplies any Products (or any part of them) and/or performs the whole or any part of this Contract;
- (b) provides facilities or services necessary for the provision of the Services and/or the supply of any Products (or any part of them) and/or the performs the whole or any part of this Contract; and/or
- (c) is responsible for the management, direction or control of the provision of the Services and/or supply of any Products (or any part of them) and/or the performance of the whole or any part of this Contract;

“Subcontractor” means any person other than the Supplier (and/or an Assessor who is self-employed or who provides services to the Supplier through that Assessor’s own personal service company), who is a party to a Sub-Contract and the servants or agents of that person;

“Submission” means, in respect of the relevant Milestone, the Products set out against that Milestone in the third column of the Table in Annex 7 to the Service Requirements;

“Submission Date” means, in respect of the relevant Milestone, the date set out against that Milestone in the second column of the Table in Annex 7 to the Service Requirements;

“Submission Issues Log” means the issues log referred to in, and meeting the requirements of, the Product Description for the Submission Issues Log;

“Subsequent Transfer” has the meaning given in paragraph 8.1 of Schedule 12 (*Exit Management*);

“Supplementary Specimen Assessment Materials” means a full suite of sample questions and tasks for the Core Component and Occupational Specialist Component(s) (in addition to the TQ Specimen Assessment Materials), as referred to in Service Requirement 5.1;

“Supplier Authorised Representative” means the person referred to in Schedule 20 as such or the representative appointed by the Supplier from time to time in relation to this Contract as

notified in writing (which may, in the case of this specific notification, be by email only) to the Authority;

“Supplier Personnel” means all employees of the Supplier (and any subcontractor) who are wholly or mainly engaged in or assigned to the provision of the Services or any relevant part of the Services including the development of the Products;

“Supplier Staff” means all directors, officers, employees, agents, consultants and contractors of the Supplier (including any Assessor who is self-employed or who provides services to the Supplier through that Assessor’s own personal service company), any Subcontractor engaged in the performance of the Supplier’s obligations under this Contract and any company or organisation noted in the Supplier’s Tender as forming part of the consortium which submitted the Supplier’s Tender (**“Consortium Member”**) and all directors, officers, employees, agents, consultants and contractors of any such Subcontractor and/or any such Consortium Member engaged in the performance of the Supplier’s obligations under this Contract;

“Supplier’s Final Supplier Personnel List” means a list provided by the Supplier of all Supplier Personnel whose will transfer under TUPE on the Service Transfer Date;

“Supplier’s Provisional Supplier Personnel List” means a list prepared and updated by the Supplier of all Supplier Personnel who are at the date of the list wholly or mainly engaged in or assigned to the provision of the Services or any relevant part of the Services which it is envisaged as at the date of such list will no longer be provided by the Supplier;

“Supplier’s Response” means that part of the Supplier’s Tender (including any method statements) which is at Schedule 5 (*Supplier’s Response*);

“Supplier’s Tender” means the Supplier’s selection questionnaire and tender responses submitted in response to the Authority’s advertisement in the Find a Tender Service (as referred to in the Recitals to this Contract) for a provider of the Services and supplier of the Products, as clarified in writing by the Supplier to the Authority prior to the date of this Contract in response to any request for clarification issued by the Authority;

“Supplier Termination Event” means:

- (a) the Supplier (i) commits a material Default which is irremediable; or (ii) commits a material Default which is capable of remedy, but which has not been remedied by the Supplier within 30 days of being notified in writing to do so by the Authority;

- (b) a Conflict of Interest arises in connection with the delivery of the Services (and/or the supply of the Products) to which no mitigation acceptable to the Authority can be promptly identified;
- (c) where a right of termination is expressly reserved in this Contract;
- (d) the Supplier is in material Default in respect of any data handling and/or security requirements set out in clauses 13, 18, 19 or Schedule 9 (*Data Handling and Security Management*) (where applicable);
- (e) an Insolvency Event occurring in respect of the Supplier.
- (f) a change of Control of the Supplier.
 - (i) the Authority has given its prior written consent (not to be unreasonably withheld or conditioned) to the particular change of Control, which subsequently takes place as proposed; or
 - (ii) the Authority has not served its notice of objection within 6 months of the later of the date on which the change of Control took place or the date on which the Authority was given notice of the change of Control;
- (g) a material failure by the Supplier to comply with legal obligations in the fields of environmental, social or labour law;
- (h) the departure from the Supplier of any of its senior officers or Key Personnel where the Authority has reasonable grounds to believe that such departure will impact or could potentially impact the delivery of the Services and/or the supply of any Products unless the Authority has not served its notice of objection within 6 months of the date on which the Authority was informed by the Supplier of such departure;
- (i) the Supplier assigns, transfers or otherwise disposes of its rights, obligations and/or liabilities or seeks to assign, transfer or otherwise dispose of its rights, obligations and/or liabilities under the whole or any part of this Contract to a third party in breach of the terms of this Contract (including in breach of the requirements of paragraph 1 of Schedule 8 (*Supply Chain (including approved Subcontractors)*);
- (j) the Supplier is in Default under clause 31.1 (*Preventing Fraud, Bribery and Corruption*);
- (k) the Supplier provided incorrect or misleading information as part of the Supplier's Tender;
- (l) the Supplier or any Subcontractor or Affiliate through its act or omission brings the Authority, the Department and/or the ESFA and/or the T Levels Programme into disrepute and/or diminishes the trust the public places in the Authority, the Department and/or the ESFA;
- (m) Not used.

- (n) an occurrence of any of the circumstances in regulations 44(1) (a) to (c) of the Regulations;
- (o) this Contract has been substantially modified in breach of regulation 43(10) of the Regulations;
- (p) the Authority discovers that the Supplier was in one of the situations in regulations 38(8) to 38(10) of the Regulations at the time this Contract was awarded;
- (q) the Court of Justice of the European Union uses Article 258 of the Treaty on the Functioning of the European Union (“**TFEU**”) to declare that this Contract should not have been awarded to the Supplier because of a serious breach of the TFEU or the Regulations;
- (r) a Critical Service Failure occurs; or
- (s) the Supplier fails to comply with clause 35.2 (*Tax*) or fails to provide details of steps being taken and mitigating factors pursuant to clause 35.2 (*Tax*) which in the reasonable opinion of the Authority are acceptable;

“Support Materials” means teaching support materials intended for a Provider or Student audience, such as textbooks, and any other materials which the Authority agrees in writing to be Support Materials;

“Target Service Level” means the target performance level set out against the relevant KPI in the third column of the Table attached at Annex 1 to Schedule 15 (*Monitoring of Performance*);

“Technical Qualifications Explanatory Note” means an explanation of TQs, their purpose and how they are delivered;

“Term” means the period commencing on the Effective Date and ending on the End Date;

“Termination Notice” means a written notice of termination given by one Party to the other, notifying the Party receiving the notice of the intention of the Party giving the notice to terminate this Contract on a specified date and setting out the grounds for termination;

“Third Party” means any supplier of services fundamentally the same as the Services (either in whole or in part) immediately before the Effective Date;

“Third Party IPR” means Intellectual Property Rights owned by a third party which is or will be used by the Supplier for the purpose of providing the Services and/or supplying the Products;

“Transferring Former Supplier Employees” means those employees of the Former Supplier to whom TUPE will apply on a Relevant Transfer Date;

“TQ” means the technical education qualification element of the T Level in respect of the Pathway that is (amongst other things) designed, developed and delivered under this Contract;

“TQ Assignment and Licence” means the assignment and licence in respect of certain Intellectual Property Rights in relation to the TQ in the form set out in Schedule 14 (*Form of Assignment and Licence*);

“TQ Change” means any change or variation to the content of the TQ;

“TQ Content Updating Schedule” means the schedule of dates set out in Annex 6 to the Service Requirements (or such other dates as may be agreed by the Authority from time to time) applicable to the relevant Inclusive TQ Change or Exclusive TQ Change (as the case may be);

“TQ Core Component” means the core component of the TQ referred to in the Former Supplier’s TQ Specification and/or if relevant, the Outline Content;

“TQ Deliverables” means:

- (a) in the period prior to the Supplier making available the Grade Standard Exemplification Materials referred to in paragraph 6.2.2 of Part 1 of the Service Requirements, the Approved Initial TQ Deliverables and the Approved Guide Standard Exemplification Materials; and
- (b) in the period following the Supplier making available the Grade Standard Exemplification Materials referred to in paragraph 6.2.2 of Part 1 of the Service Requirements:
 - (i) the Approved Initial TQ Deliverables; and
 - (ii) the Grade Standard Exemplification Materials,

in each case, as amended in accordance with this Contract;

“TQ Development Meeting” shall have the meaning given in clause 5.4 (*Developing the TQ and achieving IfATE Approval*);

“TQ Live Assessment Materials” shall have the meaning given in Schedule 2 (*Service Requirements*);

“TQ Specification” means the Specification of Content, the Scheme of Assessment and the Approved Provider’s Quality Assurance Process;

“TQ Specimen Assessment Materials” means the specimen assessment materials referred to in, and meeting the requirements of, the Product Description for the TQ Specimen Assessment Materials;

“T Level” means the technical study programme known as a “T Level”;

“T Level Awarding Organisations” shall have the meaning given in paragraph 1.1 of Schedule 4 (*Co-operation*);

“T Level Branding Guidelines” means the Authority’s written guidelines prescribing the permitted form and manner in which the trade marks (the “*Mark*” as defined within the T Level Trade Mark Licence) may be used and setting out how the Supplier branding may be used in relation to materials used in the operation of the TQ or to promote the TQ, a copy of which is set out in the document entitled T Level Branding Guidelines, including any amendments or additions notified by the Authority to the Supplier from time to time, provided that the Authority shall where possible provide reasonable notice in writing to the Supplier of any proposed amendments or additions to such guidelines;

“T Level Panel” means the group of Employers, professionals and practitioners appointed to advise on the content of the T Level of which the TQ forms part;

“T Level Trade Mark Licence” means the trade mark licence granted pursuant to Schedule 16 (*Logos and Trademarks – T Level Trade Mark Licence*);

“T Levels Programme” means the programme of technical education in England managed by the Authority and known as “T Levels”;

“Transferable Contracts” means Sub-Contracts, or other agreements which are necessary to enable the Authority or any Replacement Supplier to provide the Services and/or develop, maintain or supply the Products or the Replacement Services, including all relevant Documentation;

“Transferring Supplier Employee” means those employees whose contract of employment will be transferred to the Authority or a Replacement Supplier pursuant to TUPE on expiry or termination of this Contract;

“Transition Period” means the period from a Replacement Supplier or Future Supplier commencing any aspects of development or delivery of the TQ to the End Date, eg from the point when the Replacement Supplier or Future Supplier has been awarded a contract for provision of the TQ, but while this Contract remains in place for existing Students;

“Transparency Information” has the meaning given to it in clause 20 (*When information can be shared*);

“Transparency Reports” means: (i) the Management Information relating to the Services and performance of this Contract which the Supplier is required to provide to the Authority in accordance with the reporting requirements set out in the Service Requirements; and (ii) the output of any survey commissioned by the Authority in connection with the performance of the Supplier under this Contract;

“Transparent” means that Students and Employers will regard the TQ delivered by a Future Supplier as materially the same as the TQ delivered and operated by the (existing) Supplier;

“TUPE” means the Transfer of Undertakings (Protection of Employment) Regulations 2006 (2006/246) and/or any other regulations or other legislation enacted for the purpose of implementing or transposing the Acquired Rights Directive (77/187/EEC, as amended by Directive 98/50 EC and consolidated in 2001/23/EC) into English law;

“TUPE Information” has the meaning given in paragraph 8.5 of Schedule 12 (*Exit Management*);

“Updated Projection” shall have the meaning given in paragraph 2.1 of Schedule 6A (*Adaptive Pricing*);

“Variation” means any variation or change to this Contract which is not an Inclusive TQ Change;

“Variation Form” means the form set out in Schedule 11 (*Change Management*);

“VAT” means value added tax in accordance with the provisions of the Value Added Tax Act 1994; and

“Working Day” means any day other than a Saturday or Sunday or public holiday in England and Wales.

Schedule 2

Service Requirements

The content for this Schedule is contained in a separate file at:

S2_GEN2W1_DSP_Service_Requirements

S2_A3_GEN2W1_DSP_TQ_Spec

Schedule 2

Service Requirements

S2_GEN2W1_DSP_Service_Requirements

Schedule 2

Service Requirements

Definitions

In this Service Requirements, the following terms shall have the following meanings:

“Appeal” shall have the meaning given in SR 8.2 in Service Requirement 8;

“Approved Assessment Strategy” means the Assessment Strategy approved by the Authority in accordance with clause 5.13 (*Developing the TQ and achieving IfATE Approval*) or clause 8 (*TQ Changes*) (as the case may be), subject to paragraph 2.6 of Part 1 of the Service Requirements, as amended from time to time in accordance with this Contract;

“Approved Guide Standard Exemplification Materials” means the Guide Standard Exemplification Materials approved by the Authority in accordance with clause 5.13 (*Developing the TQ and achieving IfATE Approval*) subject to paragraph 2.6 of Part 1 of the Service Requirements, as amended from time to time in accordance with this Contract;

“Component” means the TQ Core Component or any Occupational Specialist Component (as the case may be) and **“Components”** shall mean both or all of them (as the context may require);

“Employer Set Project” means a project set collaboratively between the Supplier and Employers, as more particularly referred to in Service Requirement 2;

“External Examination” means each assessment by examination which is:

- (a) set by the Supplier;
- (b) designed to be taken simultaneously by all Students taking the relevant assessment at a time (subject to compliance with the requirements of the Key Dates Schedule for the relevant Academic Year) determined by the Supplier;
- (c) taken under conditions specified by the Supplier (including conditions relating to the supervision of Students taking the relevant assessment and the duration of the assessment); and
- (d) marked by the Supplier.

“First Teach Cohort” means the first group of Students to be assessed on the TQ;

“Guided Learning” means the activity of a Student being taught or instructed by, or otherwise participating in education or training under the immediate guidance or supervision of a lecturer, supervisor, tutor or other appropriate provider of education or training. For these purposes the activity of ‘participating in education or training’ shall be treated as including the activity of being assessed if the assessment takes place under the immediate guidance or supervision of a lecturer, supervisor, tutor or other appropriate provider of education or training;

“Occupational Entry Competence” means that level of competence that:

- (a) signifies that a Student is well-placed to develop full occupational competence, with further support and development, once in employment;
- (b) is as close to full occupational competence as can be reasonably expected of a Student studying the TQ in a classroom-based setting (e.g. in the classroom, workshops simulated working and (where appropriate) supervised working environments); and
- (c) signifies that a Student has achieved the level for a pass in relation to the relevant Occupational Specialist Component;

“Qualification Purpose” means the purpose of the TQ set out in Annex 1 of this Service Requirements;

“Service Definition Table” means the Table set out in Part 2 of this Service Requirements;

“Service Requirement 1” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 1: Designing, developing and managing TQ Content” in the Service Definition Table;

“Service Requirement 2” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 2: Assessment Design and Delivery” in the Service Definition Table;

“Service Requirement 3” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 3: Grading and Awarding” in the Service Definition Table;

“Service Requirement 4” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 4: Provider Approval” in the Service Definition Table;

“Service Requirement 5” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 5: Provider Support” in the Service Definition Table;

“Service Requirement 6” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 6: Student registration and Student entry” in the Service Definition Table;

“Service Requirement 7” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 7: TQ Results” in the Service Definition Table;

“Service Requirement 8” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 8: TQ Post-Results Services” in the Service Definition Table;

“Service Requirement 9” means that part of the Services (including the requirements for and the outcomes to be achieved by the Supplier as a result of the performance of that part of the Services) set out or referred to under the heading of “Service Requirement 9: Reporting” in the Service Definition Table;

“TQ Critical Path Diagram” means the diagram setting out the critical path for the design, development and delivery of the TQ attached at Annex 4 to the Service Requirements;

“TQ Live Assessment Materials” means the live assessment materials referred to in, and meeting the requirements of, the Product Description for the TQ Live Assessment Materials.

Part 1 – Overview of the Service Requirements

1 Introduction

1.1 This Part 1 of this Service Requirements sets out:

- 1.1.1 at paragraph 2, that part of the Services relating to the design, development and delivery of the Initial TQ Deliverables and Guide Standard Exemplification Materials and the review and update of such Initial TQ Deliverables and/or the TQ Deliverables (as the case may be), including the Initial Development Services and the Ongoing Development Services;
- 1.1.2 at paragraph 3, that part of the Services relating to the Provider Approval and monitoring services (as detailed in that paragraph 3);
- 1.1.3 at paragraph 4, that part of the Services relating to the support to be provided to Eligible Providers and Approved Providers (as detailed in that paragraph 4);
- 1.1.4 at paragraph 5, that part of the Services relating to Student registration and Student assessment entry (including Additional Services) (as detailed in that paragraph 5);
- 1.1.5 at paragraph 6, that part of the Services relating to the design and delivery of the TQ Live Assessment Materials (as detailed in that paragraph 6);
- 1.1.6 at paragraph 7, that part of the Services relating to grading and awarding in respect of each Student's performance in respect of the TQ Live Assessment Materials (as detailed in that paragraph 7);
- 1.1.7 at paragraph 8, that part of the Services relating to the provision of results (as detailed in that paragraph 8);
- 1.1.8 at paragraph 9, that part of the Services relating to the provision of Post-Results Services (including Additional Services) (as detailed in that paragraph 9);
- 1.1.9 at paragraph 10, that part of the Services relating to the reporting of Management Information (as detailed in that paragraph 10); and

- 1.1.10 at paragraph 11, such other services as may be necessary to support and/or are associated with the provision of the Services (as detailed in that paragraph 11).
- 1.2 Paragraphs 2 (*Initial TQ Deliverables and development services*) to 9 (*TQ Post-Results Services*) shall be read in conjunction with the TQ Critical Path Diagram.
- 1.3 The Supplier shall design, develop, obtain IfATE Approval for, and deliver to Approved Providers in England, the technical qualification element of the T Level for the relevant Pathway under this Contract, including, without prejudice to its obligations in clause 3.1.8 (*How the Services must be supplied*), performing all of the Services set out in this Service Requirements.
- 1.4 Unless otherwise stated in this Service Requirements, the Supplier shall organise and deliver the Services:
 - 1.4.1 to ensure that the activities contemplated by the Key Dates Schedule for the relevant Academic Year and/or the TQ Content Updating Schedule (and which rely on the performance of the whole or any part of the Services) can be carried out and completed in accordance with such Key Dates Schedule and/or the TQ Content Updating Schedule (as the case may be);
 - 1.4.2 in accordance with the Implementation and Delivery Plan;
 - 1.4.3 in accordance with the Resource Plan;
 - 1.4.4 in accordance with the Approved Assessment Strategy; and
 - 1.4.5 (at all times) taking into account the aims of the Qualification Purpose.
- 1.5 The Supplier shall, subject to paragraphs 2.5 and 2.6 (*Initial TQ Deliverables and development services*) and paragraph 6.3 (*TQ live assessment design and delivery*) and without prejudice to paragraph 2.1 to 2.4 (*Initial TQ Deliverables and development services*) (inclusive), provide a copy of any Products that are developed, amended, updated and/or supplemented from time to time by the Supplier in accordance with this Contract to the Authority as soon as reasonably practicable following such development, amendment, update and/or supplement.
- 1.6 If there is any conflict and/or inconsistency between the provisions of this Service Requirements and the Conditions of Recognition, the Conditions of Recognition shall prevail.

- 1.7 Without prejudice to paragraph 1.4.1, the Supplier shall organise and deliver the Services to ensure that all applicable parts of the Services are provided at such times and in such manner as shall be necessary to facilitate the delivery of the number of assessment series for the TQ as shall be contemplated by the Key Dates Schedule for the relevant Academic Year, subject always to the provisions of paragraphs 1.8 to 1.10 (inclusive).
- 1.8 The Supplier shall ensure that there shall be at least one, but not more than two, assessment series in each Academic Year in respect of each of the assessments for:
- 1.8.1 the TQ Core Component (comprising the External Examination and the Employer Set Project); and
- 1.8.2 the Occupational Specialist Components.
- 1.9 The Supplier acknowledges that the assessments in each Academic Year for the TQ Core Component and the Occupational Specialist Components referred to in paragraph 1.8 may be, but are not required to be, held in the same assessment series and so therefore can be for example:
- 1.9.1 provided in a single assessment series (encompassing both such assessments for the TQ Core Component and the Occupational Specialist Components); or
- 1.9.2 provided in two assessment series (for each of such assessments for the TQ Core Component and the Occupational Specialist Components) being a total of four assessment series.
- 1.10 The Supplier shall ensure that:
- 1.10.1 each Student takes all of the assessments for the TQ Core Component referred to in paragraph 1.8.1;
- 1.10.2 each Student takes all of the assessments for each individual Occupational Specialist Component referred to in paragraph 1.8.2 in the same assessment series;
- 1.10.3 a Student may, subject to paragraphs 1.10.1 and 1.10.2, take the assessments for the TQ Core Component and the Occupational Specialist Components referred to in paragraph 1.8 in different assessment series (including assessment series in different Academic Years); and

- 1.10.4 its approach to the scheduling of the assessments shall be set out in its Assessment Strategy.

2 Initial TQ Deliverables and development services

Initial Development Services

- 2.1 Without prejudice to the Supplier's obligations in clause 3.1 (*How the Services must be supplied*) and clause 5 (*Developing the TQ and achieving IfATE Approval*), the Supplier shall design, develop and deliver the Initial TQ Deliverables in accordance with (and meeting all of the requirements of):
- 2.1.1 the Product Description for each item forming part of the Initial TQ Deliverables;
 - 2.1.2 the Former Supplier's TQ Specification and/or ,if relevant, the Outline Content;
 - 2.1.3 the requirements set out in the third column of Service Requirement 1, Service Requirement 2, Service Requirement 3 and Service Requirement 4;
 - 2.1.4 the Implementation and Delivery Plan (including the Supplier's obligation to work with and consult (and take into account the outcome of such working with and consultation of) a representative sample of Providers and Employers (as required by that Implementation and Delivery Plan);
 - 2.1.5 the Resource Plan;
 - 2.1.6 the Assessment Strategy; and
 - 2.1.7 Annex 7 (*Initial Development Milestones*) to this Service Requirements,
- and, in each case, to ensure the delivery of a high quality technical education qualification element of the T Level for the relevant Pathway and that the outcomes referred to in the first column of Service Requirement 1, Service Requirement 2, Service Requirement 3 and Service Requirement 4 are achieved (the "**Initial Development Services**").
- 2.2 The Supplier shall procure that, without prejudice to its obligations in clause 5.13.2 (*Developing the TQ and achieving IfATE Approval*), the Initial TQ Deliverables

(meeting all of the requirements of paragraph 2.1) shall be delivered to the Authority on or prior to the Final Approval Milestone Date.

Ongoing Development Services

2.3 The Supplier shall procure that (without prejudice to the Supplier's obligations in clause 3.1 (*How the Services must be supplied*) and clause 5.3 (*Developing the TQ and achieving IfATE Approval*) and notwithstanding the achievement of IfATE Approval in respect of the Initial TQ Deliverables) throughout the Term the TQ Deliverables meet (and continue to meet) all of the requirements of:

- 2.3.1 the Product Description for each item forming part of the TQ Deliverables;
- 2.3.2 the Former Supplier's TQ Specification and, if relevant, the Outline Content;
- 2.3.3 the requirements set out in the third column of Service Requirement 1, Service Requirement 2, Service Requirement 3 and Service Requirement 4;
- 2.3.4 the Implementation and Delivery Plan (including the Supplier's obligation to work with and consult (and take into account the outcome of such working with and consultation of) a representative sample of Providers and Employers (as required by that Implementation and Delivery Plan));
- 2.3.5 the Resource Plan;
- 2.3.6 the Approved Assessment Strategy; and
- 2.3.7 clause 8 (*TQ Changes*) and Annex 6 (*TQ Content Updating Schedule*) to this Service Requirements,

and in each case, to ensure the continued delivery of a high quality technical education qualification element for the T Level for the relevant Pathway and that the outcomes referred to in the first column of Service Requirement 1, Service Requirement 2, Service Requirement 3 and Service Requirement 4 are achieved (the "**Ongoing Development Services**").

2.4 The Supplier shall procure that the TQ Deliverables (as amended, supplemented or replaced in accordance with clause 8 (*TQ Changes*) and Annex 6 (*TQ Content Updating Schedule*) to this Service Requirements) shall be delivered to the Authority

on or prior to the applicable date specified on the Key Dates Schedule for the relevant Academic Year or TQ Content Updating Schedule (as applicable).

Updating the Implementation and Delivery Plan and the Resource Plan

- 2.5 Subject to the provisions of paragraph 3 (*Key Personnel*) of Schedule 7 (*Staff including Key Personnel*), the Parties acknowledge and agree that the Implementation and Delivery Plan and the Resource Plan are intended to be live documents that may need to flex from time to time to ensure the continued successful delivery of the Services to the standards required by this Contract and the Supplier shall, throughout the Term, review, amend and update (as necessary) each of the Implementation and Delivery Plan and the Resource Plan to ensure that such Implementation and Delivery Plan and Resource Plan takes into account (and (where applicable) mitigates the effects of) all relevant factors that have impacted or may impact upon the successful delivery of the Services to the standards required by this Contract, provided always that where any such review, amendment and/or update would (or is reasonably likely to) operate to reduce and/or otherwise diminish the Authority's rights and/or remedies and/or the Supplier's liabilities contemplated by this Contract (including where, but for such review, amendment and/or update, the Supplier would (or would be reasonably likely to) be in Default under this Contract), the Supplier shall:
- 2.5.1 submit such proposed reviewed, amended and/or updated Implementation and Delivery Plan and/or Resource Plan (as the case may be) to the Authority for Approval; and
- 2.5.2 where the Supplier does not obtain such Approval, the Implementation and Delivery Plan and/or Resource Plan (as the case may be) shall be deemed not to have been so reviewed, amended and/or updated to the extent that such review, amendment and/or update would (or would be reasonably likely to) operate to so reduce the Authority's rights and/or remedies and/or the Supplier's liabilities under this Contract.

Updating the Approved Initial TQ Deliverables and TQ Deliverables

- 2.6 The Supplier shall, notwithstanding the achievement of IfATE Approval in relation to the Initial TQ Deliverables and subject to the provisions of clauses 8.4 and 8.5 (*TQ Changes*) and Annex 6 (*TQ Content Updating Schedule*) to this Service Requirements (which shall apply in respect of the annual review referred to in such clauses 8.4 and 8.5 (*TQ Changes*)), be required to keep under review, and entitled to amend and update, the Approved Initial TQ Deliverables and the TQ Deliverables throughout the

Term to ensure that the Supplier continues to meet its obligations under paragraph 2.3, provided always that the Supplier shall:

- 2.6.1 notify the Authority (as part of the Operational Delivery Report) of any proposed amendments and/or updates to such Approved Initial TQ Deliverables and/or TQ Deliverables; and
- 2.6.2 comply with the applicable requirements of clauses 8.10 and 8.11 (*TQ Changes*) prior to making available any such amended and/or updated Approved Initial TQ Deliverables and/or TQ Deliverables to Approved Providers and provided further that the words “*by the relevant date prescribed by the TQ Content Updating Schedule*” in such clauses 8.10 and 8.11 shall be deemed to be deleted for the purposes of this paragraph 2.6.

3 TQ Provider Approval and monitoring services

- 3.1 Without prejudice to the Supplier’s obligations in clause 3.1 (*How the Services must be supplied*), the Supplier shall, following IfATE Approval:
 - 3.1.1 provide that part of the Services referred to in the third column of Service Requirement 4 to ensure that the outcomes referred to in the first column of Service Requirement 4 are achieved; and
 - 3.1.2 monitor the delivery by Approved Providers of the TQ (and the Approved Provider’s continuing satisfaction of all of the requirements of the Provider Approval Criteria) in accordance with the monitoring arrangements set out in the Approved Assessment Strategy.¹
- 3.2 Without prejudice to the Supplier’s obligations in clause 3.1 (*How the Services must be supplied*) and paragraph 10.1 (*Reporting*) below, the Supplier shall notify the Authority (and provide full details of the circumstances) as soon as reasonably practicable where:
 - 3.2.1 it reasonably believes that an Eligible Provider may not become an Approved Provider;
 - 3.2.2 an Eligible Provider does not become an Approved Provider;

¹ These proposed arrangements should form part of the Supplier Response.

- 3.2.3 it reasonably believes that an Approved Provider may cease to be an Approved Provider;
- 3.2.4 an Approved Provider ceases to be an Approved Provider; and/or
- 3.2.5 the monitoring referred to in paragraph 3.1.2 reveals (and/or the Supplier otherwise becomes aware of):
 - (i) any failure by the Approved Provider to comply with the Approved Provider's Quality Assurance Process in the applicable Provider Contract;
 - (ii) any event, matter or circumstance which has had (or is reasonably likely to have) an adverse impact on Students (including as a result of an Appeal referred to in Service Requirement 8) and/or shall or may bring the T Level Programme into disrepute; and/or
 - (iii) any malpractice and/or maladministration on the part of the Approved Provider (including where any confidential TQ Live Assessment Materials (and/or the content of or information about such TQ Live Assessment Materials) is lost, stolen or transmitted).
- 3.3 The Supplier shall, as soon as reasonably practicable following the occurrence or identification of any matter referred to in paragraph 3.2, notify the Eligible Provider or Approved Provider (as the case may be) of any steps that are necessary to be taken by such Eligible Provider or Approved Provider (as the case may be) to remedy such matters and/or such failure and shall (as soon as reasonably practicable) notify the Authority (and provide full details) of such steps, together with details of the action that the Supplier will be taking to:
 - 3.3.1 procure that the Eligible Provider or Approved Provider (as the case may be) takes such steps; and/or
 - 3.3.2 mitigate the effects of such failure and/or matters.
- 3.4 The Supplier shall:
 - 3.4.1 use all reasonable endeavours to procure that the Eligible Provider or Approved Provider (as the case may be) takes the steps referred to in paragraph 3.3; and

3.4.2 take the action referred to in paragraph 3.3,

together with, in either case, such further steps and/or action as the Authority may reasonably require following the notification referred to in paragraph 3.3.

3.5 The Supplier shall (in such manner (including as to timing) as the Authority may reasonably require) keep the Authority updated as to:

3.5.1 the progress by the Eligible Provider or Approved Provider (as the case may be) with the taking of the steps referred to in paragraph 3.3 (including (where applicable) whether the event, matter or circumstance giving rise to the requirement for the taking of such steps has been (or is reasonably likely to be) remedied); and

3.5.2 the action that the Supplier is taking and has taken in accordance with paragraph 3.4,

provided always that where the Supplier fails to comply with its obligations in paragraphs 3.2 to 3.4 (inclusive), such failure shall (notwithstanding the provisions of clauses 14.2.1 to 14.2.10 (*What may happen if there are issues with your provision of the Services*)) be deemed to give rise to a right for the Authority to issue written notification of Designated Action to the Supplier, to which the provisions this Contract (including clause 14.2 (*What may happen if there are issues with your provision of the Services*)) shall apply.

4 TQ Provider support services

4.1 Without prejudice to the Supplier's obligations in clause 3.1 (*How the Services must be supplied*) and Schedule 4 (*Co-operation*), the Supplier shall, throughout the Term, provide that part of the Services referred to in, and in accordance with, the third column of Service Requirement 5 to:

4.1.1 ensure that the outcomes referred to in the first column of Service Requirement 5 are achieved; and

4.1.2 following achievement of IfATE Approval, facilitate the implementation by Providers of the TQ in accordance with the Approved TQ Specification.

4.2 The Supplier shall, subject always to clause 4.12 and 4.13 (*Pricing and payments*), in respect of:

- 4.3 the Fees for the first Academic Year for the first Exclusive Cohort, make available details of the Fees to Eligible Providers and Approved Providers as soon as reasonably practicable;
- 4.4 the Fees for the second Academic Year, make available details of the Fees to Eligible Providers and Approved Providers no later than 30 April prior to the start of the second Academic Year; and
- 4.5 the third and each subsequent Academic Year, publish details of the Fees to Approved Providers no later than 30 April prior to the start of the relevant Academic Year.

5 Student registration and Student entry

- 5.1 The Supplier shall procure that Approved Providers have processes in place (and implement such processes) to ensure that, on or prior to the relevant date specified on the Key Dates Schedule for the relevant Academic Year, each Student is correctly registered for the TQ and in the manner contemplated by Service Requirement 6.
- 5.2 The Supplier shall procure that Approved Providers have processes in place (and implement such processes) to ensure that, on or prior to the relevant date specified on the Key Dates Schedule for the relevant Academic Year, each Student is correctly entered for assessment in respect of:
 - 5.2.1 the TQ Core Component; and
 - 5.2.2 each Occupational Specialist Component,for which they are undertaking assessment.
- 5.3 The Supplier shall, following a request from an Approved Provider, provide the Additional Services referred to as “Late entry or entry amendment”, “Late registration or registration amendment”, “Very late entry or entry amendment” or “Very late registration or registration amendment” (as the case may be) in accordance with the applicable requirements set out against that Additional Service in Annex 10 (*Additional Services*) to this Service Requirements.
- 5.4 Without prejudice to the Supplier’s obligations in clause 3.1 (*How the Services must be supplied*) and paragraph 10.1 (*Reporting*) below, the Supplier shall ensure that, following IfATE Approval and (as applicable) in each Contract Month throughout the remainder of the Term, details of the registrations and assessment entries referred to in paragraph 5.1 and 5.2 are reported to the Authority in the Management Information

that is provided in respect of the Contract Month in which such registrations and/or entries are made, such reports to meet the requirements set out in the third column of each of Service Requirement 6 and Service Requirement 9 to ensure that the outcomes referred to in the first column of each of Service Requirement 6 and Service Requirement 9 are achieved.

5.5 Without prejudice to the Supplier's obligations in clause 3.1 (*How the Services must be supplied*) and elsewhere in this Service Requirements, the Supplier shall, as soon as reasonably practicable after:

5.5.1 becoming aware of any Approved Provider that is not registering any Students for the TQ (as contemplated by paragraph 5.1) and/or not entering Students for assessment (as contemplated by paragraph 5.2); and/or

5.5.2 becoming concerned as to the number of Students being registered for the TQ and/or being entered for assessment,

notify the Authority (together with full details) of such matter and/or concern.

6 TQ live assessment design and delivery

6.1 The Supplier shall (without prejudice to its obligations in clause 3.1 (*How the Services must be supplied*)):

6.1.1 on or prior to the relevant date specified on the Key Dates Schedule for the relevant Academic Year, design, develop and make available to Approved Providers the TQ Live Assessment Materials;

6.1.2 during the period specified on the Key Dates Schedule for the relevant Academic Year, administer the delivery by the Approved Providers of the TQ Live Assessment Materials and mark (or (where applicable) procure the marking and/or Moderation of) Student assessment evidence generated by the application and/or use (as the case may be) of such TQ Live Assessment Materials; and

6.1.3 during the period specified on the Key Dates Schedule for the relevant Academic Year and following a request from an Approved Provider, administer the delivery by that Approved Provider of the TQ Live Assessment Materials in respect of the Additional Services referred to as "Retakes" in accordance with the applicable requirements set out against that Additional Service in Annex 10 (*Additional Services*) of this Service

Requirements and mark (or (where applicable) procure the marking and/or Moderation of) Student assessment evidence generated by the application and/or use (as the case may be) of such TQ Live Assessment Materials,

in each case, in accordance with the then current Approved Assessment Strategy, subject to paragraph 6.2, the then current Approved Guide Standard Exemplification Materials or Grade Standard Exemplification Materials (as the case may be) and the requirements set out in the third column of Service Requirement 2 so as to ensure that the outcomes referred to in the first column of Service Requirement 2 are achieved.

6.2 The Supplier shall:

6.2.1 in respect of the First Teach Cohort for the relevant element of the Occupational Specialist Component, require the implementation and use by Approved Providers (including any assessors employed or engaged by any such Approved Provider and any Moderators where permitted in accordance with the Approved Assessment Strategy) and Assessors of the Approved Guide Standard Exemplification Materials for the purposes of assessing each Student's performance in respect of the TQ Live Assessment Materials; and

6.2.2 following grading of Student performance in respect of the TQ Live Assessment Materials undertaken by the First Teach Cohort of the relevant element of the Occupational Specialist Component and for each subsequent Cohort, develop, make available and require the implementation and use by Approved Providers (including any assessors employed or engaged by any such Approved Provider and any Moderators where permitted in accordance with the Approved Assessment Strategy) and Assessors of the Grade Standard Exemplification Materials.

6.3 The Supplier shall provide a copy of the TQ Live Assessment Materials to the Authority as soon as reasonably practicable following the date on which such TQ Live Assessment Materials are first made available to Students.

7 TQ grade awarding

7.1 Following completion of the live assessments referred to in paragraphs 6.1.2 and 6.1.3 (*TQ live assessment design and delivery*) in the relevant Academic Year, the Supplier shall (as soon as reasonably practicable but not later than the date specified on the Key Dates Schedule for the relevant Academic Year for such live assessments for that

Academic Year) assign a grade to each Student (to reflect the relevant marks awarded to each such Student) in respect of their performance in the assessment for the TQ Core Component and each Occupational Specialist Component that each such Student has undertaken in accordance with the requirements set out in the third column of Service Requirement 3 and so as to ensure that the outcomes referred to in the first column of Service Requirement 3 are achieved.

8 TQ results

8.1 The Supplier shall (as soon as reasonably practicable following completion of its obligations in paragraph 7.1 (*TQ grade awarding*), but not later than the date specified on the Key Dates Schedule for the relevant Academic Year), provide the results for each Student in the Cohort to the Authority or to the Authority's nominee (as notified by the Authority to the Supplier from time to time) in accordance with paragraph 8.2, such results to include details of:

8.1.1 the mark and grade awarded for the TQ Core Component;

8.1.2 the mark and grade awarded for each Occupational Specialist Component;
and

8.1.3 such information and/or data as is required (including grade boundaries) by the Authority to award an overall grade for the T Level,

in each case, in respect of each TQ assessment that the relevant Student has undertaken.

8.2 Without prejudice to the Supplier's obligations in clause 3.1 (*How the Services must be supplied*) and paragraph 10.1 (*Reporting*) below, the Supplier shall ensure that the results referred to in paragraph 8.1 are provided to the Authority or to the Authority's nominee (as notified by the Authority to the Supplier from time to time) and reported to the Authority in the Management Information that is provided in respect of the Contract Month in which such results are required to be provided in accordance with paragraph 8.1, such results and report to meet the requirements set out in the third column of each of Service Requirement 7 and Service Requirement 9 to ensure that the outcomes referred to in the first column of each of Service Requirement 7 and Service Requirement 9 are achieved.

8.3 The Supplier shall (on the date specified on the Key Dates Schedule for the relevant Academic Year) provide to the Approved Provider a breakdown of attainment to allow

any Approved Provider and/or Student to make informed decisions about applications for (amongst other things) marking reviews and/or appeals (including a Review of Marking and/or Appeal as referred to in Annex 10 (*Additional Services*) to this Service Requirements), such breakdown (subject always to the provisions of clauses 13.10 to 13.12 (*Intellectual Property Rights*) (inclusive)) to be presented in such manner and/or format as shall not be capable of being regarded, interpreted and/or represented as a formal qualification certificate or statement of achievement.

9 TQ Post-Results Services

9.1 The Supplier shall, following the provision of the results referred to in paragraph 8.1 (*TQ results*) and, in respect of each Cohort, for a period expiring at the end of 2 Academic Years following the end of the final Academic Year for each such Cohort:

9.1.1 respond to enquiries about results; and

9.1.2 following a request from an Approved Provider made in accordance with the applicable Key Dates Schedule(s) referred to in paragraph 9.2, provide the relevant Additional Services requested by that Approved Provider (other than the Additional Services referred to in paragraph 5.3 (*Student registration and Student entry*) and 6.1.3 (*TQ live assessment design and delivery*), to which the provisions of those paragraphs shall apply) in accordance with the applicable requirements set out against the relevant Additional Services in Annex 10 (*Additional Services*) to this Service Requirements, (including as referred to in, and in accordance with, the third column of Service Requirement 8 to ensure that the outcomes referred to in the first column of Service Requirement 8 are achieved).

9.2 The Parties acknowledge and agree that the time period within which an Approved Provider may request the provision of the Additional Services referred to in paragraph 9.1.2 in relation to a Student that has undertaken an assessment (including an assessment that is a “Retake”, as referred to in Annex 10 (*Additional Services*)) in an assessment series (the “**Relevant Assessment Series**”) shall be as set out in the Key Dates Schedule(s) for the relevant Academic Year(s) applicable to the Relevant Assessment Series (including any Key Dates Schedule applicable to and/or regulating the provision of Additional Services in respect of assessments undertaken in the Relevant Assessment Series), provided always that nothing in this paragraph 9.2 shall operate to:

9.2.1 prevent or restrict (or be deemed to give rise to a right of the Supplier to prevent or restrict) any “Retakes” from being undertaken (or from being requested to be undertaken) in accordance with paragraph 6.1.3; and/or

9.2.2 extend the period referred to in paragraph 9.1.

10 Reporting

10.1 The Supplier shall (without prejudice to its obligations in clause 3.1 (*How the Services must be supplied*)) in each Contract Month throughout the Term, report to the Authority in accordance with (and provide such information as is required by) the requirements set out in the third column of Service Requirement 9 to ensure that the outcomes referred to in the first column of Service Requirement 9 are achieved.

11 Overarching services

11.1 The Supplier shall:

11.1.1 maintain, update and provide to the Authority (as required by clause 5.5.1 and paragraph 3.1 of Schedule 15 (*Monitoring of Performance*)) each of the Risk Register and the Issues Log;

11.1.2 implement, carry out and complete such steps (and within such time) as the Authority shall reasonably require arising out of the review of the Risk Register and/or the Issues Log pursuant to clause 5.5.1 (*Developing the TQ and achieving IfATE Approval*) and paragraph 3.1 of Schedule 15, (*Monitoring of Performance*) provided always that where the Supplier fails to implement, carry out and complete such steps in accordance with such requirements (including within such time), such failure shall (notwithstanding the provisions of clauses 14.2.1 to 14.2.10 (*What may happen if there are issues with your provision of the Services*)) be deemed to give rise to a right for the Authority to issue written notification of Designated Action to the Supplier, to which the provisions of this Contract (including clause 14.2 (*What may happen if there are issues with your provision of the Services*)) shall apply.

11.2 The Supplier shall provide all of the back-office systems and business processes necessary to enable the delivery of the Services, including IT systems, data security systems, accounting and administrative services.

11.3 The Supplier shall:

- 11.3.1 actively promote the T Level for which it is the TQ provider, coordinated in partnership with, and with the Approval of, the Authority; and
- 11.3.2 adhere to the Authority's guidelines in respect of all publicity and marketing material produced by the Supplier (or its Subcontractors) in relation to the T Level for which it is the TQ provider.
- 11.4 The Supplier shall, following any reasonable request from the Authority:
 - 11.4.1 participate in and support any promotional activities intended to increase the uptake of T Levels by Providers and/or Students; and
 - 11.4.2 without prejudice to its obligations in Schedule 4 (*Co-operation*) and Schedule 15 (*Monitoring of Performance*), attend and participate in any such meetings as the Authority may reasonably convene from time to time in connection with the T Levels Programme.

12 Efficiency

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13 Social Value Commitments

- 13.1 The Supplier must ensure it takes reasonable measures to meets its Social Value commitments, in full compliance with its response to Q9.6 of the Award Questionnaire in their tender submission.

Part 2 - Service Definition Table

This Part 2 sets out the outcomes each Service must deliver and the minimum requirements the Supplier must meet when delivering each Service.

Service Requirement 1: Designing, developing and managing TQ content			
Outcomes	SR1.1	1	During the Initial Development, any removal of TQ Specification material from the Specification of Content must be justified and validated by a sufficient and representative sample of Employers. Where the Supplier considers that it is necessary to remove content present in the existing TQ Specification, it shall provide a clear and detailed rationale as part of its Assessment Strategy included with the Submission for Interim Milestone 1 (and any subsequent milestones) to the Authority. Evidence from a representative sample of employers relevant to the sector must also be provided to support any proposals to remove any TQ Specification material from the Specification of Content.-The Authority shall consider whether such content may be removed from the Specification of Content, provided always that the Authority's decision as to whether such content may be removed from the Specification of Content shall be final.
<p>The Specification of Content is sufficiently clear and appropriately detailed to ensure Approved Providers can properly prepare Students for the TQ assessments.</p> <p>The knowledge, understanding, skills and behaviours specified in the Former Supplier's TQ Specification and, if relevant, the Outline Content in relation to the TQ Core Component are up-to-date and have been validated by employers to ensure that the TQ has continued currency among</p>	Maintenance of the Specification of Content	2	During the Initial Development, the inclusion of additional material must be justified and validated by a sufficient and representative sample of Employers as agreed by the Authority. The Supplier shall ensure that the Specification of Content does not include entirely new content, as distinct from updated content, that is not included in the existing TQ Specification, unless otherwise agreed by the Authority. Where the Supplier considers that it is necessary to include entirely new content, it shall provide a clear and detailed rationale as part of its Assessment Strategy included with the Submission for Interim Milestone 1 (and any subsequent milestones) to the Authority. Evidence from a representative sample of employers relevant to the sector must also be provided to support any proposals to remove any TQ Specification material from the Specification of Content. The Authority shall consider whether such new content may be included as part of the Specification of Content, provided always that the Authority's decision as to whether such new content may be included as part of the Specification of Content shall be final. The Supplier must show that new content must be covered at an appropriate depth for a level 3 qualification.

<p>Employers and other end-users (including higher education providers).</p> <p>The knowledge, understanding, skills and behaviours specified in the Former Supplier's TQ Specification and, if relevant, the Outline Content in relation to each Occupational Specialist Component are up-to-date and ensure that the TQ has continued currency among Employers and other end-users (including higher education providers).</p>		<p>3 During the delivery period the Supplier must ensure that the Specification of Content :</p> <ul style="list-style-type: none"> (a) enables accurate interpretation of the Specification of Content by Approved Providers (including to facilitate a clear and consistent understanding by Approved Providers of what is required to be taught and assessed for the TQ and to enable Approved Providers to determine (i) the level of competence required for staff who assess learning and (ii) any other physical requirements (such as facilities and hardware) integral to successful learning for the TQ); (b) supports Student progression and adaptability; (c) enables Students to achieve Occupational Entry Competence in relation to each Occupational Specialist Component; and (d) ensures that English, mathematics and digital content is integrated within the rest of the content in such manner as shall ensure such content is delivered and assessed in appropriate occupationally specific contexts. <p>4 Components should follow the same structure as set out in the existing TQ Specification. The Supplier shall not move elements of the existing TQ Specification which relate to one Component into another Component, unless otherwise agreed by the Authority. Where the Supplier considers that it is necessary to move content from one Component to another, it shall provide a clear and detailed rationale as part of its Assessment Strategy for Submission at Interim Milestone 1 to the Authority and the Authority shall consider whether such content may be moved, provided always that the Authority's decision as to whether such content may be moved shall be final.</p> <p>5 The TQ has two types of Component. The Supplier shall ensure that:</p> <ul style="list-style-type: none"> (e) the TQ has only two types of Component and is not unitised any further, such that only the TQ Core Component and each Occupational Specialist Component are formally graded;
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		<p>(f) the TQ Core Component clearly assesses the core knowledge, understanding, skills and behaviours relevant to all occupations within the T Level; and</p> <p>(g) each Occupational Specialist Component clearly assesses the occupationally specific knowledge, understanding, skills and behaviours relevant to the occupations within the T Level.</p>
	6	<p>The TQ must not be biased towards any Occupational Specialist Component. Where there is more than one Occupational Specialist Component for the TQ, the Supplier shall ensure that the TQ Core Component is not biased towards any particular Occupational Specialist Component. This is to ensure fairness for all Students, to support learning in their chosen Occupational Specialist Component.</p>
	7	<p>The TQ and its Components must be appropriately titled. The Supplier shall ensure that the TQ and the Components reflect the titling conventions in the Former Supplier's TQ Specification and, if relevant, the Outline Content. The Supplier shall agree any amendments to the titling conventions of the TQ with the Authority and shall then use only this agreed title to refer to the TQ.</p>
	8	<p>The Specification of Content must support fair access to attainment, including for Students with special educational needs and/or disabilities. Without prejudice to the Supplier's obligations in clause 3.1.7 (<i>How the Services must be supplied</i>) and clause 32 (<i>Equality, diversity, human rights and anti-slavery</i>), the Supplier shall comply with all applicable Law and shall ensure that the Specification of Content is inclusive, including providing for Reasonable Adjustments and Special Consideration (as defined in SR 2.4 and SR 2.5 (respectively) below). The Supplier shall provide evidence that it has considered and addressed all such applicable Law relating to delivery of fair access to the TQ.</p>
	9	<p>Set recommended Guided Learning hours for each part of each Component. The Supplier shall ensure that the Specification of Content details the recommended Guided Learning hours for each part of the TQ Core Component and each Occupational Specialist Component, including the recommended Guided Learning hours for both delivery and assessment of each such part of each such Component, provided that (i) such recommended hours are between a minimum of 900 hours and a maximum of 1400 hours and (ii) the maximum number of hours within the recommended range for the TQ Core Component are no more than 50%, and no</p>

		<p>less than 20%, of the overall time for the TQ. The Supplier shall provide a clear and detailed rationale for such recommended Guided Learning hours as part of its Assessment Strategy included with the Submission for the Final Approval Milestone to the Authority, or earlier at the Authority's request, and the Authority shall consider whether such proposed recommended Guided Learning hours may be included as part of the Specification of Content, provided always that the Authority's decision as to whether such recommended Guided Learning hours may be included as part of the Specification of Content shall be final.</p> <p>10 Combination of Occupational Specialist Components. Where a T Level features more than one Occupational Specialist Component these should be specified as options from which a Student will typically select one Occupational Specialist Component. Where a Student is required to study two Occupational Specialist Components, the Supplier shall specify any prohibited combinations of Occupational Specialist Components, for example where there is overlap between the Occupational Specialist Component content or where there would be insufficient time to study a particular combination. The Supplier shall make it clear that Approved Providers can select the Occupational Specialist Component(s) they wish to deliver within these rules. Where rules of combination are given, the Supplier shall provide a clear and detailed rationale as part of its Assessment Strategy for Submission at Interim Milestone 1 which explains how any combinations are compatible and achievable within the duration of the TQ.</p> <p>11 Where, in exceptional circumstances, the Supplier proposes to give Students the option to study more than two Occupational Specialist Components, it must provide a clear and detailed rationale as part of its Assessment Strategy for Submission at Interim Milestone 1 to the Authority and the Authority shall consider whether such rules of combination are appropriate, provided always that the Authority's decision as to whether such rules of combination are appropriate shall be final.</p>
Service Requirement 2: Assessment design and delivery		
Outcomes The TQ provides for optimal assessment and reliable evidence	SR 2.1 Assessment quality	<p>1 The Supplier shall ensure that:</p> <p>(a) the Scheme of Assessment, the TQ Specimen Assessment Materials and the TQ Live Assessment Materials provide the optimum balance of the assessment principles set out below; and</p>

<p>of a Student's attainment in relation to the knowledge, understanding, skills and behaviours specified in the Former Supplier's Specification of Content and, if relevant, the Outline Content.</p> <p>The TQ supports fair access to attainment for all Students who take the TQ.</p>		<p>(b) the Assessment Strategy sets out a detailed rationale to explain how the TQ Specification, the TQ Specimen Assessment Materials and the TQ Live Assessment Materials meet these assessment principles.</p> <p>Assessment principles</p> <ol style="list-style-type: none"> 1 Validity. The extent to which the TQ assessments (including the TQ Specimen Assessment Materials and the TQ Live Assessment Materials) effectively measure what they are intended to measure. This includes the extent to which TQ assessments (including the TQ Specimen Assessment Materials and the TQ Live Assessment Materials) allow Students to produce assessment evidence for the TQ that clearly corresponds to the Specification of Content and ensures the Specification of Content is not under-represented or misrepresented. 2 Reliability. This is about consistency and so concerns the extent to which the various stages in the TQ assessment process generate outcomes that would be replicated were the assessment repeated. The reliability of an assessment is affected by a range of factors, such as the sampling of assessment tasks and inconsistency in marking by human assessors. Reliability is critical to ensuring standards of attainment are equivalent over time (comparable performance). 3 Comparable performance. The extent to which the same grade for a Component with the same title indicates a comparable level of Student performance across Approved Providers (nationally) and over time. 4 Minimising bias. Ensuring that a TQ assessment (including the TQ Specimen Assessment Materials and the TQ Live Assessment Materials) does not produce unreasonably adverse outcomes for Students who share a particular characteristic. The Supplier should seek to ensure all Students are treated fairly and the assessment (including the TQ Specimen Assessment Materials and the TQ Live Assessment Materials) complies with all applicable Law. 5 Minimising malpractice. Ensuring the TQ design (including the TQ Specimen Assessment Materials and the TQ Live Assessment Materials) and processes relating to the delivery of the TQ assessments limit malpractice, including attempts by candidates to communicate with each
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		<p>other during an assessment and failures by Provider staff to comply with Supplier instructions regarding storage of Student assessment evidence.</p> <p>6 Appropriate demand. This relates to the level of difficulty of a TQ assessment task (including within the TQ Specimen Assessment Materials and the TQ Live Assessment Materials) and the requirements of the relevant part of the Specification of Content which is to be assessed and any expectations of performance at specified grades. Demand should be appropriate to a level 3 qualification.</p> <p>7 Manageability. The feasibility of carrying out the TQ assessment processes. A manageable assessment process is one that has reasonable expectations of Students, Approved Providers and (where appropriate) Employers. This will be based on the impact of the assessment process on Students, Approved Providers and (where appropriate) Employers as against the usefulness of the outcomes.</p>
	<p>SR 2.2</p> <p>General assessment delivery requirements</p>	<p>The Supplier shall:</p> <p>1 specify when the TQ assessments can be undertaken during the relevant Academic Year (taking into account any dates prescribed by the Key Dates Schedule for the relevant Academic Year) so that Students have sufficient time to generate assessment evidence and/or demonstrate the required knowledge, understanding, skills and behaviours;</p> <p>2 notwithstanding the number of Assessors (and Moderators where permitted in accordance with the Approved Assessment Strategy) identified in the Implementation and Delivery Plan and/or the Resource Plan, ensure a sufficient number of qualified and trained Assessors (and such Moderators) are available to assess Students' assessment evidence for the TQ;</p> <p>3 train Assessors (and Moderators where permitted in accordance with the Approved Assessment Strategy) so that their judgements in relation to the TQ assessments are consistent and accurate and applied in line with the standards defined by or through such training;</p>

		<p>4 sample the marking of live TQ assessments (to ensure accuracy and consistency) and, where such marking is not accurate and/or consistent, take all such steps as are necessary to ensure that such marking is accurate and consistent;</p> <p>5 ensure the TQ Live Assessment Materials are made available to Approved Providers in English (online and/or in hard copy (as applicable));</p> <p>6 ensure the TQ Live Assessment Materials are available at the right time (online and/or in hard copy (as applicable)) in accordance with this Contract;</p> <p>7 ensure that TQ Live Assessment Materials are free from errors and where any errors are identified in the TQ Live Assessment Materials they are dealt with appropriately, including through the issue of an erratum and by taking all such actions as are necessary to ensure that Students are not disadvantaged as a result of such errors;</p> <p>8 where Student assessment evidence for the TQ is required to be generated under supervised conditions:</p> <p>(a) ensure that the nature of the supervised conditions and the hours for such supervised conditions are detailed in the TQ Specification; and</p> <p>(b) provide a clear and detailed rationale as part of its Assessment Strategy for Submission at Interim Milestone 4 to the Authority and the Authority shall consider whether such hours are appropriate, provided always that the Authority's decision as to whether such hours are appropriate shall be final;</p> <p>9 ensure that Approved Providers comply with the Approved Provider's Quality Assurance Process, including:</p> <p>(a) keeping Students' assessment evidence for the TQ secure during and after assessment; and</p> <p>(b) verifying that a Student's assessment evidence for the TQ has been solely produced by that Student;</p>
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		<p>10 following IfATE Approval, monitor the delivery of the TQ to identify any feature which could disadvantage a group of Students who share a particular characteristic and shall, as soon as reasonably practicable following identification of such a feature, take such steps as are necessary to minimise the feature being an unnecessary barrier to Student attainment;</p> <p>11 monitor and investigate instances of malpractice and/or maladministration relating to the TQ in accordance with paragraph 3 (TQ Provider Approval and monitoring services) of Part 1 of this Service Requirements;</p> <p>12 ensure final marks awarded by Assessors (and Moderator final marks and/or judgements, where permitted in accordance with the Approved Assessment Strategy) in relation to the TQ are collected for each Student and checked for accuracy by the relevant date specified in the Implementation and Delivery Plan; and</p> <p>13 where marking is to be applied to Student assessment evidence for the TQ by Assessors (and/or by assessors employed or engaged by Approved Providers and/or Moderation is to be undertaken in relation to such marking (in circumstances where the Approved Assessment Strategy allows for use of assessors employed or engaged by the Approved Provider)), ensure:</p> <p>(a) such Assessors (and assessors and Moderators) are appropriately trained and competent;</p> <p>(b) such Assessors (and Moderators) have no personal interest in the outcome of the marking; and</p> <p>(c) marking and Moderation is conducted in a way which secures the accuracy of marking and a consistent approach to marking, provided always that where the Supplier determines that such marking and/or Moderation is not being undertaken accurately and consistently, it shall correct any inaccuracies and/or inconsistencies and shall take (or shall (where necessary) procure that the relevant Approved Provider and/or Moderator shall take (as the case may be)) all necessary steps to prevent any future recurrence of such inaccuracy and/or inconsistency.</p>
	SR 2.3	<p>1 The Supplier shall ensure that it has all necessary processes in place to ensure that, where TQ Live Assessment Materials are confidential (including the content of or information about</p>

	Confidentiality of TQ Live Assessment Materials	<p>such TQ Live Assessment Materials), all such TQ Live Assessment Materials remain confidential.</p> <p>2 If, notwithstanding the processes referred to above, a breach of confidentiality in relation to the TQ Live Assessment Materials does occur (including through the loss, theft or transmission of confidential TQ Live Assessment Materials) or is either suspected by the Supplier or alleged by any other person (and where there are reasonable grounds for that suspicion or allegation), such matter shall be notified to the Authority in accordance with paragraph 3.2 of Part 1 of this Service Requirements and the provisions of paragraphs 3.3 to 3.5 (inclusive) of such Part 1 of this Service Requirements shall apply.</p>
	<p>SR2.4</p> <p>Reasonable Adjustments</p>	<p>“Reasonable Adjustments” means such adjustments to and/or exemptions from the TQ Live Assessment Materials (as applicable) as are necessary and reasonable (in the context of what is being assessed) to enable a Student with special educational needs and/or disabilities to demonstrate his or her knowledge, understanding, skills and behaviours to the level of attainment required.</p> <p>The Supplier shall:</p> <ol style="list-style-type: none"> 1 have in place clear arrangements for making Reasonable Adjustments; 2 explain (in the Assessment Strategy) how Reasonable Adjustments will be made to support fair access to attainment; and 3 provide details of such arrangements to Approved Providers, <p>in each case, taking into account and (where applicable) implementing the process, approach and/or system agreed between the T Level Awarding Organisations pursuant to paragraph 2.1.8 of Schedule 4 (Co-operation).</p>
	<p>SR2.5</p> <p>Special Consideration</p>	<p>“Special Consideration” means consideration to be given to a Student who has experienced a temporary illness, injury or other event outside of the Student’s control and which has had, or is reasonably likely to have had, a material effect on that Student’s ability to take a TQ assessment or demonstrate his or her level of attainment in a TQ assessment.</p> <p>The Supplier shall:</p>

		<ol style="list-style-type: none"> 1 have in place clear arrangements for Special Consideration; 2 explain (in the Assessment Strategy) how Special Considerations will be applied to support fair access to attainment; and 3 provide details to Approved Providers of how to request such Special Consideration, <p>in each case, taking into account and (where applicable) implementing the process, approach and/or system agreed between the T Level Awarding Organisations pursuant to paragraph 2.1.8 of Schedule 4 (<i>Co-operation</i>).</p>
	SR 2.6 TQ Core Component assessment design and delivery	<ol style="list-style-type: none"> 1 The TQ assessments must be appropriately weighted. Where there is more than one Occupational Specialist Component for the TQ, the Supplier shall not weight the assessment of the TQ Core Component more heavily towards any one Occupational Specialist Component. This is to ensure fairness for all Students, to support learning in their chosen Occupational Specialist Component. 2 The Supplier shall assess the TQ Core Component using two distinct methods, as follows: <ol style="list-style-type: none"> (a) the core knowledge and understanding shall be assessed using an External Examination; and (b) the core skills and relevant aspects of core knowledge shall be assessed through the Employer Set Project in accordance with paragraph 3 below, <p>in each case, as referred to in the Specification of Content.</p> 3 Evidence generated by a Student in assessments of the Employer Set Project should be marked by an Assessor. However, in very exceptional circumstances set out in the Approved Assessment Strategy, an Approved Provider may be permitted to mark assessment evidence generated by a Student only where the Supplier: (i) puts in place robust arrangements which ensure that such marking achieves valid and reliable outcomes; (ii) uses an approach that is as close to complete independence as possible (such arrangements and approach to be

		<p>detailed in the Approved Assessment Strategy); and (iii) procures that all such marking is subject to Moderation.²</p> <p>4 Assessment objectives. The Supplier shall:</p> <p>(a) set out the assessment objectives for each of the External Examination and the Employer Set Project; and</p> <p>(b) specify the relevant weightings as between the External Examination and the Employer Set Project,</p> <p>in each case, in the Scheme of Assessment.</p> <p>5 Minimum performance requirements for the TQ Core Component must be clearly defined. The Supplier shall ensure that:</p> <p>(a) the External Examination and the Employer Set Project are each assessed using compensatory assessment methods, such that high performance in one part of the TQ Core Component assessment compensates for lower performance in another; and</p> <p>(b) the minimum performance requirements for each judgemental grade required for the TQ Core Component shall reference each of the External Examination and the Employer Set Project.</p> <p>6 Devise the External Examination to assess the full range of knowledge and understanding outlined in the TQ Core Component. The Supplier shall ensure that:</p> <p>(a) the External Examination will sample from the full breadth of relevant parts of the Specification of Content; and</p> <p>(b) an indicative sampling grid for the Term is included within the Assessment Strategy.</p>
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² These proposed arrangements should form part of the Supplier's Response.

		<p>7 Assessment of core skills and relevant aspects of knowledge through Employer Set Project. The Supplier shall develop briefs for Employer Set Projects and shall ensure that:</p> <ul style="list-style-type: none"> (a) such briefs are developed in collaboration with Employers; (b) each such brief enables a Student to demonstrate core skills and relevant aspects of core knowledge in an occupationally relevant context; and (c) the Assessment Strategy outlines how such briefs will continue to be relevant to the TQ Core Component throughout the Term and how the Supplier will ensure that such Employer Set Projects do not become predictable and how they will keep pace with the needs of industry, <p>in each case, so that new briefs for Employer Set Projects are made available by the Supplier in each Academic Year.</p>
		<p>8 Engage with relevant Employers to set clear project briefs. The Supplier shall:</p> <ul style="list-style-type: none"> (a) engage with Employers to ensure that sufficient project brief(s) is/are made available to enable Students to demonstrate skills across the breadth of the available Occupational Specialist Component(s), provided always that where the Supplier proposes to make available only one project brief in respect of the TQ to Students and/or proposes to utilise a project brief in respect of more than one Occupational Specialist Component, then: <ul style="list-style-type: none"> (i) the Supplier shall provide a detailed rationale for such proposals as part of its Assessment Strategy included with the Submission for Interim Milestone 1 to the Authority; (ii) the Authority shall consider whether such proposals are acceptable; and (iii) the Authority's decision as to whether such proposals are acceptable shall be final; (b) engage with Employers to ensure that each project brief:

		<ul style="list-style-type: none"> (i) has clear objectives, which align with the Specification of Content and which aim to motivate Students; (ii) requires Students to solve a real world problem; (iii) enables Students to generate sufficient assessment evidence to meet the objectives referred to in (i) immediately above; (iv) clearly sets out the arrangements and restrictions for Approved Providers to support Students in carrying out and completing the Employer Set Project; and (v) allows sufficient time to enable Students to generate sufficient assessment evidence; and <p>(c) obtain evidence of validation from each Employer involved in setting the brief(s) that they approve such brief(s) (and the Supplier shall make available to the Authority a copy of such evidence). Evidence of employer validation must include, but is not limited to, details of the questions asked of Employers, Employer responses and how the AO addressed Employer feedback.</p>
	<p>SR 2.7</p> <p>Occupational Specialist Component assessment design and delivery</p>	<p>1 Assessment of performance outcomes. The Supplier shall ensure that:</p> <ul style="list-style-type: none"> (a) the assessment materials for each Occupational Specialist Component assess all performance outcomes detailed in the Specification of Content for that Occupational Specialist Component; and (b) so far as is reasonably practicable, each assessment is synoptic to reflect how knowledge, understanding, skills and behaviours are drawn together and implemented to develop meaningful occupationally relevant Student assessment evidence, which attests to Occupational Entry Competence, provided always that where the Supplier reasonably determines that it is not possible to assess performance outcomes synoptically, the Supplier shall provide a clear and detailed rationale as part of its Assessment Strategy for Submission at Interim Milestone 1 to the Authority and the Authority shall consider whether it is acceptable not to assess performance outcomes

		<p>synoptically, provided always that the Authority's decision as to whether such approach is appropriate shall be final.</p> <p>2 Evidence generated by a Student in assessments of each Occupational Specialist Component should be marked by an Assessor. However, in very exceptional circumstances set out in the Approved Assessment Strategy, an Approved Provider may be permitted to mark assessment evidence generated by a Student only where the Supplier: (i) puts in place robust arrangements which ensure that such marking achieves valid and reliable outcomes; (ii) uses an approach that is as close to complete independence as possible (such arrangements and approach to be detailed in the Approved Assessment Strategy); and (iii) procures that all such marking is subject to Moderation.³</p> <p>3 Exemplifying the expected standards of attainment. The Supplier shall, for each Occupational Specialist Component, produce Guide Standard Exemplification Materials (which shall be validated by sufficient and representative sample of Employers and Providers as agreed by the Authority)) for the purposes of IfATE Approval and for the First Teach Cohort and, for each Academic Year following grade awarding for the First Teach Cohort, produce Grade Standard Exemplification Materials (which shall be validated by Employers before results are issued) and submitted to the Authority for agreement by no later than the end of September and published by the end of October of that Academic Year, unless otherwise agreed in writing by the Authority.</p>
Service Requirement 3: Grading and Awarding		
Outcomes Grades awarded for the TQ Core Component and each Occupational Specialist Component	SR 3.1	<p>1 The Supplier shall undertake grading and awarding in accordance with the relevant part of the Approved Assessment Strategy.</p>

³ These proposed arrangements should form part of the Supplier's Response.

<p>are reliable and allow Employers and other end-users (including higher education providers) to accurately identify a Student's level of attainment and effectively differentiate their performance.</p> <p>The TQ supports fair access to attainment for all Students who take the TQ.</p> <p>The minimum pass grade standard for each Occupational Specialist Component attests to Occupational Entry Competence, meets Employer expectations, and is as close to full occupational competence as possible.</p>		
Service Requirement 4: Provider Approval		
<p>Outcomes</p> <p>Approved Providers are capable of</p>	<p>SR4.1</p>	<p>1 The Supplier shall receive and process applications from Eligible Providers to become Approved Providers in accordance with the relevant part of the Approved Assessment Strategy.</p>

delivering the TQ to meet the required standards and expectations.		<p>2 The Supplier shall (within 30 Working Days) following receipt of an application for Provider Approval from an Eligible Provider:</p> <ul style="list-style-type: none"> (a) assess that Eligible Provider against the Provider Approval Criteria to determine whether such Eligible Provider satisfies all of the requirements of the Provider Approval Criteria; (b) notify that Eligible Provider of the outcome of its application; and (c) where the Eligible Provider satisfies all of the requirements of the Provider Approval Criteria, grant Provider Approval in respect of such Eligible Provider.
Service Requirement 5: Provider Support		
<p>Outcomes</p> <p>Approved Providers are fully supported to plan and deliver (including to properly prepare Students for assessment) the TQ to meet the required standards and expectations.</p>	SR 5.1	<p>The Supplier shall ensure that Approved Providers are fully supported to promote, plan and deliver the TQ, including:</p> <ul style="list-style-type: none"> 1 setting out in the TQ Specification and Assessment Guidance for Providers any guidance and support available to the Approved Provider in respect of the TQ, which may include guidance as to sequencing of assessment of any Component; 2 providing a telephone, email and internet facility and ensuring that sufficient, suitably trained contact staff are available to: <ul style="list-style-type: none"> (a) answer Approved Providers' queries regarding the Provider Services and/or the TQ (including enquiries and/or queries about results); (b) deal with complaints in relation to the Provider Services and/or the TQ; and (c) ensure that such queries and/or complaints (and any queries about the T Level Programme, including different programme elements and work placements) are directed to the relevant individual at the Supplier, the Authority or other Stakeholder (as applicable);

		<p>3 ensuring that such training, resources and other information relating to the TQ, as is necessary to assist Approved Providers' administration and examination officers, is available, including in relation to:</p> <ul style="list-style-type: none"> (a) key dates for administration of the TQ; (b) how to use any systems to upload materials; and (c) which forms should be used to enable Approved Providers to claim completion of the TQ by the relevant Student; <p>4 ensuring that such training, resources and other information relating to the TQ, as is necessary to assist Approved Providers' teaching and learning, is available to ensure the requirements of the TQ are clear and Students can be well prepared for assessment for the TQ, including:</p> <ul style="list-style-type: none"> (a) exemplifying (through the provision of and training in relation to the application of the Guide Standard Exemplification Materials) the expected standards of performance for the TQ for the First Teach Cohort, so that the Approved Providers are able to design effective courses and have a clear understanding of the quality and standards their Students need to achieve; and (b) the development in accordance with Annex 11 to the Service Requirements, of <ul style="list-style-type: none"> (i) Supplementary Specimen Assessment Materials; (ii) Employer Set Project Guide Exemplar Responses; (iii) Employer Set Project Grade Exemplar Responses; and (iv) Accompanying Assessment Guidance for Providers; all of which must be suitable to be used by Approved Providers to prepare Students effectively for live TQ assessments; and (c) exemplifying (through the provision of documentation, including chief examiner and chief moderator reports, which provides an overview or analysis of Student performance and includes but is not limited to, examples of student responses to assessment questions and/or tasks) the expected standards of performance for the TQ,
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		<p>so that Approved Providers are supported in understanding how students performed at item, sub-component and component level to support future teaching and learning.</p> <p>5 undertaking intermittent reviews to ensure that the support remains fit for purpose, taking account of feedback from Approved Providers and amending the support packages as necessary;</p> <p>6 having in place systems and processes to monitor and report to the Authority details of Approved Provider uptake of the TQ Deliverables (and any other Products and/or documents associated with the TQ), ensuring each and every Approved Provider has accessed and is using the current version of the relevant TQ Deliverable.</p> <p>7 aligning training and resources with any wider FE Professional Readiness to Deliver T Levels training and support offered by the Authority; and</p> <p>8 supporting Approved Providers on agreed promotional activity, as appropriate following any reasonable request from the Authority.</p>
Service Requirement 6: Student registration and Student entry		
Outcomes Unique identification of Students	SR 6.1	The Supplier shall procure that Approved Providers register each Student undertaking the TQ in a way that permits the Student to be clearly and uniquely identified.
Service Requirement 7: TQ Results		
Outcomes Accurate and complete results	SR 7.1	The Supplier shall ensure that all results which it issues are accurate and complete and reflect the outcome of the awarding process.

Service Requirement 8: TQ Post-Results Services		
<p>Outcomes</p> <p>The TQ provides for optimal assessment and reliable evidence of a Student's attainment in relation to the knowledge, understanding, skills and behaviours specified in the Former Supplier's TQ Specification and, if relevant the Outline Content.</p> <p>The TQ supports fair access to attainment for all Students who take the TQ.</p>	<p>SR 8.1</p> <p>Assessment Review</p>	<p>The Supplier shall ensure a transparent and effective process for review of marks (or (where applicable) Review of Moderation (as defined in Annex 10 (<i>Additional Services</i>) to this Service Requirements) for each Component.⁴</p>
	<p>SR 8.2</p> <p>Appeals Process</p>	<p>1 The Supplier shall operate an appeals process, which enables Approved Providers to appeal:</p> <p>(a) the results of TQ assessments undertaken by Students or (in the case of an appeal in respect of an individual Student) results of TQ assessments undertaken by that Student (including in either case the outcome of a Review of Marking and/or Review of Moderation);</p>

⁴ The proposed process should form part of the Supplier Response. This requirement will simply link to the proper implementation of that process.

		<p>(b) any decisions regarding Reasonable Adjustments and/or Special Consideration for Students or (in the case of an appeal in respect of an individual Student) decisions regarding Reasonable Adjustments and/or Special Consideration for that Student; and</p> <p>(c) decisions which have resulted in action taken against that Approved Provider or (in the case of an appeal in respect of an individual Student) that Student in relation to the TQ, in either case, following an investigation into malpractice or maladministration,⁵</p> <p>(together or individually (as the case may be) an “Appeal”).</p> <p>2 Where, as a result of an Appeal, the Supplier identifies that there is or was (as the case may be) a failure in its TQ assessment process affecting more than one Student, it shall:</p> <p>(a) notify the Authority of such failure (including full details of the impact of such failure);</p> <p>(b) identify all Students who have (or who may reasonably be expected to have) been affected by the failure;</p> <p>(c) correct or, where it cannot be corrected, mitigate as far as possible the effect of the failure; and</p> <p>(d) take all such steps as are necessary to ensure that such failure does not recur in the future,</p> <p>and the provisions of paragraphs 3.2 to 3.5 (inclusive) of Part 1 of this Service Requirements shall apply in respect of such failure.</p>
Service Requirement 9: Reporting		
Outcomes Accurate and timely information and data is	SR 9.1	The Supplier shall ensure that the Management Information is provided to the Authority as follows. In the case of:

⁵ The proposed appeals process should form part of the Supplier Responses. This requirement will simply link to the proper implementation of that process.

available throughout the Term		<ol style="list-style-type: none"> 1 the Development Phase Report, in accordance with clause 5.5 (<i>Developing the TQ and achieving IfATE Approval</i>); 2 the Operational Delivery Report, in accordance with paragraph 3.1 of Schedule 15 (<i>Monitoring of Performance</i>); 3 the information and data generated pursuant to paragraph 5 of Part 1 of this Service Requirements, in accordance with paragraph 5.4 of Part 1 of this Service Requirements; 4 the information and data generated pursuant to paragraph 8 of Part 1 of this Service Requirements, in accordance with paragraph 8.2 of Part 1 of this Service Requirements; 5 the information and data relating to the delivery of the Additional Services in accordance with paragraphs 5.3, 6.1.3 and 9.1.2 of Part 1 of this Service Requirements, in each Contract Month; and 6 the information and data relating to adjustment to the Fees pursuant to clauses 4.12 and 4.13 (<i>Pricing and payments</i>), in accordance with clause 4.13.1 (<i>Pricing and payments</i>). 7 the information and data relating to the delivery of the Social Value commitments in accordance with paragraph 13.1 (<i>Social Value Commitments</i>)
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Part 3 – Product Descriptions

This Part 3 sets out the Product Description for each Product.

Product	Description
Assessment Strategy	<p>A clear and detailed explanation for how the TQ meets the outcomes/overall measures and requirements for each Service.</p> <p>In relation to the design of the TQ, the Assessment Strategy shall include details of and a clear and detailed rationale for:</p> <ul style="list-style-type: none">• how the design of the TQ will ensure compliance (including ongoing compliance) with all relevant requirements of this Service Requirements;• (i) individual assessment time for each TQ assessment, for example in terms of covering the required part of the Specification of Content effectively and balancing reliability and manageability, and (ii) combined assessment time for the different TQ assessments;• the number of marks for each individual TQ assessment, for example in terms of covering the required part of the Specification of Content effectively and balancing reliability and manageability;• how the design of the TQ will ensure appropriate compensation taking into account the requirements of SR 2.6 (5) (a) of Service Requirement 2;• the approach to differentiating for the available grade range in each case;• how Students' interests will be protected if there are changes to the Specification of Content;• the Guided Learning hours for each Component, taking into account the requirements of SR 1.1 (9) of Service Requirement 1;

Product	Description
	<ul style="list-style-type: none"> • if applicable, why Students have been given the option to study more than two Occupational Specialist Components; • the approach to how assessments will be structured, for example in terms of covering the required part of the Specification of Content effectively and achieving the optimum balance of the assessment principles set out in SR 2.1 of Service Requirement 2, including: <ul style="list-style-type: none"> ○ the number of tasks and assessments in the External Examination; ○ the number of tasks and assessments in the Employer Set Project; ○ the relative weightings of the External Examination and the Employer Set Project; ○ the number of tasks and assessments for each Occupational Specialist Component; ○ for Occupational Specialist Components, why it is not possible to assess performance outcomes synoptically (if applicable); and ○ how the Former Supplier's TQ Specification and, if relevant, the Outline Content will be covered over the life of the Contract including any proposed approach to sampling. • in very exceptional circumstances where the Supplier considers that there is justification for any assessments in relation to the Employer Set Project and/or the Occupational Specialist Components to be marked by an Approved Provider and not externally marked by an Assessor, a detailed rationale which explains why this is necessary in terms of achieving an optimum balance of the assessment principles set out in SR 2.1 of Service Requirement 2 and a detailed explanation of the approach to Moderation. Exceptional circumstances shall include the following factors: <ul style="list-style-type: none"> ○ where the assessment evidence generated by Students is likely to arise spontaneously and/or be ephemeral in nature and where this may lead to significant or insurmountable logistical difficulties in terms of the Supplier arranging to be present for every assessment; ○ where the assessment would require repeat measurement over an extended period of time, potentially including measurement of multiple aspects across multiple Students, rather than measurement on a single occasion and where this may lead to significant or insurmountable logistical difficulties in terms of the Supplier being present for the whole period of the assessment; ○ where the presence of an Assessor could significantly affect the assessment, for example because it may place undue pressure on Students and therefore undermine fairness, or could require the assessment to be designed and/or completed in an artificial way which would undermine validity; and

Product	Description
	<ul style="list-style-type: none"> ○ where the presence of an Assessor is not possible owing to issues of sensitivity and/or confidentiality with respect to individuals required to participate in the assessment(s), provided always that the factor(s) giving rise to a claim by the Supplier of the existence of any exceptional circumstances are relevant to the content of the TQ, the risks to the validity or manageability of the assessment arising as a result of such factor(s) are significant and such factor(s) and/or risk(s) cannot be managed or mitigated without marking being undertaken by an Approved Provider; • the approach to coverage of the Former Supplier's TQ Specification and, if relevant the Outline Content, including: <ul style="list-style-type: none"> ○ how the Former Supplier's TQ Specification and, if relevant the Outline Content has been covered overall and in each TQ assessment; ○ how the Former Supplier's TQ Specification and, if relevant the Outline Content has been elaborated on where necessary; ○ if applicable, why it is necessary to move elements of the Former Supplier's TQ Specification and, if relevant, the Outline Content which relate to one Component into another Component; and ○ if applicable, why it is necessary to include entirely new content that is not included in the Former Supplier's TQ Specification and, if relevant, the Outline Content into the Specification of Content; • the approach to: <ul style="list-style-type: none"> ○ mapping of the Specification of Content in TQ Specimen Assessment Materials; ○ coverage of the Specification of Content over time; and ○ ensuring the assessments for the TQ Core Component and each Occupational Specialist Component support fair access to attainment, including the approach to Reasonable Adjustments and Special Consideration; • the assessment objectives and weightings for the External Examination and the Employer Set Project; • the approach to targeting assessment objectives in the External Examination and the Employer Set Project, and to targeting performance outcomes in each Occupational Specialist Component; • the approach to each TQ assessment, including: <ul style="list-style-type: none"> ○ an explanation of:

Product	Description
	<ul style="list-style-type: none"> ▪ the range of task types to be used (e.g. multiple-choice, short answer, extended response, practical assignment) and how these will support valid assessment of the Specification of Content; and ▪ the approach to mark scheme and assessment criteria design, including for different task types, and an explanation of how resulting mark schemes and assessment criteria will support reliable application by Assessors (and any assessors employed or engaged by any Approved Provider and any Moderators where permitted in accordance with the Approved Assessment Strategy); ○ sample question/tasks which may be from the TQ Specimen Assessment Materials, and associated mark schemes and assessment criteria, representing the range to be used in each such TQ assessment, with commentaries explaining the approaches; ○ an indicative sampling grid for the External Examination; and ○ how the requirements of SR 2.6 (7) and SR 2.6(8) of Service Requirement 2 have been taken into account. <ul style="list-style-type: none"> • the approach to availability of TQ assessments, including: <ul style="list-style-type: none"> ○ when assessments will be scheduled for the External Examination, the Employer Set Project and each Occupational Specialist Component; ○ how the approach is appropriate, including consideration of: the amount and weight of material to be covered; the extent to which different aspects would be covered sequentially or concurrently; how coherence with the overall T Level Programme will be promoted; the need to ensure that enough time is available for sufficient learning to have taken place (including how Approved Providers will be supported so that they enter Students for a Component's assessments in an appropriate Academic Year and in an appropriate assessment series within that Academic Year, in each case, within the two-year programme for the T Level); and how the approach will support standard setting; ○ when the first assessment cycle will be held for the First Teach Cohort, taking into account the need to ensure that standards are set appropriately in the first Academic Year so they are appropriate to be carried forward to future assessment cycles; ○ arrangements for Students to retake, in full, any or all of the External Examination, the Employer Set Project and each Occupational Specialist Component; and ○ the type of assessment (e.g. online and/or paper-based) for the External Examination, Employer Set Project and each Occupational Specialist Component; and

Product	Description
	<ul style="list-style-type: none"> • quality assuring the design and development of the TQ and its component assessments in line with the requirements set out in the Service Requirements and in line with the Assessment Strategy. <p>Taking into account the approach to availability of TQ assessments, the Assessment Strategy shall include a clear and detailed explanation of any risks that have been identified, how these will be mitigated, and how particular challenges will be addressed, including:</p> <ul style="list-style-type: none"> • ensuring comparability of assessments; • minimising predictability of assessments; • ensuring security and confidentiality of assessments; and • in relation to the Employer Set Project, how the Employer Set Projects will continue to be relevant to the TQ Core Component throughout the Term and how they will not become predictable and will keep pace with the needs of industry. <p>In relation to the delivery of the TQ, the Assessment Strategy shall include:</p> <ul style="list-style-type: none"> • details of and a clear and detailed rationale for how the delivery of the TQ will ensure ongoing compliance with all relevant requirements of this Service Requirements; • clear details of the process for developing TQ assessment materials (including TQ Specimen Assessment Materials and TQ Live Assessment Materials), including different stages and Supplier Staff involved, how evidence regarding functioning of previous assessments is used, any differences by assessment type and item setting arrangements; • clear details of the approach to training individuals who will be responsible for setting TQ assessments and/or items, including ensuring security and mitigating any conflicts of interest; • details of the nature of and number of hours of supervised conditions that will be required to deliver the TQ; • clear details of the approach to training and standardising the approach of Assessors (and any assessors employed or engaged by any Approved Provider and any Moderators where permitted in accordance with

Product	Description
	<p>the Approved Assessment Strategy), together with details of standardisation procedures and any wider training;</p> <ul style="list-style-type: none"> • a clear and detailed explanation of how the marking processes for Student assessment evidence for the TQ will operate, including any variation between the External Examination, the Employer Set Project and each Occupational Specialist Component; • a clear and detailed explanation of the process that will be in place: <ul style="list-style-type: none"> ○ to monitor accuracy and consistency of marking by Assessors (and Moderation by Moderators where permitted in accordance with the Approved Assessment Strategy) and issuing of results, and ○ to take remedial action where such process does not deliver accuracy and consistency of marking (and/or Moderation by Moderators where permitted in accordance with the Approved Assessment Strategy) and/or issuing of results; • a clear and detailed explanation of how malpractice will be minimised and addressed and the approach to maintaining security and confidentiality of TQ assessments, including any differences by assessment; • a clear and detailed explanation as to how live issues during assessments for the TQ will be dealt with (i.e. where the design/delivery mitigations have failed); • a clear and detailed explanation as to how results data for each Component and the TQ will be provided to the Authority in line with the Key Dates Schedule for the relevant Academic Year; and • a clear and detailed explanation as to how each Post-Results Service (referred to in paragraph 9 (<i>TQ Post-Results Services</i>) of Part 1 of this Service Requirements) will be delivered.⁶ <p>In relation to Eligible Providers and Approved Providers, the Assessment Strategy shall include a summary of the proposed approach to ensuring that Approved Providers are able to prepare for and undertake the TQ assessments, together with a clear and detailed explanation of:</p>

⁶ The Supplier Response should detail the Supplier's proposals for the Additional Services. This requirement will link to the proper implementation of that part of the Supplier Response.

Product	Description
	<ul style="list-style-type: none"> the approach to approving Eligible Providers as Approved Providers, in line with the Provider Approval Criteria; the approach to ensuring that all Approved Providers have appropriate and consistent quality assurance measures in place for the delivery of the TQ and ensuring that such Approved Providers maintain ongoing compliance with those quality assurance measures; the approach to the provision of guidance and training to Approved Providers in connection with the delivery of the TQ assessments for the Employer Set Project and the Occupational Specialist Components; the approach to monitoring Approved Providers in relation to TQ assessments for the Employer Set Project and the Occupational Specialist Components, including how this approach will ensure that such assessments remain fit for purpose on delivery; how Guide Standard Exemplification Materials will be produced, with input from and validated by a sufficient and representative sample of Employers and Providers as agreed by the Authority; and how Grade Standard Exemplification Materials will be produced, and kept under review, with input from validated by a sufficient and representative sample of Employers as agreed by the Authority. <p>In relation to awarding, the Assessment Strategy shall include a clear and detailed explanation of:</p> <ul style="list-style-type: none"> the technical methodology employed in the awarding process, including the Supplier Staff involved and their roles; how the decisions from the awarding process are approved within the Supplier and the Supplier Staff involved in this; how comparability between different versions of assessments and different types of assessment (e.g. online vs paper-based) is ensured, both where these are available at the same time and on an ongoing basis;

Product	Description
	<ul style="list-style-type: none"> • how comparability between any options in the TQ will be ensured; • how any evidence in relation to the comparability of the TQ with the technical education qualification element for other applicable T Levels within the same Route (including those offered by other T Level Awarding Organisations) will be used to inform decisions on standard setting; • how grades are calculated, including judgemental and arithmetic grade boundaries, aggregation of marks between the External Examination and Employer Set Project, and the use of any conversion scales; and • the approach to and range of qualitative and quantitative evidence used to inform grading and awarding decisions and the weight given to different sources, together with: <ul style="list-style-type: none"> ○ a rationale for this approach in the light of the TQ design and Cohort make-up; and ○ details of how this approach will be kept under review and may be adjusted, including any variation between initial standard setting and maintenance of standards, <p>and in relation to such qualitative and quantitative evidence:</p> <ul style="list-style-type: none"> ○ qualitative evidence shall include (for the TQ Core Component and each Occupational Specialist Component as a whole and for each TQ assessment): <ul style="list-style-type: none"> ▪ views of senior examiners about the quality of Student assessment evidence for the TQ; ▪ views of senior examiners about the demand of TQ assessments; ▪ performance descriptions informed by Employer views; ▪ Guide Standard Exemplification Materials and Grade Standard Exemplification Materials informed by Employer views; ▪ archive Student assessment evidence for the TQ from previous series (where applicable); and ▪ if necessary, cognate Student assessment evidence for the TQ, for example from related qualifications; and ○ quantitative evidence shall include (for the TQ Core Component and each Occupational Specialist Component as a whole and for each TQ assessment): <ul style="list-style-type: none"> ▪ mark distribution; ▪ mean mark; ▪ standard deviation;

Product	Description
	<ul style="list-style-type: none"> ▪ item-level data, such as facility and discrimination indices; ▪ percentage of Students achieving each grade in previous series; and ▪ information about Students' prior/concurrent attainment. <p>The Assessment Strategy shall also include an explanation as to how innovation will be appropriately tested before implementation to secure on-going compliance by the Supplier with its obligations under this Service Requirements.</p>
Employer and Provider Engagement Strategy	A clear and detailed strategy describing the approach to engaging with, and where applicable training, Employers and Providers in relation to the design, content, delivery, assessment, validation and update of the TQ and the Services, including the approach to sharing early and/or amended drafts of all Initial TQ Deliverables and TQ Deliverables with Employers and Providers (as applicable).
TQ Specification	<p>Specification of Content</p> <p>The Specification of Content shall set out the knowledge, understanding, skills and behaviours that Students need to learn for the TQ Core Component and each Occupational Specialist Component. The Specification of Content for the TQ Core Component and each Occupational Specialist Component must be clear and unambiguous and adequately cover (and where necessary build on) the Former Supplier's TQ Specification and, if relevant, the Outline Content (and not simply replicate it). The Specification of Content shall detail the recommended Guided Learning hours for each Component (including recommended Guided Learning hours for both delivery and assessment of each Component), taking into account the requirements of SR 1.1 (9) of Service Requirement 1.</p> <p>The TQ Specification will be validated by a sufficient and representative number of Employers as agreed by the Authority.</p> <p>Scheme of Assessment</p> <p><i>TQ Core Component – External Examination – knowledge and understanding</i></p> <p>The Scheme of Assessment shall clearly set out (in relation to the External Examination) an explanation for Approved Providers of:</p>

Product	Description
	<ul style="list-style-type: none"> the assessment objectives and their weightings; the method and number of assessments (if more than one); the duration of the/each assessment; the number of marks in the/each assessment; how and when the/each assessment will be made available; the grades available for the TQ Core Component and that these grades are for the External Examination and the Employer Set Project in combination; and any relevant design features for the External Examination, such as the range of different question types that will be used and any access there will be to stimulus/pre-release materials. <p><i>TQ Core Component – Employer Set Project</i></p> <p>The Scheme of Assessment shall clearly set out (in relation to the Employer Set Project) an explanation for Approved Providers of:</p> <ul style="list-style-type: none"> the assessment objectives and their weightings; the assessment tasks available, i.e. options; the duration of the assessment; the number of marks for the assessment; how and when the assessment will be made available; the assessment criteria that will be applied (including, in very exceptional circumstances set out in the Approved Assessment Strategy, where any assessments in relation to the Employer Set Project are to be marked by an Approved Provider and not externally marked by an Assessor, details of how marks should be allocated); the conditions under which assessment evidence must be generated; the forms of assessment evidence that must be retained by the Approved Provider and the expectations around this; the grades available for the TQ Core Component and that these grades are for the External Examination and Employer Set Project in combination; and (in very exceptional circumstances set out in the Approved Assessment Strategy, where any assessments in relation to the Employer Set Project are to be marked by an Approved Provider and not externally marked by an Assessor) details of how Moderation will be conducted.

Product	Description
	<p>The Scheme of Assessment shall also:</p> <ul style="list-style-type: none"> • specify the relevant weightings as between the External Examination and the Employer Set Project; and • outline the minimum performance requirements for each judgemental grade required for the TQ Core Component (and each judgemental grade shall reference both the External Examination and Employer Set Project). <p><i>Occupational Specialist Components</i></p> <p>The Scheme of Assessment shall clearly set out (in relation to each Occupational Specialist Component) an explanation for Approved Providers of:</p> <ul style="list-style-type: none"> • the performance outcomes and how these are mapped to the Former Supplier's Specification of Content and, if relevant, the Outline Content; • the assessment task(s) for the relevant Occupational Specialist Component; • the duration of the assessment; • the number of marks for the assessment; • how and when the TQ Live Assessment Materials will be made available; • the assessment criteria that will be applied (including, in very exceptional circumstances set out in the Approved Assessment Strategy, where any assessments in relation to the relevant Occupational Specialist Component are to be marked by an Approved Provider and not externally marked by an Assessor, details of how marks should be allocated); • the conditions under which Student assessment evidence must be generated; • the forms of Student assessment evidence that must be retained by the Approved Provider and the expectations around this; • any permissions/prohibitions with respect to different Occupational Specialist Components being taken in combination; • the grades available for the relevant Occupational Specialist Component; and • (in very exceptional circumstances set out in the Approved Assessment Strategy, where any assessments in relation to the relevant Occupational Specialist Component are to be marked by an Approved Provider and not externally marked by an Assessor) details of how Moderation will be conducted.

Product	Description
	<p>Approved Provider's Quality Assurance Process</p> <p>This part of the TQ Specification shall set out details of the Approved Provider's role in quality assuring the TQ assessments, to ensure compliance by the Supplier with its quality assurance obligations in the relevant part of the Supplier Response⁷, for example:</p> <ul style="list-style-type: none"> • authentication – ensuring Students' assessment evidence is their own; • malpractice – for example during controlled conditions; and • any other activity required of Approved Providers by the Supplier to ensure regulatory/contractual requirements are met. <p>Additional Information for Approved Providers</p> <p>The TQ Specification shall also clearly set out:</p> <ul style="list-style-type: none"> • the Qualification Purpose; and • the prior learning requirements for the TQ (if applicable). <p>The TQ Specification shall also clearly set out, or provide appropriate links to, information regarding:</p> <ul style="list-style-type: none"> • calculating grades (e.g. aggregation and scaling); • submitting general queries; • access arrangements, Reasonable Adjustments and Special Consideration; • enquiries about results and Appeals; • retakes; and • any guidance in relation to delivery of the TQ.

⁷ The proposed assurance arrangements should form part of the Supplier Response.

Product	Description
TQ Specimen Assessment Materials	<p>The TQ Specimen Assessment Materials shall comprise examples of assessments that are representative of the approach the Assessment Strategy proposes is used in live operation and shall be produced to the same quality standard. The TQ Specimen Assessment Materials shall cover each of the following:</p> <ul style="list-style-type: none"> • TQ Core Component – External Examination – sample question paper and mark scheme for the/each assessment, together with mapping to the Former Supplier’s Specification of Content and, if relevant, the Outline Content and sampling approach proposed; • TQ Core Component – Employer Set Project – assessment tasks/requirements for each available option and assessment criteria; and • Occupational Specialist Component – practical assessment tasks/requirements and assessment criteria for each Occupational Specialist Component. <p>TQ Specimen Assessment Materials for all components of the TQ will be validated by a sufficient and representative number of Employers as agreed by the Authority.</p>
TQ Live Assessment Materials	<p>The live assessment materials (modelled on the TQ Specimen Assessment Materials and taking into account (as applicable) performance demonstrated by previous TQ Live Assessment Materials) that are to form the basis of assessment for the TQ for the relevant Academic Year.</p>
Exemplification Materials	<p>Guide Standard Exemplification Materials</p> <p>Guide Standard Exemplification Materials shall include indicative ‘guide’ examples of Student assessment evidence which the Supplier judges would be likely to meet the minimum requirements for Occupational Entry Competence and higher grades in each Occupational Specialist Component. Guide Standard Exemplification Materials will be produced in consultation with and validated by Employers. Guide Standard Exemplification Materials must accurately portray student assessment evidence and may include, but is not limited to, the use of photographic, audio or video evidence accompanied by an explanatory commentary.</p> <p>Grade Standard Exemplification Materials</p> <p>Grade Standard Exemplification Materials shall include actual marked examples of Students’ assessment evidence, selected after awarding, which:</p>

Product	Description
	<ul style="list-style-type: none"> • have met the minimum requirements for Occupational Entry Competence and higher grades in each Occupational Specialist Component; • are produced (and reviewed on an ongoing basis) in consultation with and validated by Employers; • may be used to train Assessors (and any assessors employed or engaged by an Approved Provider and any Moderators where permitted in accordance with the Approved Assessment Strategy) to ensure that Student assessment evidence is assessed to the correct standard consistently, provided always that if the materials are used to train such Assessors (and any assessors and Moderators), the Supplier shall ensure that the spread of marks covered by the materials (including the Grade Standard Exemplification Materials) that are used for such training shall not be restricted to the grade boundaries but shall include material at a range of other marks; and • meet the requirements of SR 2.7(3) of Service Requirement 2. <p>Student assessment evidence may include, but is not limited to, the use of photographic, audio or video evidence accompanied by an explanatory commentary.</p>
Implementation and Delivery Plan	<p>A detailed explanation of the Supplier's proposed approach to successfully designing, developing and delivering the TQ throughout the Term (the level of detail in respect of the whole (and each relevant part of such Term) being commensurate with the level of detail that can reasonably be expected to be known by and/or available to the Supplier from time to time in respect of such whole or part of the Term), including evidence of the achievability of the proposed approach against the TQ Critical Path Diagram.</p> <p>It shall present a clear and achievable overall timetable for the delivery of all of the Services.</p> <p>The Implementation and Delivery Plan shall include information about the Supplier's:</p> <ul style="list-style-type: none"> • programme and project management approach and project expertise to develop the design, content, assessment and delivery of the TQ, including details of delivery risks and plan to mitigate such risks; • financial modelling on cost of design, development and delivery of the TQ and delivery of the Services;

Product	Description
	<ul style="list-style-type: none"> • approach to working with Stakeholders (including, if relevant, the T Level Panel up to Interim Milestone 1) in relation to the design, development delivery and ongoing update of the TQ and the Services (including consultation with Eligible Providers to ensure the quality of the Initial TQ Deliverables at each Milestone); • approach to working with Stakeholders and organisations associated with and/or providing advice and/or guidance in relation to Students with special educational needs and disabilities in the design, development, delivery and update of the TQ and the Services, including a process for regularly reporting on progress; • approach to sharing early and/or amended drafts of the Initial TQ Deliverables and TQ Deliverables with Eligible Providers and/or Approved Providers (as applicable), including how such documents will be shared and when; • capacity to scale up in relation to demand and in response to delivery challenges to ensure overall delivery remains on track; • ability to develop and implement innovative solutions; • approach to ensuring that Management Information is interoperable with the Authority's systems and processes during the design, development and live operation of the TQ; • proposals for efficiently supporting Providers to deliver the TQ and to answer related enquiries and address related complaints (including Post-Result Services) made by telephone, by post and by other electronic correspondence efficiently and effectively; • process for raising delays or concerns; and • details of proposed joint working between T Level Awarding Organisations (as contemplated by Schedule 4 (<i>Co-operation</i>)) to support (amongst other things) the effective and efficient delivery of the T Level Programme and to streamline administration relating to the T Levels Programme in the interests of Students and Providers. <p>The Implementation and Delivery Plan shall evidence that the Supplier has, or will have:</p> <ul style="list-style-type: none"> • IT infrastructure and systems to support the design, development, delivery and award of the TQ; • secured any relevant third party contracts to support delivery of the TQ; and • processes for the design, development, delivery and award of the TQ.
Resource Plan	A detailed explanation of the Supplier's proposed approach to resourcing to ensure performance of the Services, and the successful design, development and delivery of the TQ, which shall be in the format of the template Resource Plan issued by the Authority as part of the procurement process leading to the award of this Contract.

Product	Description
	<p>The Resource Plan shall include detail about:</p> <ul style="list-style-type: none"> • all types of resources required for delivery of the Services, including a distinction between those that will be dedicated to the TQ and those that will be used for other qualifications or business areas; • the resources that will be internal and those that will be external; • the skills and experience profiles for the required resources; • any existing skills or knowledge gaps that may exist with resources already in place and how and when additional resources will be recruited, mobilised, trained and managed; • the number of resources required (including the number of Assessors (and any Moderators where permitted in accordance with the Approved Assessment Strategy) required); • what the resources would be required to deliver and by when; • how long the relevant resources would be engaged; • processes, measures and strategies that will ensure proper, effective and resilient resourcing so that the TQ will at all times operate in accordance with the Service Requirements; • processes for keeping resource requirements under review; • the proposed approach to the recruitment (including the timescales for and number) of Assessors (and any Moderators where permitted in accordance with the Approved Assessment Strategy) which have recent relevant industry experience, including the trajectory that will be required to be maintained to meet the requirements for the provision of Assessors (and (where applicable) Moderators) under this Service Requirements; • the proposed approach to the training (including the timescales) of Assessors (and any Moderators where permitted in accordance with the Approved Assessment Strategy) which have recent relevant industry experience, including the trajectory that will be required to be maintained to meet the requirements for the provision of Assessors (and (where applicable) Moderators) under this Service Requirements; • the assessment expertise, which will be used to deliver assessment design and processes set out in the Assessment Strategy; and • the occupationally specific subject expertise needed to devise and assess Occupational Specialist Components.
Submission Issues Log	The log of issues raised by the Authority in respect of the Initial TQ Deliverables following a Submission and the Supplier's detailed description of how each such issue has been resolved.

Product	Description
Risk Register	The Supplier's register detailing any events, matters and/or circumstances which it reasonably foresees (acting in accordance with Good Industry Practice) may impact upon and/or risk the successful performance of the Services by the Supplier in accordance with this Contract (or, where the Supplier has failed to create, maintain and/or update such register, such register as would detail such events, matters and/or circumstances if the Supplier was complying with its obligations under this Contract).
Issues Log	The Supplier's log detailing any events, matters and/or circumstances which have occurred and which may impact (or have impacted) upon and/or risk the successful performance of the Services by the Supplier in accordance with this Contract (or, where the Supplier has failed to create, maintain and/or update such log, such log as would detail such events, matters and/or circumstances if the Supplier was complying with its obligations under this Contract).
Provider Approval Criteria	<p>The Supplier's criteria for the approval of Eligible Providers to deliver the TQ which shall:</p> <ul style="list-style-type: none"> • ensure that the Eligible Provider's ability to deliver the TQ to the required standards and expectations is assessed and verified; • ensure that the expertise of the Eligible Provider to deliver the TQ to the required standards and expectations is assessed and verified; • ensure that resources available to the Eligible Provider to deliver the TQ in line with the required standards and expectations is assessed and verified; • promote accessibility of the TQ to all Eligible Providers; • not impose any undue and/or overburdensome administrative, financial and/or operational requirements and/or require any change in the existing administrative, financial and/or operational aspects of an Eligible Provider's business and/or operations, in either case, which could not reasonably be expected by an Eligible Provider as being strictly necessary to deliver the TQ (having regard to the administrative, financial and/or operational aspects of the business and/or operations within which Providers (operating in the same or substantially similar business and/or operations as the Eligible Provider) operate; and • not be inconsistent with and/or lead to a breach of the requirements of clause 7.1 (<i>Interaction with Providers</i>).
Assessment Guidance for Providers	Assessment Guidance shall be produced along with the specimen assessment materials (SAMs) and will

Product	Description
	<p>include guidance to ensure that Providers are fully supported to prepare students for assessment.</p> <p>This guidance must include information relating to each component, task or similar activity.</p> <p>Guidance must also include but is not limited to, information on how to prepare for and administer assessments and where applicable, how to submit assessment evidence, guidance on marking and moderation as well as any other information that is required to ensure that students and Providers are fully prepared for assessments. The content must be tailored for each series and identify and expand on the guidance given for all practical assessments.</p> <p>Assessment Guidance must be produced in consultation with a sufficient and representative sample of Providers.</p>

ANNEX 1 – QUALIFICATION PURPOSE

The purpose of the level 3 TQ is to ensure Students have the knowledge, skills and behaviours needed to progress into skilled employment or higher level technical training relevant to the T Level.⁸

To achieve this, each level 3 TQ must:

- provide reliable evidence of Students' attainment in relation to:
 - the core knowledge and skills relevant to the Route and Occupational Specialist Component(s) covered by the TQ; and
 - the knowledge, skills and behaviours required for at least one Occupational Specialist Component relevant to the TQ;
- be up-to-date, ensuring the knowledge, skills and behaviours needed for the Occupations have continued currency among Employers and other end-users;
- ensure maths, English and digital skills continue to be applied where they are essential to achieve occupationally relevant outcomes;
- ensure the minimum pass grade standard for Occupational Specialist Components attests to Occupational Entry Competence, meets employer expectations, and is as close to full occupational competence as possible;
- allow end users to accurately identify Students' level of attainment and effectively differentiate their performance;
- provide a clear and coherent basis for development of suitably demanding high-quality level 3 courses, which enable Students to realise their potential;
- provide Students with the opportunity to manage and improve their own performance; and
- support fair access to attainment for all Students who take the TQ, including those with special educational needs and disabilities.

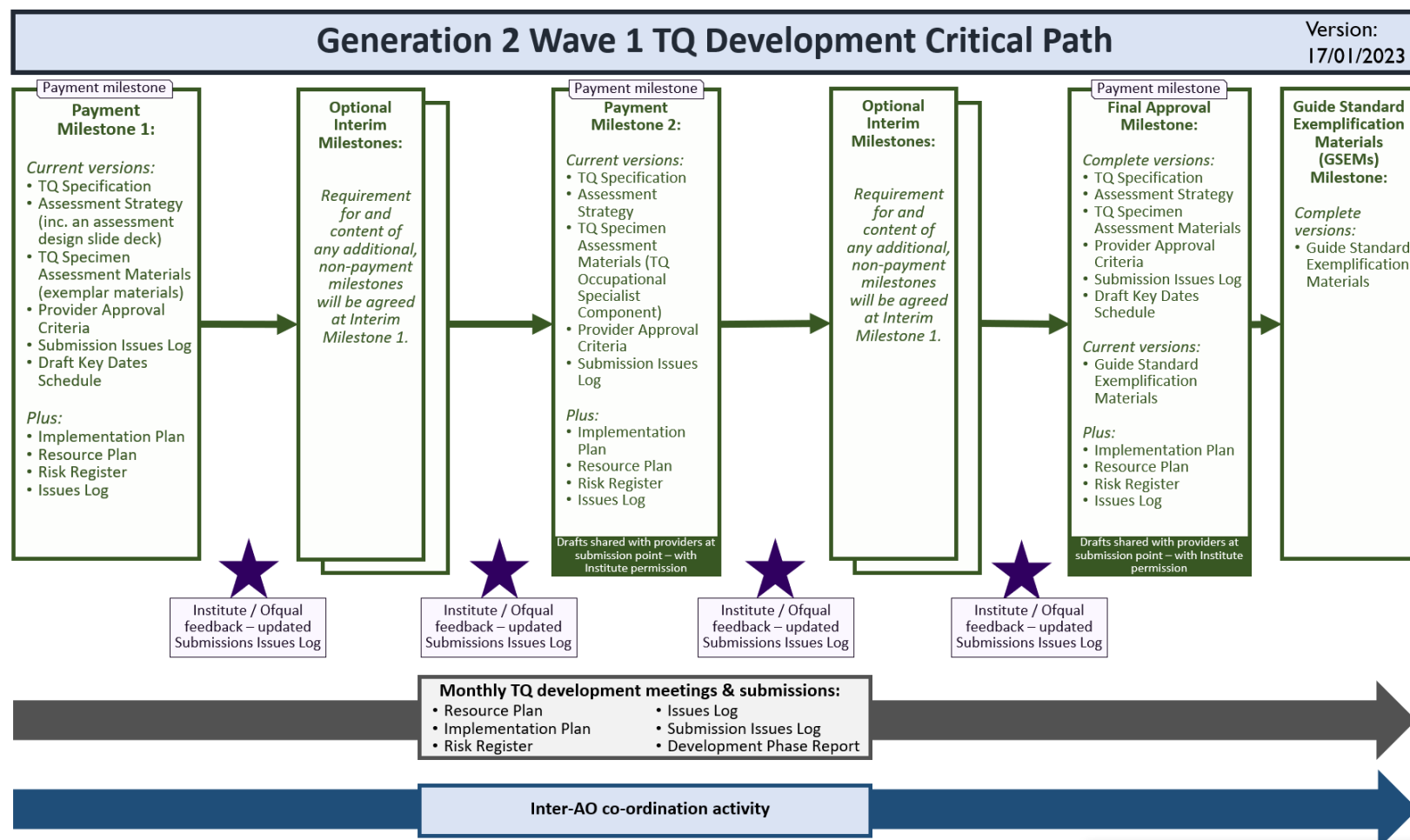
⁸ The Authority may only grant IfATE Approval of the qualification "if satisfied that by obtaining the qualification a person demonstrates that he or she has attained as many of the outcomes set out in the standards as may reasonably be expected to be attained by undertaking a course of education" (sA2DA(3) of the 2009 Act).

ANNEX 2 – INTENTIONALLY BLANK

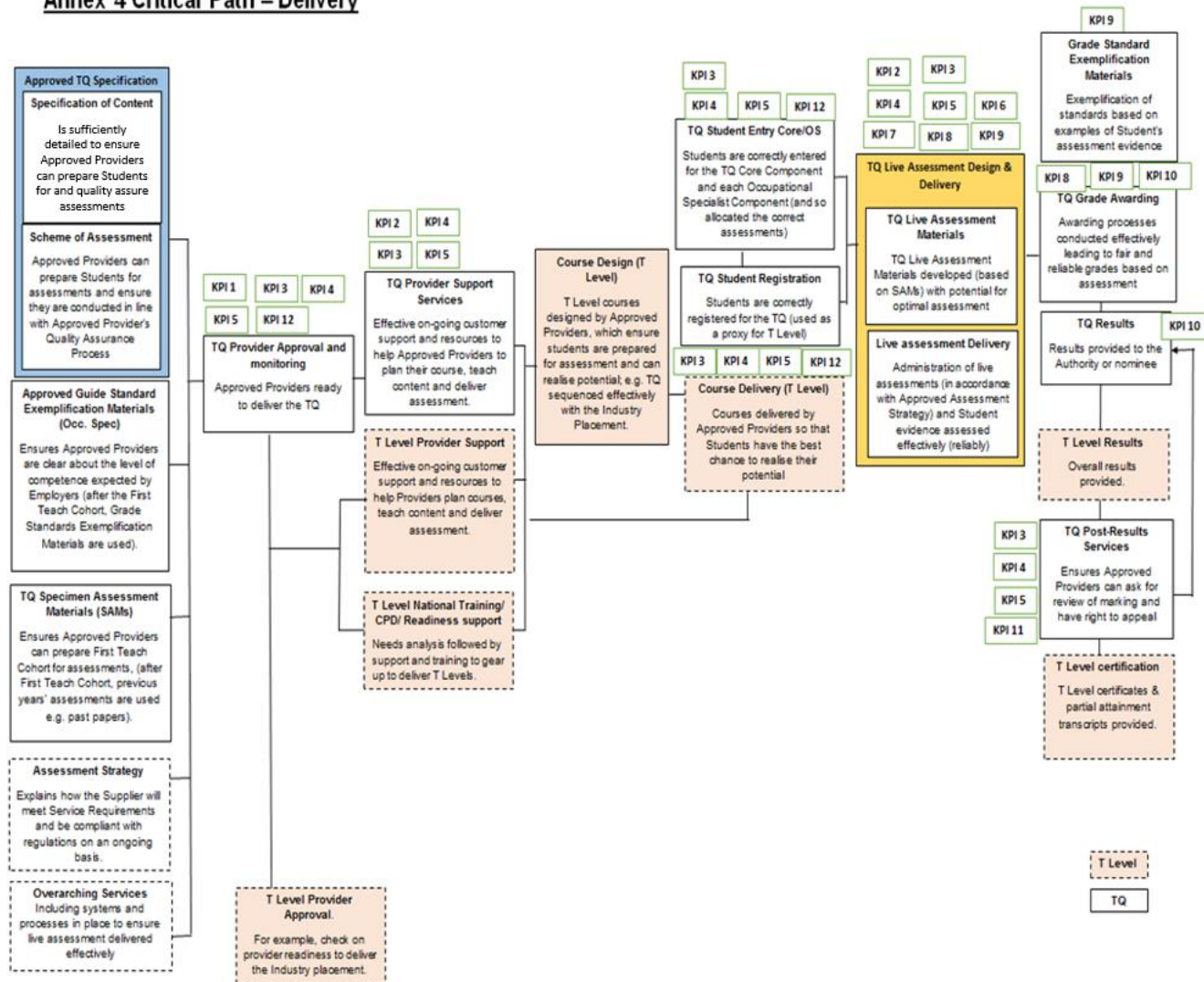
ANNEX 3 – FORMER SUPPLIER’S TQ SPECIFICATION

The TQ Specification content for this Annex is contained in a separate folder - at GEN2W1_ITT_Attachment_11_TQ_Specs

ANNEX 4 – TQ CRITICAL PATH DIAGRAM



Annex 4 Critical Path – Delivery



ANNEX 5 – INDICATIVE KEY DATES SCHEDULE⁹

To meet the requirements of Schedule 4 (*Co-operation*) the Supplier, working with other T Level Awarding Organisations, will need to produce a Key Dates Schedule, which secures the efficient and effective delivery of each assessment series for the TQ. Within the Key Dates Schedule, the deadline for submitting TQ Student registration data to the Authority must be in November in the first year of study. For a summer assessment series results must be issued on or no later than the date A level results are issued.

For a summer assessment series the key dates could include but are not restricted to:

Key Date	Description	Assessment series
November (Yr1)	Deadline for submitting TQ Student registration data to the Authority	All
3 rd week Feb	Deadline for entries for assessments by Approved Providers	June
3 rd week Feb	Final date for submitting Reasonable Adjustment requests to the Supplier by Approved Providers	June
4 th week Feb	Assessment timetable issued	June
2 nd week May	First date for submitting Special Consideration requests to the Supplier	June
2 nd week May-3 rd week June	Assessments take place	June
3 rd week August	Restricted release of T Level results to Approved Providers by the Authority	June
3 rd week August	Release of results to Students by the Authority	June

⁹ This is an indicative Key Dates Schedule. Exact dates and further key dates will need to be agreed between the Supplier and other T Level Awarding Organisations through Schedule 4 (*Co-operation*) and the resulting Key Dates Schedule must be Approved by the Authority.

Key Date	Description	Assessment series
3 rd week August	Release of more detailed TQ results data from the Supplier	June
3 rd week September	Appeals and assessment review requests made	June
4 th week Nov	T Level certificates and statements of achievement issued by the Department (or the function may be delegated to the Authority)	All

ANNEX 6 – TQ CONTENT UPDATING SCHEDULE

TQ Content Updating Schedule: Inclusive TQ Changes

Schedule Date	Activity
By end November (Academic Year X ¹⁰ -1)	Where the Authority carries out an annual review contemplated by clause 8.4, the Authority shall (where the Authority considers that the outcome of that review gives rise to any one or more Inclusive TQ Changes that the Authority requires to be implemented in accordance with this TQ Content Updating Schedule) submit to the Supplier an annual guidance note setting out such Inclusive TQ Changes.
December to February (Academic Year X-1)	The Supplier shall reflect any Inclusive TQ Changes arising out of the relevant annual guidance note (and any additional updates the Supplier proposes should be included as part of the annual review) in the Approved Initial TQ Deliverables or the TQ Deliverables (as the case may be) and/or any other Products and/or documents associated with the TQ (as applicable).
By end February (Academic Year X-1)	The Supplier shall submit the relevant Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents (as the case may be) as amended to reflect the Inclusive TQ Changes in question to the Authority for agreement.
March (Academic Year X-1)	<p>(a) The Authority shall either:</p> <ul style="list-style-type: none"> • confirm to the Supplier its agreement to the relevant amended Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents; or • notify the Supplier that the whole or part of such amended Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents are not agreed (and provide details of the comments and/or objections that the Authority has in relation to such documents). <p>(b) The Supplier shall (as soon as reasonably practicable following receipt of the Authority's notice) make such amendments to the whole or relevant part (as the case may be) of the Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents as are necessary to address any comments and/or objections</p>

¹⁰ Where Academic Year X shall be the Academic Year in which the agreed amended documents reflecting the relevant Inclusive TQ Changes shall (where applicable) be implemented by Approved Providers for the new Cohort of Students.

	of the Authority and resubmit such amended documents to the Authority for agreement, to which the provisions of paragraph (a) (immediately above) shall apply.
The earlier of the end of March (Academic Year X-1) and (where applicable) the date of agreement by the Authority to the relevant amended documents	The Supplier shall make available any agreed amended Approved Initial TQ Deliverables or TQ Deliverables and (where applicable) any Products and/or documents to Approved Providers and facilitate the implementation by Approved Providers of such amended Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents, provided always that where part of any such amended document is subject to further amendment (as required by the Authority pursuant to paragraph (a) above), the Supplier shall not (unless otherwise agreed with the Authority) make any part of that relevant Approved Initial TQ Deliverable, TQ Deliverable, Product or document available to Approved Providers until the Supplier has made such amendments as are necessary to address the comments and/or objections of the Authority referred to in paragraph (a) above and the Authority has either confirmed its agreement to the resubmitted document or notified the Supplier that such document (containing only those amendments that have been agreed by the Authority) may be made available to Approved Providers.
September (Academic Year X)	Any agreed amended Approved Initial TQ Deliverables or TQ Deliverables and (where applicable) any Products and/or documents shall be implemented by Approved Providers for the new Cohort of Students.

TQ Content Updating Schedule: Exclusive TQ Changes

Schedule Date	Activity
End May (Academic Year X ¹¹ -2)	Where the Authority carries out an annual review contemplated by clause 8.4, the Authority shall (where the Authority considers that the outcome of that review gives rise to any one or more Exclusive TQ Changes that the Authority requires to be implemented in accordance with this TQ Content Updating Schedule) submit to the Supplier an annual guidance note setting out such Exclusive TQ Changes.
June (Academic Year X-2) to September (Academic Year X-1)	The Supplier shall reflect any Exclusive TQ Changes arising out of the relevant annual guidance note in the Approved Initial TQ Deliverables or the TQ Deliverables (as the case may be) and/or any other Products and/or documents associated with the TQ (as applicable).

¹¹ Where Academic Year X shall be the Academic Year in which the agreed amended documents reflecting the relevant Exclusive TQ Changes shall (where applicable) be implemented by Approved Providers for the new Cohort of Students.

By End September (Academic Year X-1)	The Supplier shall submit the relevant Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents (as the case may be) as amended to reflect the Exclusive TQ Changes in question to the Authority for IfATE Approval.
October to November (Academic Year X-1)	<p>(a) The Authority shall either:</p> <ul style="list-style-type: none"> confirm to the Supplier that the relevant amended Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents meet the requirements for IfATE Approval; or notify the Supplier that the whole or part of such amended Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents do not meet the requirements for IfATE Approval (and provide details of the comments and/or objections that the Authority has in relation to such documents). <p>(b) The Supplier shall (as soon as reasonably practicable following receipt of the Authority's notice) make such amendments to the whole or relevant part (as the case may be) of the Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents as are necessary to address any comments and/or objections of the Authority and resubmit such amended documents to the Authority for IfATE Approval, to which the provisions of paragraph (a) (immediately above) shall apply.</p>
The earlier of the beginning of December (Academic Year X-1) and (where applicable) the date of IfATE Approval being achieved in relation to the relevant amended documents	The Supplier shall make available any amended Approved Initial TQ Deliverables or TQ Deliverables and (where applicable) any Products and/or documents that have achieved IfATE Approval to Approved Providers and facilitate the implementation by Approved Providers of such amended Approved Initial TQ Deliverables, TQ Deliverables, Products and/or documents, provided always that where part of any such amended document is subject to further amendment (as required by the Authority pursuant to paragraph (a) above), the Supplier shall not (unless otherwise agreed with the Authority) make any part of that relevant Approved Initial TQ Deliverable, TQ Deliverable, Product or document available to Approved Providers until the Supplier has made such amendments as are necessary to address the comments and/or objections of the Authority referred to in paragraph (a) above and the Authority has either confirmed that such amended resubmitted document has achieved IfATE Approval or notified the Supplier that such document (containing only those amendments on which the Authority would be prepared to award IfATE Approval) may be made available to Approved Providers.

September (Academic Year X)	Any amended Approved Initial TQ Deliverables or TQ Deliverables and (where applicable) any Products and/or documents that have achieved IfATE Approval shall be implemented by Approved Providers for the new Cohort of Students.
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ANNEX 7 – INITIAL DEVELOPMENT MILESTONES

This Annex sets out the submission requirements for the three Milestones at which the Authority will render initial, interim and final payments of the Development Charge.

Further interim submission Milestones may be added to this timetable where these are agreed as part of the agreement at Interim Milestone 1. This decision will be influenced by the quantum of change to the TQ that is approved by the Authority at that initial Milestone.

In the event of any conflict and/or inconsistency between the provisions of this Annex 7 and the provisions of Annex 4 (*TQ Critical Path Diagram*) to this Service Requirements, the provisions of this Annex 7 shall prevail.

Milestone	Submission Date	Submission
Interim Milestone 1	14 October 2024 (indicative)	<p>TQ Specification. A draft version of the complete TQ Specification, which takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting, and which includes:</p> <ul style="list-style-type: none">(a) a complete Specification of Content for all Components which fully covers the Former Supplier's TQ Specification and, if relevant, the Outline Content and any proposed changes to the Former Supplier's Specification of Content;(b) the proposed Guided Learning hours for each Component;(c) a draft of the Scheme of Assessment which:<ul style="list-style-type: none">(i) specifies the assessment objectives for each part of the TQ Core Component;

Milestone	Submission Date	Submission
		<p>(ii) defines each assessment method to be used for each Component;</p> <p>(iii) specifies indicative weightings for the assessments within the Components.</p> <p>TQ Specimen Assessment Materials. Sample indicative assessment tasks, and assessment criteria/mark schemes which takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting for:</p> <p>(a) each part of the TQ Core Component; and</p> <p>(b) at least one Occupational Specialist Component.</p> <p>The submission must support the exemplification of the proposals within the assessment design walkthrough and include as a minimum the following:</p> <p>(c) exemplar questions that cover the variety of questions types and accompanying mark scheme including indicative content;</p> <p>(d) exemplar tasks for one example of an Employer Set Project together with an exemplar mark scheme and indicative content; and</p> <p>(e) exemplar tasks for one Occupational Specialist Component Assignment together with an exemplar mark scheme including indicative content.</p>

Milestone	Submission Date	Submission
		<p>Assessment Strategy. A draft of the Assessment Strategy, which contains a clear explanation of the structure of the assessment design and strategy for example, the proposed number of assessments and/or assessment tasks, the duration of each and the conditions under which each would be taken. For the Employer Set Project and the Occupational Specialisms, the draft of the Assessment Strategy should also set out the proposed approach to marking and how students' application of skills and knowledge will be assessed. The draft of the Assessment Strategy shall meet (so far as is reasonably practicable having regard to the timing of Interim Milestone 1) all of the requirements of the Product Description for the Assessment Strategy and take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>The Submission must include an:</p> <p>Assessment design slide deck. A slide deck which contains a clear explanation of the structure of the assessment design and explanation of the design decision rationale for the TQ Core Component and Occupational Specialist Component. The slide deck must contain the structural elements and rationale in accordance with any guidance on the Service Requirements issued by the Authority and take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting. The assessment design slide deck will be used to facilitate a walkthrough with the Authority shortly following the submission.</p> <p>Implementation and Delivery Plan. A complete version of the Implementation and Delivery Plan, which meets (so far as is reasonably practicable having regard to the timing of Interim Milestone 1) all of the requirements of the Product Description for the Implementation and Delivery Plan and which also takes in account any comments, objections, recommendations</p>

Milestone	Submission Date	Submission
		<p>and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting</p> <p>Resource Plan. A complete version of the Resource Plan, which meets (so far as is reasonably practicable having regard to the timing of Interim Milestone 1) all of the requirements of the Product Description for the Resource Plan and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Provider Approval Criteria. A complete version of the Provider Approval Criteria, which meets (so far as is reasonably practicable having regard to the timing of Interim Milestone 1) all of the requirements of the Product Description for the Provider Approval Criteria and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Risk Register and Issues Log. An updated and complete version of each of the Risk Register and the Issues Log which meet all of the requirements of the Product Description for the Risk Register or Issues Log (as applicable) and which take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Submission Issues Log. An updated Submission Issues Log which meets all of the requirements of the Product Description for the Submission Issues Log, and which explains how each issue raised by the Authority to date has been dealt with in this Submission.</p>

Milestone	Submission Date	Submission
		<p>Employer and Provider Engagement Strategy. A complete version of the Employer and Provider Engagement Strategy, which meets (so far as is reasonably practicable having regard to the timing of Interim Milestone 1) all of the requirements of the Product Description for the Employer and Provider Engagement Strategy and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier in respect of the Supplier's Response and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p>
Interim Milestone 2	2 December 2024 (indicative)	<p>TQ Specification. a complete version of the TQ Specification, which meets all of the requirements of the Product Description for the TQ Specification and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>TQ Specimen Assessment Materials and accompanying Assessment Guidance for Providers. A complete version of the TQ Occupational Specialist Component and each part of the TQ Core Component, and accompanying Assessment Guidance for Providers which meet all of the requirements of the Product Descriptions and which also take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Assessment Strategy. A complete version of the Assessment Strategy, which meets all of the requirements of the Product Description for the Assessment Strategy and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p>

Milestone	Submission Date	Submission
		<p>Implementation and Delivery Plan. A complete version of the Implementation and Delivery Plan, which meets all of the requirements of the Product Description for the Implementation and Delivery Plan and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Resource Plan. A complete version of the Resource Plan, which meets all of the requirements of the Product Description for the Resource Plan and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Provider Approval Criteria. A complete version of the Provider Approval Criteria which meets (so far as is reasonably practicable having regard to the timing of Interim Milestone 4) all of the requirements of the Product Description for the Provider Approval Criteria and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Risk Register and Issues Log. A complete version of each of the Risk Register and the Issues Log which meet all of the requirements of the Product Description for the Risk Register or Issues Log (as applicable) and which also take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Submission Issues Log. An updated Submission Issues Log which meets all of the</p>

Milestone	Submission Date	Submission
		<p>requirements of the Product Description for the Submission Issues Log, and which explains how each issue raised by the Authority to date has been dealt with in this Submission.</p> <p>Employer and Provider Engagement Strategy. A complete version of the Employer and Provider Engagement Strategy, which meets all of the requirements of the Product Description for the Employer and Provider Engagement Strategy and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at Interim Milestone 1 and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p>
Final Approval Milestone	14 February 2025 (indicative)	<p>TQ Specification. A complete version of the TQ Specification, which meets all of the requirements of the Product Description for the TQ Specification and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>TQ Specimen Assessment Materials and accompanying Assessment Guidance for Providers. A complete version of the TQ Specimen Assessment Materials, and accompanying Assessment Guidance for Providers which meet all of the requirements of the Product Descriptions and which also take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Assessment Strategy. A complete version of the Assessment Strategy, which meets all of the requirements of the Product Description for the Assessment Strategy and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in</p>

Milestone	Submission Date	Submission
		<p>connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Implementation and Delivery Plan. A complete version of the Implementation and Delivery Plan, which meets all of the requirements of the Product Description for the Implementation and Delivery Plan and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Resource Plan. A complete version of the Resource Plan, which meets all of the requirements of the Product Description for the Resource Plan and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Provider Approval Criteria. A complete version of the Provider Approval Criteria, which meets all of the requirements of the Product Description for the Provider Approval Criteria and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Risk Register and Issues Log. A complete version of each of the Risk Register and the Issues Log which meet all of the requirements of the Product Description for the Risk Register or Issues Log (as applicable) and which also take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p>

Milestone	Submission Date	Submission
		<p>Submission Issues Log. An updated Submission Issues Log which meets all of the requirements of the Product Description for the Submission Issues Log, and which explains how each issue raised by the Authority to date has been dealt with in this Submission.</p> <p>Employer and Provider Engagement Strategy. A complete version of the Employer and Provider Engagement Strategy, which meets all of the requirements of the Product Description for the Employer and Provider Engagement Strategy and which also takes into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any previous Interim Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting.</p> <p>Draft Key Dates Schedule. An updated version of the Key Dates Schedule.</p>
Guide Standard Exemplification Materials	February 2025 (Indicative)	<p>Exemplification Materials. A complete version of the Guide Standard Exemplification Materials for each Occupational Specialist Component, which meet all of the requirements of the Product Description for the Guide Standard Exemplification Materials and which also take into account any comments, objections, recommendations and/or requirements notified by the Authority to the Supplier at any Milestone and/or arising out of or in connection with the submission of such Product at any previous TQ Development Meeting or any other feedback.</p>

ANNEX 8 – ELIGIBLE PROVIDERS

Part 1 – Eligible Providers 2025 Cohort

The Eligible Providers for the Academic Year commencing 2025 are published on the Gov.uk website here:

<https://www.gov.uk/government/publications/providers-selected-to-deliver-t-levels>

Part 2 – Eligible Providers Subsequent Cohorts

The Authority shall, not later than 12 months prior to the commencement of the relevant Academic Year, notify the Supplier of the Eligible Providers for such Academic Year.

ANNEX 9 – MANAGEMENT INFORMATION

Information/ report	Description
Development Phase Report	<p>In the period prior to IfATE Approval, the Supplier shall prepare and provide a dashboard report (in such form as the Authority may specify from time to time) summarising:</p> <ul style="list-style-type: none"> • the Supplier’s progress against and compliance (to date) with the Implementation and Delivery Plan (including progress against any milestones (including any Milestones)) and the Resource Plan; • how the Supplier is managing any risks and issues identified in the updated Risk Register and/or Issues Log, including the Supplier’s progress against any steps required by the Authority to be carried out by the Supplier in accordance with paragraph 11.1.2 of Part 1 of this Service Requirements; • how Employers (and other end users, including higher education providers) have been consulted in relation to the design of the TQ; and • such other information as the Authority may reasonably require from time to time.
Operational Delivery Report	<p>Monthly Performance Report</p> <p>The Supplier shall prepare and provide a dashboard report (in such form as the Authority may specify from time to time) summarising:</p> <ul style="list-style-type: none"> • the Supplier’s progress against and compliance (to date) with the Implementation and Delivery Plan, the Resource Plan and the Key Dates Schedule for the relevant Academic Year; • how the Supplier is managing any risks and issues identified in the updated Risk Register and/or Issues Log, including the Supplier’s progress against any steps required by the Authority to be carried out by the Supplier in accordance with paragraph 11.1.2 of Part 1 of this Service Requirements; • for each KPI in respect of which the Performance Monitoring Period ends in that Contract Month: <ul style="list-style-type: none"> ○ the actual performance achieved by the Supplier for that KPI during that Performance Monitoring Period; and ○ details of any Service Failure that occurred in respect of that KPI, together with the proposed KPI Improvement Plan;

Information/ report	Description
	<ul style="list-style-type: none"> • details of the Supplier's progress against each KPI Improvement Plan that the Supplier is (or should be, if it was complying with its obligations under this Contract) carrying out and/or completing during the relevant Contract Month; • the Supplier's progress in carrying out any Designated Action notified by the Authority pursuant to clause 14.2 (<i>What may happen if there are issues with your provision of the Services</i>); • without prejudice to clause 14.1 (<i>What may happen if there are issues with your provision of the Services</i>), any Critical Service Failures occurring in the relevant Contract Month; • any areas of the Services (and/or the performance of the Services) where the Supplier reasonably considers that there could be innovations and/or improvements in the delivery and/or performance of the Services, including key risks and potential benefits; • progress in implementing, and the actual impact of, any innovations and/or improvements previously notified by the Supplier; • evidence demonstrating that the Supplier is achieving the overarching outcomes for each element of the Services, as set out in the first column of the Service Definitions Table; • the monitoring undertaken by the Supplier in accordance with paragraph 3.1.2 of Part 1 of this Service Requirements in the relevant Contract Month to include reporting on Provider usage of training, resources and other support materials made available by the Supplier; • any events, matters and/or circumstances referred to in paragraph 3.2 of Part 1 of this Service Requirements occurring in the relevant Contract Month, together with the progress (during the relevant Contract Month) of the Eligible Provider or Approved Provider (as the case may be) and the Supplier in taking the steps and/or actions referred to in paragraphs 3.3 and 3.4 of Part 1 of this Service Requirements; and • such other information as the Authority may reasonably require from time to time having regard to, amongst other things, the period in the Academic Year within which the relevant Contract Month falls. <p>In relation to the assessment of the Supplier's performance against each KPI, the Supplier shall submit all such evidence as is referred to in the fifth column of the Table set out in Annex 1 to Schedule 15 (<i>Monitoring of Performance</i>), other than where such evidence is stated to be obtained via a survey. Notwithstanding the evidence that the Supplier is required to provide (referred to in the fifth column of the Table set out in Annex 1 to Schedule 15 (<i>Monitoring of Performance</i>)) to enable</p>

Information/ report	Description
	<p>the assessment of the Supplier's performance against each KPI, the Supplier shall also include within this Monthly Performance Report the following data and information (broken down by KPI):</p> <ul style="list-style-type: none"> • KPI 1 (Provider approval and monitoring): <ul style="list-style-type: none"> ○ the number of Eligible Providers applying to become Approved Providers, broken down into those Eligible Providers that are seeking a full approval and those Eligible Providers that are seeking to extend an existing approval; ○ the number and details of Eligible Providers that have submitted an application to become an Approved Provider and who have (i) not become an Approved Provider and (ii) become an Approved Provider; ○ the number and details of Eligible Providers that are awaiting a decision on their application to become an Approved Provider; ○ the number and details of Eligible Providers in respect of which a decision has been made within 30 Working Days of receipt by the Supplier of the relevant application; and ○ details of the actual monitoring of Approved Providers undertaken by the Supplier in the relevant Contract Month. • KPI 2 (Approved Provider preparedness).¹² • KPI 3 (Queries from Eligible Providers and Approved Providers): <ul style="list-style-type: none"> ○ the number of letters and other forms of electronic correspondence received (broken down by letter and each other form of electronic correspondence) and number of telephone calls received, in each case, in the relevant Contract Month; ○ a summary of key topics or queries being asked; ○ details of the percentage of such queries being resolved within the Target Service Level (broken down by letter (and each other form of electronic correspondence) and telephone calls); and ○ details of any repeat queries (including where any such queries have been raised and/or resolved in any previous Contract Month). • KPI 4 (Complaints): <ul style="list-style-type: none"> ○ the number of complaints received in the relevant Contract Month; ○ a summary of the nature of each such complaint; ○ details of the percentage of such complaints being resolved within the applicable Target Service Level;

¹² To be measured by a survey undertaken or commissioned by the Authority.

Information/ report	Description
	<ul style="list-style-type: none"> ○ details of why any complaints that have not been resolved within the applicable Target Service Level have not been so resolved; and ○ details of any repeat complaints or further complaints linked to a previous complaint (including where any such complaints have been made and/or resolved in any previous Contract Month). • KPI 5 (Provider satisfaction).¹³ • KPI 6 (Numbers of appropriately qualified and trained Assessors (and (where applicable) Moderators)): <ul style="list-style-type: none"> ○ details of the actual number of Assessors (and (where applicable) Moderators) that have been recruited, trained and retained in the relevant Contract Month; and ○ details of the number of Assessors (and (where applicable) Moderators) contemplated by the relevant Contract Month (or in line with the trajectory (as the case may be)) as set out in the then current Implementation and Delivery Plan and/or Resource Plan. The Authority may require the Supplier to provide this data more frequently than monthly during the key assessment delivery period. • KPI 7 (Quality of TQ Live Assessment Materials): <ul style="list-style-type: none"> ○ a summary of activities completed in the relevant Contract Month relating to the development of the TQ Live Assessment Materials, as contemplated in the Assessment Strategy and/or the Implementation Plan; ○ a summary of the actual quality assurance activity undertaken by the Supplier in the relevant Contract Month; ○ a summary of the quality assurance activity (if any) that is contemplated in the Assessment Strategy as being undertaken by the Supplier in or during (as the case may be) the relevant Contract Month; and ○ details of any errors reported in the TQ Live Assessment Materials in the relevant Contract Month. • KPI 8 (Student assessment evidence assessed and processed): <ul style="list-style-type: none"> ○ a summary of the actual quality assurance activity undertaken by the Supplier to verify the quality of the processing of Student assessment evidence for awarding in the relevant Contract Month, together with evidence that such

¹³ To be measured by a survey undertaken or commissioned by the Authority.

Information/ report	Description
	<p>processing has been undertaken accurately and consistently;</p> <ul style="list-style-type: none"> ○ a summary of the quality assurance activity (if any) that is contemplated in the Assessment Strategy as being undertaken by the Supplier to verify the quality of the processing of Student assessment evidence for awarding in or during (as the case may be) the relevant Contract Month; ○ details of the cumulative volume and percentages of Student assessment evidence processed (broken down to the TQ Core Component and each Occupational Specialist Component) by the end of the relevant Contract Month, as against the planned trajectory and dates in the Implementation and Delivery Plan applicable to that Contract Month; and ○ details of any errors, inaccuracies and/or inconsistencies identified in any processed Student assessment evidence in the relevant Contract Month. <ul style="list-style-type: none"> • KPI 9 (Validation of Grade Standard Exemplification Materials):¹⁴ For each Occupational Specialism: <ul style="list-style-type: none"> ○ a summary of the employer validation activity undertaken to validate Grade Standard Exemplification Materials ○ the number of employers who have been involved in the validation process; including details as to whether they have been involved in the panel prior to each validation exercise ○ evidence of validation from at least 5 different Employers relevant to the Occupational Specialism that validate the Grade Standard Exemplification Materials. ○ evidence of validation from at least 5 different Employers relevant to the Occupational Specialism that the Grade Standard Exemplification Materials are comparable to the Approved Guide Standard Exemplification Materials. • KPI 10 (Student assessment results submitted by relevant date): <ul style="list-style-type: none"> ○ details of the cumulative volume and percentages of Student results submitted by the Supplier to the Authority (or the Authority's nominee (as applicable)) by the end of the relevant Contract Month; and

¹⁴ To be assessed by the receipt and review by the Authority of evidence of validation from Employers in the relevant Contract Month.

Information/ report	Description
	<ul style="list-style-type: none"> ○ details of the cumulative volume and percentages of Student results envisaged in the Implementation and Delivery Plan to be submitted by the Supplier to the Authority (or the Authority's nominee (as the case may be)) by the end of the relevant Contract Month. • KPI 11 (Post-Results Services): <ul style="list-style-type: none"> ○ the total volume of Post-Results Services (broken down by service) and percentage of each Post-Results Service (as against total Post-Results Services) undertaken by the Supplier in the relevant Contract Month; ○ detail of the timing of delivery of Post-Results Services against the applicable timeframes in Annex 10 (<i>Additional Services</i>) of this Service Requirements as contemplated by the Supplier's Response; and ○ detail of the proportion of remarks and Appeals which have resulted in grade increases or decreases (and summary of key reasons for any changes made). • KPI 12 (Submission of information): <ul style="list-style-type: none"> ○ details of the Management Information, required or requested Products including Key Materials and/ or Ancillary Materials submitted in respect of the relevant Contract Month; ○ details of the Management Information, required or requested Products including Key Materials and/ or Ancillary Materials anticipated to be submitted in respect of the relevant Contract Month; and ○ details of any errors, inaccuracies and/or inconsistencies identified in any Management Information, required or requested Products including Key Materials and/ or Ancillary Materials submitted in respect of the relevant Contract Month (and/or any previous Contract Month). <p>Ongoing Development Services Report</p> <p>A dashboard report (in such form as the Authority may specify from time to time) summarising:</p> <ul style="list-style-type: none"> • the Supplier's progress against and compliance (to date) with the TQ Content Updating Schedule (including progress against any milestones); • any proposed amendments and/or updates made to any Product during the relevant Contract Month pursuant to paragraphs 2.5 and/or 2.6 of Part 1 of this Service Requirements; and

Information/ report	Description
	<ul style="list-style-type: none"> • such other information as the Authority may reasonably require from time to time. <p>Annual Services Report</p> <p>By the end of August each year, a high level overview of the Supplier's assessment of its performance during that Academic Year, summarising:</p> <ul style="list-style-type: none"> • the key successes and areas for improvement in the delivery of the Services and/or the TQ; • in respect of the assessment cycles in that Academic Year, what important lessons were learned and how these will be addressed in following assessment cycles; • the key issues for the next following Academic Year; • how Employers have been consulted in relation to (and been involved in the design and delivery of) TQ assessment; • performance against the Social Value commitments under paragraph 13.1 (<i>Social Value Commitments</i>); and • (where appropriate), the preparations for handover at the end of the Term. <p>The Supplier shall also provide an updated Exit Plan in accordance with paragraph 2 of Schedule 12 (<i>Exit Management</i>).</p> <p>Annual Penetration Testing Report</p> <p>By the end of August each year, a summary of:</p> <ul style="list-style-type: none"> • the Supplier's findings of independent penetration testing undertaken to test the security of any IT systems and hosting environments that are used to handle, store or process IfATE Data; and • details of any necessary remedial works required as a result of such penetration testing.
Student registrations and Student entries (as referred to in paragraph 5 of Part 1 of this Service Requirements)	<p>In relation to the Supplier's obligations in paragraph 5.4 of Part 1 of this Service Requirements, the Supplier shall report the following information and data (in a spreadsheet but in such form as the Authority may specify from time to time):</p> <ul style="list-style-type: none"> • the number of Students registered for the TQ by Approved Provider (including late registrations and/or registration amendments and very late registrations and/or registration amendments (each as referred to in Annex 10 to this Service Requirements)):

Information/ report	Description
	<ul style="list-style-type: none"> ○ in the current Academic Year; and ○ in aggregate (including for the current Academic Year) during the Term to date; • the number of Student entries by Approved Provider (including late entries and/or entry amendments and very late entries and/or entry amendments (each as referred to in Annex 10 to this Service Requirement)) in the relevant Academic Year for: <ul style="list-style-type: none"> ○ the TQ Core Component; and ○ each Occupational Specialist Component, <p>together with the number of such entries in aggregate (including for the current Academic Year) for each of the TQ Core Component and each Occupational Specialist Component for all Academic Years during the Term to date;</p> • the number of withdrawn entries in the relevant Academic Year (by Approved Provider) for: <ul style="list-style-type: none"> ○ the TQ Core Component; and ○ each Occupational Specialist Component, <p>together with the number of such withdrawals in aggregate (including for the current Academic Year) for each of the TQ Core Component and each Occupational Specialist Component for all Academic Years during the Term to date; and</p> • such other information as the Authority may reasonably require from time to time.
TQ results (as referred to in paragraph 8 of Part 1 of this Service Requirements)	<p>In relation to the Supplier's obligations in paragraph 8.2 of Part 1 of this Service Requirements, the Supplier shall report the following information and data (in such form as the Authority may specify from time to time) to the Authority (or the Authority's nominee (as applicable)):</p> <ul style="list-style-type: none"> • results for each Student for the TQ Core Component and each Occupational Specialist Component that such Student has undertaken including: <ul style="list-style-type: none"> ○ Unique Learner Number; ○ name of Approved Provider; ○ Supplier name; ○ details of the TQ achieved; ○ the grade awarded for each Component; ○ date of achievement; • the outcome of any Appeals, Clerical Check, Expedited Review of Marking, Review of Marking, and/or Review of Moderation (each as referred to in Annex 10 (<i>Additional Services</i>) to this Service Requirements)), including

Information/ report	Description
	<p>details of the nature of the Appeal and a summary of the grounds for the Appeal; and</p> <ul style="list-style-type: none"> • such other information as the Authority may reasonably require from time to time, <p>to enable, amongst other things, the aggregation for T Level certification and inclusion in any Provider performance tables.</p>
Additional Services	<p>Data and information on the volume and nature of Additional Services being delivered to Approved Providers in the relevant Contract Month, in aggregate for the Academic Year to date and in aggregate (including for the current Academic Year) for all Academic Years during the Term to date (in spreadsheet format and in such form as the Authority may specify from time to time).</p>
Adjustments to Fees	<p>In advance of its publication and availability to Approved Providers and in accordance with clause 4.13 (<i>Pricing and payments</i>), proposed adjustments to the Fees for the following Academic Year.</p> <p>In accordance with clause 4.13 (<i>Pricing and payments</i>), proposed adjustments to the Rate Card for the following Academic Year.</p> <p>The information for each of the proposed adjustments to the Fees and the proposed adjustments to the Rate Card will be submitted separately in a spreadsheet format (in such form as the Authority may specify from time to time) and will include any proposed annual percentage change in each proposed Fee and each proposed rate in the Rate Card, as such proposed change shall be calculated in accordance with clauses 4.12 and 4.13 (<i>Pricing and payments</i>).</p>

ANNEX 10 – ADDITIONAL SERVICES

Additional Service	Additional Service Requirements
Access to Student assessment evidence	The Supplier shall within 10 Working Days following receipt of a request from the relevant Approved Provider, send (in such form as such Approved Provider shall request) to that Approved Provider a copy (including, as applicable, a PDF copy) of the relevant original marked Student assessment evidence or the whole or the relevant part (as the case may be) of the original TQ Live Assessment Materials to which the Student assessment evidence relates, to help the Approved Provider (or relevant Student (as the case may be)) decide whether to request a Review of Marking or Review of Moderation (each as defined below).
Additional Approved Provider support visit	The Supplier shall, as soon as reasonably practicable following receipt of a request from an Approved Provider, attend such Approved Provider's premises and provide such additional support as such Approved Provider reasonably requires, such as support in relation to misinterpretation of the TQ Specification.
Appeal	<p>The Supplier shall:</p> <p>(i) within 20 Working Days following receipt of a request from an Approved Provider for an Appeal, undertake a detailed review of all information, data and/or documents relating to the Appeal, including the assessment evidence relating to the whole or the relevant part of a Cohort or an individual Student (as the case may be); and</p> <p>(ii) within 20 Working Days following receipt of a request from an Approved Provider for an Appeal hearing, hold an Appeal hearing in which the Approved Provider or its representative(s) can make submissions in relation to the Appeal, including (where applicable) explaining its dissatisfaction with any grade(s) awarded in relation to the whole or any part of a Cohort or an individual Student (as the case may be),</p> <p>following which the Supplier shall notify the Approved Provider of the outcome of such Appeal and, where necessary, adjust the marks awarded to the whole or any part of a Cohort or an individual Student (as the case may be) and issue new results to the Authority (or its nominee (as the case may be)), provided always that this Additional Service shall only be deemed to be an Additional Service in respect of which a Fee shall be payable by the Approved Provider if, following the determination of such Appeal, the Approved Provider is not successful in the Appeal.</p>
Clerical Check	The Supplier within 10 Working Days following receipt of a request from an Approved Provider, undertake a detailed review of the relevant Student's assessment evidence and recount all of

Additional Service	Additional Service Requirements
	the marks that such Student has been awarded to ensure that the total number of marks awarded to such Student (leading to the award of the relevant grade(s)) equal the number of marks that should have been awarded to such Student and, where necessary, adjust the marks awarded to the Student, notify the Approved Provider of such adjustment and issue new results to the Authority (or its nominee (as the case may be)).
Expedited Review of Marking	The Supplier shall within 10 Working Days following receipt of a request from an Approved Provider, undertake an expedited Review of Marking (as defined below), provided always that this Additional Service shall only be deemed to be an Additional Service in respect of which a Fee shall be payable by the Approved Provider if, following the carrying out and completion of such an expedited Review of Marking, the grade(s) awarded to such Student is not changed.
Late entry or entry amendment	Where, following the entry deadline for the TQ Core Component and/or relevant Occupational Specialist Component specified in the Key Dates Schedule for the relevant Academic Year until the very late entry deadline for the TQ Core Component and/or relevant Occupational Specialist Component specified in the Key Dates Schedule for the relevant Academic Year, an Approved Provider requires a new Student to be entered for the TQ Core Component and/or relevant Occupational Specialist Component and/or an existing entry for a Student to be amended, the Supplier shall following receipt of a request from an Approved Provider no later than 20 Working Days prior to the commencement of the relevant assessment as determined in accordance with the relevant Key Dates Schedule, enter that Student for the TQ Core Component and/or relevant Occupational Specialist Component or amend that Student's entry for the TQ Core Component and/or relevant Occupational Specialist Component (as the case may be).
Late registration or registration amendment	Where, following the registration deadline for the TQ specified in the Key Dates Schedule for the relevant Academic Year until the very late registration deadline for the TQ specified in the Key Dates Schedule for the relevant Academic Year, an Approved Provider requires a new Student to be registered for the TQ and/or an existing registration for a Student to be amended, the Supplier shall following receipt of a request from an Approved Provider no later than 20 Working Days prior to the commencement of the relevant assessment as determined in accordance with the relevant Key Dates Schedule, register that Student for the TQ or amend that Student's registration for the TQ (as the case may be).
Retake	Where, in the period following the publication of the TQ results in accordance with paragraph 8 of Part 1 of this Service Requirements until two years after the end of the final Academic Year for the Cohort within which the relevant Student is included,

Additional Service	Additional Service Requirements
	<p>an Approved Provider requests that a Student wishes to retake all or any of the assessments for:</p> <ul style="list-style-type: none"> • the TQ Core Component - External Examination; • the TQ Core Component - Employer Set Project; and/or • an Occupational Specialist Component, <p>the Supplier shall carry out and complete its obligations in paragraphs 6.1.3 (<i>TQ live assessment and delivery</i>), 7 (<i>TQ grade awarding</i>), 8 (<i>TQ Results</i>) and 9 (<i>TQ Post Results Services</i>) (save to the extent that compliance with such obligations in that paragraph 9 (<i>TQ Post Results Services</i>) would otherwise require the performance of a further Additional Service and in respect of which the provisions applicable to that further Additional Service shall apply) in each case of Part 1 of this Service Requirements in respect of such Student.</p>
Review of Marking	<p>The Supplier shall within 25 Working Days following receipt of a request from an Approved Provider, undertake a detailed review of the relevant Student's assessment evidence alongside the TQ Live Assessment Materials applicable to such assessment evidence to ensure that the marking scheme has been complied with in full in relation to the marking of that Student's assessment evidence, provided always that this Additional Service shall only be deemed to be an Additional Service in respect of which a Fee shall be payable by the Approved Provider if, following the carrying out and completion of such review, the grade(s) awarded to such Student is not changed.</p>
Review of Moderation	<p>The Supplier shall within 25 Working Days following receipt of a request from an Approved Provider, undertake a detailed review of the relevant Cohort's assessment evidence alongside the assessment criteria within the Scheme of Assessment to ensure that the assessment criteria has been complied with in full in relation to the marking of that Cohort's assessment evidence, provided always that this Additional Service shall only be deemed to be an Additional Service in respect of which a Fee shall be payable by the Approved Provider if, following the carrying out and completion of such Review of Moderation, the grade(s) awarded to any Student is not changed.</p>
Very late entry or entry amendment	<p>Where, following the very late entry deadline for the TQ Core Component and/or relevant Occupational Specialist Component specified in the Key Dates Schedule for the relevant Academic Year until the date on which entries or amendments to entries finally closes for the TQ Core Component and/or relevant Occupational Specialist Component as specified in the Key Dates Schedule for the relevant Academic Year, an Approved Provider requires a new Student to be entered for the TQ Core Component and/or relevant Occupational Specialist Component and/or an existing entry for a Student to be amended, the Supplier shall (where reasonably practicable having regard to the nature of the assessment) following receipt of a request from an Approved</p>

Additional Service	Additional Service Requirements
	<p>Provider within the period not greater than 20 Working Days prior to the commencement of the relevant assessment as determined in accordance with the relevant Key Dates Schedule, enter that Student for the TQ Core Component and/or relevant Occupational Specialist Component or amend that Student's entry for the TQ Core Component and/or relevant Occupational Specialist Component (as the case may be).</p>
<p>Very late registration or registration amendment</p>	<p>Where, following the very late registration deadline for the TQ specified in the Key Dates Schedule for the relevant Academic Year until the date on which registration for the TQ finally closes as specified in the Key Dates Schedule for the relevant Academic Year, an Approved Provider requires a new Student to be registered for the TQ and/or an existing registration for a Student to be amended, the Supplier shall (where reasonably practicable having regard to the nature of the assessment), following receipt of a request from an Approved Provider within the period not greater than 20 Working Days prior to the commencement of the relevant assessment as determined in accordance with the relevant Key Dates Schedule, register that Student for the TQ or amend that Student's registration for the TQ (as the case may be).</p>

ANNEX 11 –

Schedule for the submission of; Supplementary Specimen Assessment Materials; Employer Set Project Guide Exemplar Responses; and Employer Set Project Grade Exemplar Responses

Product	Description	Authority Submission Date	Publication date	Review point
Core Component	Supplementary Specimen Assessment Materials covering the TQ Core Component in full (comprising the External Examination and the Employer Set Project)	By the end of August prior to the first Academic Year of teaching	By end of October during the first Academic Year	Commencing during the second Academic Year of teaching, to be reviewed by the Supplier each and every Academic Year and re-submitted to the Authority to agree any changes by the end of October, for re-publication by the end of December.
Occupational Specialist Component(s)	Supplementary Specimen Assessment Materials covering the Occupational Specialist Component(s) in full	By the end of March during the first Academic Year of teaching	By end of July during the first Academic Year	Commencing during the second Academic Year of teaching, to be reviewed by the Supplier each and every Academic Year and re-submitted to the Authority to agree any changes by the end of July, for re-publication by the end of October in the following Academic Year.
Employer Set Project Guide Exemplar Responses	Employer Set Project Guide Exemplar Responses covering the Employer Set Project, produced at grade A and grade E for each Employer Set Project, in consultation with Employers and accompanied by an explanatory commentary.	By the end of August prior to the first Academic Year of teaching	By end of October during the first Academic Year	
Employer Set Project Grade Exemplar Responses	Employer Set Project Grade Exemplar Responses covering the Employer Set Project, consisting of actual marked examples of Students' assessment evidence, selected after awarding, produced at grade A and grade E, for each Employer	By the end of October during the second Academic Year of teaching	By end of December during the second Academic Year	Commencing during the third Academic Year of teaching, to be reviewed by the Supplier each and every Academic Year and re-submitted to the Authority to agree any changes by the start of

	Set Project, in consultation with Employers and accompanied by an explanatory commentary.			September, for re-publication by the end of October.
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* Where no students have sat an ESP, or no students have achieved a pass at grades A or E, on agreement with the Authority the Supplier may defer production of the Employer Set Project Grade Exemplar Responses to the next Academic Year.

Schedule 2 Annex 3

TQ Spec

S2_A3_GEN2W1_DSP_TQ_Spec

T LEVEL

*Technical Qualification
in Design, Surveying and
Planning for Construction*

Specification

For student cohorts starting in
September 2023

Version 1.3 April 2023





T Level Technical Qualification in Design, Surveying and Planning for Construction

Specification

For student cohort starting in September 2023

Version 1.3 April 2023



About Pearson

We are the world's leading learning company operating in countries all around the world. We provide content, assessment and digital services to learners, educational institutions, employers, governments and other partners globally. We are committed to helping equip learners with the skills they need to enhance their employability prospects and to succeed in the changing world of work. We believe that wherever learning flourishes so do people.

This specification is Version 1.3. We will inform providers of any changes to this version through bulletins and provider updates. The latest version can be found on our website.

All information in this specification is correct at time of publication.

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Welcome to career-ready education

T Levels are new two-year, Level 3 study programmes that will follow the study of GCSEs and Technical Awards at Key Stage 4 and offer an attractive alternative to A Levels and Apprenticeships. T Levels will combine classroom theory, practical learning and a minimum 315 hours of industry placement with an employer to make sure students have real experience of the workplace.

The Technical Qualification (TQ) is the main classroom-based element of the T Level and will see students learning from a qualification that has been shaped by industry experts. During the two-year programme, students will learn the core knowledge that underpins each industry and they will also develop occupationally specific skills that will allow them to enter skilled employment within a specific occupation.

The T Level programmes have been developed in collaboration with employers and businesses so the content will meet the needs of industry and prepare students for work. They provide the knowledge and experience needed to open the door to highly skilled employment, an Apprenticeship or higher-level study, including university.

Technical Qualification and collaboration

The Outline Content for the *T Level Technical Qualification in Design, Surveying and Planning for Construction* has been produced by T Level panels of employers, professional bodies and Providers, based on the same standards as those used for Apprenticeships. Employers involved in designing the Outline Content include Skanska and Morgan Sindall.

Pearson has used the Outline Content to form the basis of the Technical Qualification specification. This includes:

- Elaboration of the Outline Content to provide a specification that gives Providers an accurate interpretation of what is required to be taught and assessed
- Enabling students to achieve threshold competence in relation to each Occupational Specialist Component
- The integration of English, Maths and Digital skills.

Students who complete a *T Level Technical Qualification in Design, Surveying and Planning for Construction* will be able to choose between moving into a skilled occupation or further study; for example, a higher or degree level Apprenticeship, or higher-level technical study, including higher education. Therefore, it was essential we developed the qualification in close collaboration with experts from professional bodies, businesses, universities, and with the Providers who will be delivering the qualification.

Our engagement with experts during the development of the qualification ensures the content will meet your needs and give students quality preparation to help them progress. We are grateful to all university and further-education lecturers, teachers, employers, professional body representatives and other individuals who have generously shared their time and expertise to help us develop these new qualifications.

Employers, professional bodies and higher-education providers who have worked with us include:

- Arup
- Balfour Beatty
- BAM Nuttall
- Cast Consultancy
- Chartered Institution of Building Services Engineers
- HEMSEC Manufacturing Ltd
- Institution of Civil Engineers
- Kier Group
- London South Bank University
- Lovell Homes Partnership
- Low Carbon Construction
- Portsmouth University
- Royal Institution of Chartered Surveyors
- Structural Timber Association
- TDO Architecture
- Technician Apprenticeship Consortium
- Thames Labs.

This qualification has been developed under the advice of the professional bodies listed below, on behalf of the Engineering Council, in order to confirm that the qualification contributes to the requirements for professional registration; for example as an Engineering Technician (EngTech) or associate member of their professional organisation.

This qualification has been developed under the advice of the professional bodies who were part of our validation panel, including:

- Chartered Institution of Building Services Engineers
- Institution of Civil Engineers
- Royal Institution of Chartered Surveyors.

In addition, the Civil Engineering pathway of the qualification has been formally approved as meeting the Educational Base for the EngTech professional standard by the Institution of Civil Engineers.

Summary of changes (Version 1.3 for students starting T Levels from Sept 2023)	
<i>Transferring between T Levels</i> has been deleted	Page 7
Two additional bullet points have been added to 4.3 Students must understand current building regulations and their purpose, and how they are applied in construction and renovation	Page 22
<i>Calculation of T Level grade</i> Text has been amended and table removed	Page 241
<i>Result reporting</i> has been updated	Page 241
<i>Student registration</i> has been deleted and two new sections <i>Registering students on T Levels</i> and <i>Transferring between T Levels and Occupational Specialisms</i> have been added	Page 242
<i>Student assessment</i> entry has been updated	Page 244
<i>Resit arrangements</i> have been expanded and updated	Page 244
<i>Teaching, learning and assessment materials</i> Two bullet points have been added to 3. Assess	Page 257

Summary of changes to Version 1.2	
Addition of threshold competence definition.	Page 6
Added AC and DC voltage to 2.4.1	Page 17
Removed convection from 2.5.1	Page 18
2.8.5 changed to provide guidance on calculations	Page 19
Planning software added to 13.3.2	Page 52
Additional information on awarding the core component.	Page 240

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1. Qualification summary and key information

T Level Technical Qualification in Design, Surveying and Planning for Construction							
Total Guided Learning Hours (GLH)		1200 GLH					
Total Qualification Time (TQT)		1470 TQT					
First registration:	September 2020	Recommended age range:				16–19	
Core Component:	600 GLH 810 TQT	Grade:	A*–E and Unclassified				
Assessment component	Assessment method	Duration	Marks	Weighting	Timetable	Availability	Marking approach
Core Paper 1: Science and Building Technology	Written examination paper	2.5 hours	100	33.33%	Set date and time	May/June November	Externally marked
Core Paper 2: Construction Industry and Sustainability	Written examination paper	2.5 hours	100	33.33%	Set date and time	May/June November	Externally marked
Employer Set Project	Externally set project	15.5 hours	100	33.33%	Window	May/June November	Externally marked
Occupational Specialist Component:	600 GLH 660 TQT	Grade:	P, M, D and Unclassified				
Surveying and design for construction and the built environment	Externally set project	30 hours	180	100%	Task-specific: window/set date and time	May/June	Externally marked
Civil engineering	Externally set project	25 hours	180	100%	Task-specific: window/set date and time	May/June	Externally marked
Building services design	Externally set project	20 hours, 40 mins	180	100%	Task-specific: window/set date and time	May/June	Externally marked
Hazardous materials analysis and surveying	Externally set project	15 hours, 30 mins	180	100%	Task-specific: window/set date and time	May/June	Externally marked

If a student completes the assessments but is not successful in reaching the minimum threshold for the Core and Occupational specialism component, they will be issued with a U grade.

T Level Technical Qualification in Design, Surveying and Planning for Construction			
Qualification Number (QN)	603/5830/0		
First Registration Date	September 2020		
Approved Age Range	16–19		
Total Guided Learning Hours (GLH)	1200 GLH*		
Total Qualification Time (TQT)	1470 TQT*		
Assessment	All assessments are externally set and marked by Pearson		
Grading Overview	Core	Occupational Specialism	Overall
	All grades for this component will be on a scale of A* – E and Unclassified	All grades for this component will be on a scale of Pass, Merit, Distinction and Unclassified	The overall grade will be on a scale of Unclassified, Pass, Merit, Distinction, Distinction * #

* See Section 2 below for further information about GLH and TQT.

Pearson will not award the overall grade for the Technical Qualification. The overall grade will be awarded by the Institute for Apprenticeships and Technical Education (IfATE). See *Section 10 Technical Qualification Grading, T Level grading and results reporting* for further information. If a student completes the assessments but is not successful in reaching the minimum threshold for the core and/or occupational specialism component, they will be issued with a U grade.

2. Introduction to the T Level Technical Qualification in Design, Surveying and Planning for Construction

This specification contains all the information you need to deliver the *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

This qualification forms the substantive part of the *T Level Technical Qualification in Design, Surveying and Planning for Construction*, which includes other elements that are required to be successfully completed in order for students to be awarded the T Level from the Institute for Apprenticeships and Technical Education (IfATE).

The *T Level in Construction: Design, Surveying and Planning* will include:

- a 315-hour industry placement that is related to the occupational specialism selected by the student.

T Level in Construction: Design, Surveying and Planning		
Technical Qualification, 1200 GLH		
Externally set, covering all core content	Core Examinations Knowledge, skills and understanding that go across the specification	A* - U
	Employer Set Project English, maths and digital skills for the route	
Externally assessed synoptic assessment	Occupational specialism Surveying and Design for Construction and the Built Environment Civil Engineering Building Services Design Hazardous Materials Analysis and Surveying	P, M, D, U
Industry placement (minimum 315 hours)		Additional qualifications required by industry

Qualification structure

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* has two mandatory components:

1. Core Component

This component covers the underpinning knowledge, concepts and skills that support threshold competence in the Construction industry. It has 600 GLH and is assessed by two externally set Core Examinations and an Employer Set Project.

The content and details for each of these assessments is provided in *Section 4 Core Component*.

2. Occupational Specialist Components

There are four Occupational Specialist Components in this qualification, each of which has 600 GLH:

1. Surveying and design for construction and the built environment
2. Civil engineering
3. Building services design
4. Hazardous materials analysis and surveying.

Students undertaking the *T Level Technical Qualification in Design, Surveying and Planning for Construction* will be able to choose **one** of the four Occupational Specialisms to complete as part of their T Level Technical Qualification.

These components cover the occupational specialist knowledge and skills required to demonstrate threshold competence for the specialism. Each Occupational Specialism will be assessed by a skills-related project that synoptically assesses the performance outcome skills and associated underpinning knowledge.

The content and details of the assessment for Occupational Specialist Components are provided from *Section 5* onwards.

Total Qualification Time (TQT) and Guided Learning Hours (GLH)

For all regulated qualifications, we specify a total number of hours that students are expected to undertake in order to complete and show achievement for the qualification – this is the Total Qualification Time (TQT). The TQT value indicates the size of a qualification.

Within the TQT, we identify the number of Guided Learning Hours (GLH) that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising and invigilating students, for example lectures, tutorials, online instruction and supervised study.

As well as guided learning, there may be other required learning that is directed by tutors or assessors. This includes, for example, private study, preparation for assessment and undertaking assessment when not under supervision, such as preparatory reading, revision and independent research. TQT and GLH are assigned after consultation with users of the qualifications.

The TQT and GLH for this qualification and the two components are shown below:

TQT:

- The *T Level Technical Qualification in Design, Surveying and Planning for Construction* has a TQT value of 1470.
- The Core Component has a TQT value of 810.
- The Occupational Specialist Components each have a TQT value of 660.

GLH:

- The *T Level Technical Qualification in Design, Surveying and Planning for Construction* has a GLH value of 1200.
- The Core Component has a GLH value of 600.
- The Occupational Specialist Components each have a GLH value of 600.

T Level Technical Qualification in Design, Surveying and Planning for Construction			
Total Guided Learning Hours (GLH)		Total Qualification Time (TQT)	
1200 GLH		1470 TQT	
Core Component		Occupational Specialist Component:	
GLH	TQT	GLH	TQT
600 GLH	810 TQT	600 GLH	660 TQT

Technical Qualification aims and purpose

This Technical Qualification is for T Level students who are undertaking the *T Level in Construction: Design, Surveying and Planning*. It is intended for students who want to progress to a career in the construction sector, with a focus on design and surveying.

The purpose of the *T Level Technical Qualification in Design, Surveying and Planning for Construction* is to ensure students have the knowledge and skills needed to progress into highly skilled employment, an Apprenticeship or higher level study, including university, within the specialist area of design and surveying.

At the end of the Technical Qualification, students are expected to demonstrate threshold competence, which means that they have gained the core knowledge and skills related to construction design and surveying and are well placed to develop full occupational competence with additional development and support once in employment in the construction sector.

Threshold competence refers to a level of competence that:

- signifies that a student is well placed to develop full occupational competence, with further support and development, once in employment
- is as close to full occupational competence as can be reasonably expected of a student studying the TQ in a classroom-based setting (for example, in the classroom, workshops, simulated working and (where appropriate) supervised working environments)
- signifies that a student has achieved at least a pass in relation to the relevant occupational specialism component.

Student profile and progression

Students undertaking this Technical Qualification will be 16–19 years old and in full-time education. They will have chosen a T Level as an alternative to A Levels, Applied Generals or an Apprenticeship.

The typical student will likely have:

- A clear idea as to the industry sector they wish to pursue as a career.
- An idea of the type of job role they'd like to explore as a career.
- Taken an active choice not to pursue an Apprenticeship (either due to lack of availability or the wish to remain in full-time education).

This Technical Qualification is intended for students who want to progress to a career in the construction sector, with a focus on Surveying and Design, Civil Engineering, Building Services Design, or Hazardous Materials Surveying. Job roles could include:

- Surveying Technician
- Civil Engineering Design Technician
- Digital Engineering Technician
- Civil Engineering Technician
- Building Services Engineering Design Technician
- Architectural Technician
- Asbestos Analysis Surveyor
- Construction Design Coordinator

- Transport Planning Technician
- Rail Engineering Design Technician.

The jobs available to students will be based on their individual abilities in the construction sector and will be supported by their achievement of this qualification.

Alternatively, students could progress sideways to Level 3 Construction Apprenticeships to develop and gain certification of their occupational competence, or they could progress to higher level Apprenticeships such as:

- Level 4: Construction Site Engineering Technician, Construction Quantity Surveying Technician, Construction Design and Build Technician, Building Services Engineering Technician, Construction Site Supervisor, Acoustics Technician.
- Level 6: Building Control Surveyor, Building Services Design Engineer, Building Services Engineering Site Management, Chartered Surveyor, Civil Engineer, Civil Engineering Site Management, Construction Quantity Surveyor, Construction Site Manager, Design and Construction Management, Architectural Assistant.

Where students do not have access to an Apprenticeship or would prefer a more academic route, they could progress to relevant Higher National Certificate (HNC) or Higher National Diploma (HND) programmes or construction degree programmes such as Civil Engineering, Construction Management, Construction Surveying, Building Services Engineering, Construction Design and Architecture.

Students should always check the entry requirements for each degree programme with the relevant higher education provider.

Prior learning requirements

There are no formal prior learning requirements for the *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

However, as a Provider, it is your responsibility to ensure the students you recruit have a reasonable expectation of success on the programme. Formal entry requirements are not set by Pearson, but we expect students to have qualifications at or equivalent to Level 2.

Students are most likely to succeed if they have:

- five GCSEs/international GCSEs at grade 4 or above, including English, Maths and Science and/or
- Vocational Tech Award qualification(s) at Level 2 at Pass and above in a relevant subject, e.g. Construction and the Built Environment.

Students may demonstrate the ability to succeed in various ways. For example, they may have relevant work experience or specific aptitude shown through diagnostic tests or non-educational experience.

What does the qualification cover?

The Technical Qualification content has been designed from the Outline Content created by the Institute for Apprenticeships and Technical Education and the Construction T Level panel.

We have used the Outline Content to create the Technical Qualification specification and assessment, which has been validated by our own panel of construction employers and education providers to ensure it is appropriate for the progression routes identified in the above section.

Students will learn about the following topics:

- Health and safety
- Science
- Measurement
- Building technology
- Information and data
- Digital technology
- Construction mathematical techniques
- Design
- Construction and the built environment industry
- Sustainability
- Relationship management
- Commercial business
- Project management
- Law.

3. General Competency Frameworks for T Levels

The General Competency Framework for T Levels articulates the English, Mathematical and Digital competencies that students are required to develop over the course of the qualification. The tables below list the competencies from the framework that are relevant to the *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

Competencies that can be developed in relation to a specification element of content are referenced in the column next to this content element. These competencies should be delivered through the content of this qualification and tutors should seek opportunities to allow students to develop the relevant skills to enable them to reach threshold competence in the specialism.

The English and Digital competencies are embedded in both the Core Component and the Occupational Specialist Components of the *T Level Technical Qualification in Design, Surveying and Planning for Construction*. This is so that students are able to demonstrate their knowledge and understanding of these skills over the course of the qualification.

The Maths competencies have been mapped to the Core Component rather than to the Occupational Specialist Components.

General English competencies

E1	Convey technical information to different audiences
E2	Present information and ideas
E3	Create texts for different purposes and audiences
E4	Summarise information/ideas
E5	Synthesise information
E6	Take part in/leading discussions

General maths competencies

M1	Measure with precision
M2	Estimate, calculate and spot errors
M3	Work with proportion
M4	Use rules and formulae
M5	Process data
M6	Understand data and risk
M7	Interpret and represent with mathematical diagrams
M8	Communicate using mathematics
M9	Cost a project
M10	Optimise work processes

General digital competencies

Students should be supported to develop the digital knowledge and skills needed in order to:

D1	Use digital technology and media effectively
D2	Design, create and edit documents and digital media
D3	Communicate and collaborate
D4	Process and analyse numerical data
D5	Be safe and responsible online
D6	Code and program

4. Core Component

The content of the Core Component has the Core Skills mapped to where there are opportunities to develop them. The competencies and skills are not expected to be developed at every point where they are mapped; but using this guidance tutors will be able to embed them into teaching to prepare students for the assessments in the core component.

The Core Skills are assessed through the Employer Set Project. The Core Skills for this Core Component are:

Core Skill 1 (CS1) – Communication

For this skill students will:

- Produce reports and presentations for construction professionals, clients or for non-technical audiences such as the public.
- Produce sketches and drawings that include technical details for use by a client, contractor or as part of a planning application.
- Produce rendered drawings and illustrations that could be used for marketing a development to the public or similar stakeholders.
- Participate in question and answer sessions and respond to questions from a range of different types of stakeholders.
- Present ideas and concepts for design proposals as part of a group to stakeholders.
- Produce sketches and technical drawings for construction details, site layouts and external envelopes of existing buildings and developments.
- Produce rendered drawings and internal plans in response to design briefs and contexts.
- Synthesise information from given case studies, construction projects or site visits.
- Collate documentation for use as part of a simulated tender.
- Generate reports that consider the feasibility of a new development or refurbishment project.
- Present results of a PESTLE analysis to a client for a proposed project.
- Participate in group and class discussions to examine concepts and approaches to produce solutions to construction problems.

Core Skill 2 (CS2) – Work with others

For this skill students will:

- Participate in group discussions to determine the format of information that is appropriate for different types of stakeholder, taking into consideration verbal, written and drawn details.
- Work with stakeholders to determine project outcomes and required deliverables for stages of a construction project.
- Work in pairs or small groups to complete research activities in to existing construction projects.
- Work in groups to collect data during site visits, such as measurements and statistical information.
- Work as part of a team to produce and assemble a tender for a project.

Core Skill 3 (CS3) – Applying a logical approach to solving problems, identifying issues and proposing solutions

For this skill students will:

- Produce planning documentation for existing construction projects.
- Investigate projects such as the new Wembley Stadium and Crossrail to identify reasons why projects do not always run to plan and to suggest alternatives.
- Produce designs for a range of different types of project, including domestic dwellings, commercial, industrial and civil engineering developments.
- Produce of documentation for use during construction activities, such as method statements.
- Use case studies to complete a cost-benefit analysis for an infrastructure project.
- Follow standard processes to produce unit rates, bills of quantities and other costing documentation.
- Be able to interpret client vision and specification to produce outline design proposals to meet client needs.

Core Skill 4 (CS4) – Primary research

For this skill students will:

- Work with partners to collect dimensional information from a site visit to complete calculations of perimeters, areas and volumes.
- Complete tests on materials to determine qualities such as modulus of elasticity.
- Use test instruments to verify values achieved theoretically for electrical circuits.
- Participate in interviews and discussions with clients and stakeholders to determine requirements for a construction project.
- Undertake site visits to research local environments to complete land use surveys.
- Examine soil cores to determine geological conditions of a site.
- Collect and interpret statistical data, such as traffic counts to determine levels of traffic on an existing road where a bypass is proposed.
- Work as part of a team to produce and assemble a tender for a project.

Content summary

The core content covers the knowledge, understanding and application of contexts, concepts, theories and principles relating to the following areas:

- 1.** Health and safety
- 2.** Science
- 3.** Measurement
- 4.** Building technology
- 5.** Information and data
- 6.** Digital technology
- 7.** Construction mathematical techniques
- 8.** Design
- 9.** Construction and the built environment industry
- 10.** Sustainability
- 11.** Relationship management
- 12.** Commercial business
- 13.** Project management
- 14.** Law

Detailed Content

Content Area 1: Health and safety

Students must be able to apply an understanding of health and safety issues in the construction sector in a range of design, surveying and planning contexts. They must explore how legislation and regulations impact on organisations, individuals and society as a whole, including the role of the Health and Safety Executive.

What students need to learn		
1.1 Students must understand the roles, responsibilities, enforcement, penalties for non-compliance and required documentation for current health and safety legislation and regulations that apply to design, surveying and planning for construction.		
1.1.1	The Health and Safety at Work etc. Act, the role of the Health and Safety Executive (HSE) and the penalties the HSE can impose for non-compliance with legislation.	
1.1.2	The Control of Substances Hazardous to Health (COSHH) Regulations, the types of substance that are hazardous to health and the types of exposure and control measures that can be used to reduce risks.	
1.1.3	The Work at Height Regulations, planning activities, equipment and PPE requirements.	
1.1.4	The Construction (Design and Management) Regulations, the production of pre-construction information, construction phase safety plans and contents of a health and safety file.	E2 E4 D2 CS1
1.1.5	The Welfare at Work Regulations relevant to construction projects.	
1.1.6	The Manual Handling Operations Regulations, the requirement to avoid hazardous manual handling where reasonably practicable and the use of lifting assessments and machinery or mechanical aids.	
1.1.7	The Management of Health and Safety at Work Regulations and risk assessment requirements under Regulation 3 of the legislation.	
1.2 Students must understand the principles of liability.		
1.2.1	Public liability: injury, illness and death of third parties and damage to the property of a third party.	
1.2.2	Employer liability: employee illness, injury, accidents and compensation.	
1.3 Students must understand and apply HSE approved codes of practice.		
1.3.1	The use of Approved Codes of Practice (ACOP) – legal reference L series books from the HSE and application of Managing Health and Safety in Construction.	

What students need to learn		
1.4 Students must understand the implications of poor health and safety performance and the benefits of addressing poor health and safety for design surveying and planning in construction		
1.4.1	<p>The possible implications of and penalties for non-compliance.</p> <ul style="list-style-type: none"> • Legal and financial: <ul style="list-style-type: none"> ◦ enforcement, sanctions, loss of reputation, loss of work, corporate manslaughter ◦ magistrates and crown court penalties – fines and imprisonment. 	
1.4.2	<p>The possible implications of and penalties for non-compliance.</p> <ul style="list-style-type: none"> • Ethical and environmental: <ul style="list-style-type: none"> ◦ duty of care; moral and ethical obligation to keep people safe ◦ obligation to care for the environment. 	
1.4.3	<p>The benefits of undertaking safety reviews, including:</p> <ul style="list-style-type: none"> • reduction in costs • improved reputation of the company • improved employee morale • improved performance in terms of production. 	CS3
1.5 Students must understand the development of safe systems of work		
1.5.1	<p>The approaches used to develop safe systems of work in construction workplaces, including the production and use of risk assessment, method statements, company-specific procedures and permits to work.</p>	CS3
1.6 Students must understand the need for safety-conscious behaviours used in construction		
1.6.1	<p>Why safety-conscious behaviours produce fewer accidents and incidents.</p>	
1.6.2	<p>The application and implications of:</p> <ul style="list-style-type: none"> • following safe systems of work • reporting potential hazards • poor housekeeping. 	D4
1.6.3	<p>The need to review safety systems by using data to establish where unplanned events occur, and how this reduces the chance of future incidents, including analysis of the following types of accident information:</p> <ul style="list-style-type: none"> • trends in near misses and types of accident • comparison with UK national accident data • discussion with workforce, site safety meetings, interviews and safety committees • suggestions and recommendations for improvements, justified by statistical analysis. 	CS3 CS2 CS1

Content Area 2: Science

Students must be able to apply an understanding of the range of materials used by the construction sector in a range of design, surveying and planning contexts. They must explore how materials behave while they are under load, and perform calculations related to structural members under various loading conditions. Students also need to understand the principles of human comfort and apply theories to contextualised problems. Students will also gain an understanding of earth sciences and their impact on the construction industry, specifically in a range of design, surveying and planning contexts.

What students need to learn		
2.1 Students must understand material properties, chemical composition, degradation, failure and effects of environmental conditions		
2.1.1	<p>How different materials behave, material properties, composition and causes of failure and degradation in order to discriminate between materials and select appropriately.</p> <ul style="list-style-type: none"> • Material properties: mass, density, compressive strength, tensile strength, shear strength, hardness, toughness, stiffness, workability, resistance to moisture/vapour penetration, resistance to degradation/oxidisation. • Chemical composition (structure) of materials: timber, concrete, plastics, metals. • Degradation: natural agents, timber infestation, timber decay, chemical degradation. • Modes of failure: fatigue, creep, buckling, bending, shear. • Effects of environmental conditions: moisture movement, exposure conditions, freeze-thaw, thermal ageing. • Remedial measures to prevent and reduce degradation: special paints, preservatives, special coatings. 	
2.1.2	<p>Key properties of construction materials, how they work together to provide composite performance and properties, how they impact on performance in use and on the specification of materials for different scenarios and levels of exposure to the elements.</p> <ul style="list-style-type: none"> • Bricks – facings, Class A engineering, Class B engineering, commons. • Concrete – prescribed mixes, design mixes. • Reinforced concrete – pre-stressed concrete, types of reinforcement, pre-cast, cast in situ. • Concrete blocks – aerated, high-density, insulated. • Mortar mixes – cement mortar, cement lime mortar, coloured mortar. • Plasterboard. • Glass and glass finishes – smart glass (thermochromic, electrochromic, photochromic), laminated, tempered, float, clear, obscured. • Insulation materials – fibreglass, expanded polystyrene, thermal insulation boards, mineral wool, cellulose, straw, polyurethane. 	

What students need to learn		
	<ul style="list-style-type: none"> Plastics used for polythene damp-proof membranes (DPM), damp-proof courses (DPC), doors and window frames, soffits, bargeboards, fascia, guttering. Polyvinyl chloride (PVC), unplasticised polyvinyl chloride (uPVC). Timber and manufactured boards – hardwoods, softwoods, plywood, chipboard, particle board, medium-density fibreboard (MDF). Roofing materials – slate, concrete, pantile, roofing felt, thatch, ridge, lead flashing. Engineered timber – glulam beams, engineered joists, engineered beams, eco joists. Metals: steel (mild, stainless, high-strength), aluminium alloys, copper, brass. 	
2.2 Students must understand information associated with mechanical science		
2.2.1	Relationships between, and calculations of, force, work, energy and power.	M2 M3 M4 M8
2.2.2	Energy forms (kinetic and potential) – thermal, solar and chemical.	M3 M4 M8
2.3 Students must understand the structural science of how loads and forces act on buildings		
2.3.1	Forces – tension, compression, shear, bending.	M2 M3 M4 M8
2.3.2	Stress and strain – shear, compressive, tensile.	M2 M3 M4 M8
2.3.3	Loadings on simply supported beams – point, uniformly distributed (UDL).	M2 M3 M4
2.3.4	The material and types of structural element – beams, columns, struts and ties.	
2.3.5	Calculations including forces, stress, strain, Young's modulus and beam reactions.	M2 M3 M4 M8
2.4 Students must understand the principles of electricity		
2.4.1	Generation of electricity, types of power station and their advantages and disadvantages: <ul style="list-style-type: none"> non-renewable – coal, oil, gas, nuclear renewable – solar, wind, tidal/hydro. 	
2.4.2	AC and DC voltage, an understanding of the relationship between voltage, current and resistance (Ohm's Law), electrical power, energy, efficiency and work done.	M2 M3 M4 M8
2.4.3	Transformation: <ul style="list-style-type: none"> principles of electro-magnetic induction, including transformer equations applications of transformers: step-up and step-down transformers. 	M2 M3 M4

What students need to learn		
2.4.4	Distribution: <ul style="list-style-type: none"> voltages and currents distribution networks: National Grid, Super Grid, local distribution to domestic and industrial users. 	
2.4.5	Use of formulae for calculations involving Ohm's Law, power, energy, efficiency and work done.	M2 M3 M4 M8
2.5 Students must understand the principles of heat in design surveying and planning		
2.5.1	Heat transfer mechanisms – conduction, radiation.	M2 M3 M4
2.5.2	Properties of air – air temperature, air density, humidity, air movement.	M2 M3 M4
2.5.3	Condensation – sources of condensation, effects of condensation, types of condensation, methods of controlling condensation.	
2.5.4	Causes of heat loss – through the fabric of the building, ventilation thermal bridging, air changes.	
2.5.5	Factors affecting rates of heat loss – temperature differences, surface area, material heat transfer properties, air change rates.	
2.5.6	Thermal conductivity and resistance – U-values, insulation materials.	M3 M4 M8
2.5.7	Calculations involving thermal conductivity and resistance, heat loss, conduction and convection.	M3 M4 M8
2.6 Students must understand the principles of light in design surveying and planning		
2.6.1	Types of light and flow of light energy: electromagnetic spectrum, artificial and natural light.	
2.6.2	Refraction, diffraction and reflection.	
2.6.3	Glare, directed and reflected light.	
2.6.4	Daylight factor – sky component, externally reflected component and internally reflected component.	
2.6.5	Calculation of illuminance using the inverse square law, including application of units.	M2 M3 M4 M8

What students need to learn		
2.7 Students must understand the principles of acoustics in design surveying and planning		
2.7.1	Frequencies of sound.	
2.7.2	Reverberation and reverberation time.	
2.7.3	Decibels – as a unit of measure, addition of levels of sound, threshold limits.	M3 M4 M8
2.7.4	Comfort levels – noise pollution, personal factors, building regulations, external sources of sound and noise.	
2.7.5	Privacy and approaches to sound insulation – structural elements, controlling flanking sound and use of materials.	
2.8 Students must understand types of earth science and how these impact on design, surveying and planning		
2.8.1	Physical geography – groundwork, water levels, investigation methods, contaminated land, land use.	CS4
2.8.2	Hydrology: <ul style="list-style-type: none"> • water cycle – evaporation, condensation, precipitation, infiltration, surface run-off • rivers, reservoirs, lakes. 	
2.8.3	Geology: <ul style="list-style-type: none"> • ground conditions, including methods of investigation (bore holes, pits, trenches) • structure of the ground, including types of rocks, soils, clay • groundwater: water tables, springs, watersheds, aquifers. 	CS4
2.8.4	Earth forces and natural phenomena, including effects and impacts on the built environment of: <ul style="list-style-type: none"> • earthquakes – scales and magnitude, earthquake zones • landslides – effects of shear strength of soils, methods of stabilising land (geosynthetic injection, steel or concrete reinforcement, ground anchors) • tidal surges – effects of currents, approaches to reducing effects (storm surge barriers, sea walls, tidal lagoons, closure dams). 	
2.8.5	Weather and climate – rainfall, temperatures, sunlight, wind, frost.	M5 CS4
2.8.6	Interpretation of data and completion of calculations related to earth science, simple calculations with data, percentage, volume, length.	M5 M8 D4 CS3

Content Area 3: Measurement

Students must be able to apply an understanding of different types of measurement and standards, including the processes involved with the production of documentation, as applicable to the construction sector in a range of design, surveying and planning contexts. They must explore the standard units of measurement associated with construction and be able to complete calculations where standard measurements and units are applied.

What students need to learn		
3.1 Students must understand the benefits of accurate and appropriate measurement on built environment performance		
3.1.1	Advantages of accurate and appropriate measurement and reporting.	M1 M8
3.1.2	Measurement and reporting of performance indicators – building running costs, flexibility of space, reliability of systems.	M1 M8 CS1
3.2 Students must understand and apply types of measurement and mensuration techniques		
3.2.1	Different types of measurement, techniques for measurement and the units associated with these measurements, including: <ul style="list-style-type: none"> • electrical • dimensional • sound • force, stress, strain and pressure • temperature. 	M3 M4
3.2.2	Students will need to be able to carry out calculations involving measurements and units.	M3 M4 M8
3.3 Students must understand measurement standards, guidance and practice, including measurement rules, their scope and application for design surveying and planning		
3.3.1	New Rules of Measurement: NRM1, NRM2, NRM3.	
3.3.2	Civil Engineering Standard Method of Measurement, Fourth Edition (CESMM4).	
3.3.3	International Construction Measurement Standards (ICMS).	
3.3.4	Application of measurement standards and rules for taking off quantities – bills of quantities, tendering and estimating, budgets and costs.	D4

Content Area 4: Building technology

Students must be able to apply their understanding of a range of construction methods to typical applications and the technologies involved with their use. They must understand the different parts of a building and be able to identify, interpret and produce drawings of structural features and elements. Students must be aware of the various approved documents that form the building regulations and how these impact on the design of building elements, structures and services. Students must also have an understanding of the use of manufacturers' documents as required for the installation and maintenance of services within buildings.

What students need to learn		
4.1 Students must understand construction methods used in residential, commercial and industrial construction contexts, and be able to discriminate between methods and select appropriately		
4.1.1	On-site construction methods: <ul style="list-style-type: none">• brick and block• frame – portal; steel, concrete, timber• container• green oak• straw bale• cross-laminated timber (CLT)• use of on-site robotics.	
4.1.2	Off-site construction methods: <ul style="list-style-type: none">• structural insulated panels (SIPs)• pre-assembled units/elements/foundations• precast concrete sections and cladding panels• pre-assembled structural steelwork• steel framing systems (SFS)• complete or modular units• framed panels (timber, steel)• sandwich panel systems• concrete panels/sections (including flatpack)• 3D printing• 3D volumetric modules• construction-integrated manufacturing (CIM).	
4.1.3	Building renovations and refurbishment: <ul style="list-style-type: none">• structural – extensions, changes of use• cosmetic upgrades• direct replacements.	
4.1.4	Sustainable energy provision within new and existing buildings.	

What students need to learn		
4.2 Students must understand the characteristics and applications of forms of construction in order to discriminate and select forms of construction, and interpret and produce accurate drawings of these forms		
4.2.1	Sub-structures – foundations, basements, retaining walls, excavations.	
4.2.2	Foundations – strip (traditional, deep, narrow, wide, stepped, reinforced), raft (edge thickening, edge beams, reinforced), pad (isolated, combined, reinforced), pile (driven, cast in situ, end bearing, friction).	
4.2.3	Superstructures – frames (timber, steel, concrete, portal), roofs, floors, internal and external walls, windows and doors.	
4.2.4	Internal and external walls – types (solid masonry, cavity walls, curtain walls, infill walls, structural insulated panels (SIPs), stud), openings, insulation, damp proofing, weather tightness.	
4.2.5	External works – drainage, landscaping, parking, paving, perimeter boundaries (fences, walls).	
4.2.6	Infrastructure - roads, bridges	
4.3 Students must understand current building regulations and their purpose, and how they are applied in construction and renovation		
4.3.1	<p>Approved documentation:</p> <ul style="list-style-type: none"> • structure – Approved Document A • fire safety – Approved Document B • site preparation and resistance to contaminants and moisture – Approved Document C • toxic substances – Approved Document D • resistance to sound – Approved Document E • ventilation – Approved Document F • sanitation, hot water safety and water efficiency – Approved Document G • drainage and waste disposal – Approved Document H • conservation of fuel and power – Approved Document L • access to and use of buildings – Approved Document M • overheating – Approved Document O • electrical safety in dwellings – Approved Document P • infrastructure for charging electric vehicles – Approved Document S • materials and workmanship – Approved Document 7. 	

What students need to learn		
4.4 Students must understand the purpose of buildings standards, including the benefits to the industry, regulatory bodies and consumers of such standards and their purpose in renovation and construction		
4.4.1	British Standards – current standards for electrical installations, gas, waste management, Building Information Modelling, fire safety.	
4.4.2	International Standards Organisation (ISO) – current standards for structures, building materials, energy performance and sustainability, heating, cooling and lighting, fire safety.	
4.4.3	Common Minimum Standards for Construction (CMS) – for public sector construction projects.	
4.5 Students must have an understanding of the role of manufacturers' instructions and their purpose in ongoing maintenance and renovation of the built environment		
4.5.1	Types of manufacturers' instructions: <ul style="list-style-type: none"> • installation instruction manuals • operation and maintenance manuals • commissioning manuals. 	
4.5.2	The integration of manuals and information within a Building Information Modelling (BIM) environment.	D3 D4 D5

Content Area 5: Information and data

Students must be able to apply knowledge and understanding of the key elements of information and data associated with construction activities, including the reasons why data needs to be managed and used according to regulations. They must understand where data is sourced from, including for products and specifications, and the need to manage data to maintain confidentiality.

What students need to learn		
5.1 Students must have an understanding of how data is used during the design, construction, operation and decommissioning of buildings and structures		
5.1.1	Accuracy and precision of data.	M5 M6 D4
5.1.2	Generalisation – layers of data, trends, representative data.	M5 M6 D4 CS4
5.1.3	Interoperability – exchange of data, use of data in Building Information Modelling (BIM) systems and building management systems.	M5 M6 D4 CS3
5.1.4	Level of detail and metadata – data about projects, data about information flows.	M5 M6 D4
5.2 Students must understand the implications and purpose of information standards, regulation, guidance and practice for the construction industry		
5.2.1	Construction Operations Building Information Exchange (COBie) – facilities management, common formats and coding of data.	
5.2.2	Standards – Construction Industry Council (CIC) BIM protocol.	
5.2.3	Data management – regulation, security of data, reasons for standards, compliance with guidance and practice.	
5.3 Students must understand the characteristics and applications of the following sources of information when applied to construction activities		
5.3.1	Data sources for identification of contaminated land – site surveys, desk-based surveys.	D4 CS4
5.3.2	Use of Land Registry data – freehold and leasehold data, land values.	D4
5.3.3	Data sheets – material specifications, system components, operational data, manufacturers' specifications.	D4
5.3.4	Weather and climatic data – rainfall, wind speed, temperature, days of frost, hours of daylight.	D4 CS4
5.3.5	Maps – local geological maps (desktop research), climate maps.	CS4

What students need to learn		
5.4 Students must understand the importance of data management and confidentiality		
5.4.1	Current data protection legislation.	D4 D5
5.4.2	Typical organisational procedures – information flows, shared files/systems, types of information.	D4 D5
5.4.3	Legal responsibilities related to data collection and use.	D4 D5

Content Area 6: Digital technology

Students must be able to apply an understanding of the use of the Internet of Things within construction contexts. They must explore how digital technologies are used in the construction industry, including the benefits of using digital technologies throughout the life of a construction project, and in particular with respect to design, surveying and planning activities.

What students need to learn		
6.1 Students must demonstrate an understanding of the application of the Internet of Things (IoT) and the wider issues of the application of the IoT in the construction industry		
6.1.1	Data capture in a completed building.	D4
6.1.2	Utilising data for manufacture and delivery, and machine-to-machine learning.	D4 D5
6.1.3	Smart homes and buildings – building management systems, lighting, heating, security systems, entertainment systems.	D3 D5
6.1.4	Smart applications for building and urban space management and real-time monitoring.	
6.1.5	The link to sustainability of buildings, systems and energy monitoring.	
6.1.6	Crowdsourcing – collaborative working, sharing ideas, problem solving, design thinking.	CS3
6.1.7	Modelling and analysis – digital data to assist structural analysis, BIM modelling, old information used to support new plans, visual modelling.	D1 D4 CS3
6.1.8	Information interdependencies – cloud computing and storage, sensors, access to common data feeds, project management, just-in-time asset management.	D4
6.1.9	Asset management – Radio-Frequency Identification (RFID) tags, embedded monitoring sensors in materials.	
6.2 Students must understand how digital engineering techniques are used in design, surveying and planning activities		
6.2.1	Simulation – structural analysis, failure mode analysis and digital twins.	D1 D2 CS3
6.2.2	Animation – walkthroughs, fly-throughs, visualisation of structural behaviour and simulation of system operations.	M6 D1 D2 CS3
6.2.3	CAD modelling – 2D drawings, 3D models, rendered images and manipulation of images.	M6 D1 D2 CS3
6.2.4	Surveying – GPS total stations, laser levelling, laser measuring devices and digital theodolites.	CS4

What students need to learn		
6.3 Students must understand the benefits of using technologies from other industries and how the construction industry is incorporating these technologies.		
6.3.1	3D scanning – renovation/printing of houses, replacement components and visualisation of existing features.	M6
6.3.2	Drones – surveying (including difficult access, dangerous conditions and thermal imaging), site security, site inspections and virtual walk-arounds.	
6.3.3	Geo surveying – laser geo-scanning.	
6.3.4	Just-in-time construction.	

Content Area 7: Construction mathematical techniques

Students must be able to apply an understanding of a range of mathematical techniques and their typical applications within construction scenarios. They must understand how to carry out routine processes and how these are used to solve practical construction problems.

What students need to learn		
7.1 Students must be able to select and apply mathematical techniques correctly to solve construction problems		
7.1.1	Areas, volumes and perimeters of 2D and 3D shapes: <ul style="list-style-type: none"> Regular shapes – rectangles, trapeziums, triangles, circles and regular polygons Irregular shapes – with straight and curved edges Compound shapes – combinations of whole and partial simple shapes. Diameter, circumference and radius of a circle. 	M2 M3 M4 M7 M8
7.1.2	Pythagoras' theorem.	M2 M3 M4 M7 M8
7.1.3	Trigonometric techniques: sine, cosine, tangent ratios, sine rule and cosine rule.	M2 M3 M4 M7 M8
7.1.4	Triangle area rules.	M2 M3 M4 M7 M8
7.1.5	Algebraic transformation	M2 M3 M4 M7 M8
7.2 Students must be able to select and apply basic differentiation and integration techniques correctly and understand how calculus is used to solve practical construction problems		
7.2.1	Differential calculus: basic differentiation (one step) for polynomial and trigonometric functions.	M2 M3 M4 M8
7.2.2	Integral calculus: <ul style="list-style-type: none"> indefinite and definite integration techniques (one step) for polynomial and trigonometric functions constant of integration and initial conditions. 	M2 M3 M4 M8
7.2.3	Numerical integration: Simpson's Rule, Mid-Ordinate Rule, Trapezoidal Rule	M2 M3 M4 M8

What students need to learn

7.3 Students must be able to use statistical methods to analyse grouped, ungrouped, continuous and discrete sets of data, and understand how these are used to solve practical construction problems

7.3.1	Averages and central tendency: mean, median and mode.	M2 M3 M4 M5 M6 M8
7.3.2	Dispersion: range, standard deviation.	M2 M3 M4 M5 M6 M8

Content Area 8: Design

Students must be able to apply knowledge and understanding of factors that affect the design process, and the benefits of good design. They must also demonstrate an understanding of these principles with respect to the buildability of a construction project, roles and responsibilities of members of a construction team and how they interact. They will also develop an understanding of how to interpret, apply and use a range of graphic detailing techniques.

What students need to learn		
8.1 Students must understand the benefits of good design, including delivering within budget, to product performance		
8.1.1	Design to make best use of efficient heating, keeping heat inside the building.	
8.1.2	How good design and materials use leads to better saleability and general uplift to the area.	
8.1.3	How simple, affordable improvement in design gives a better quality of life.	
8.1.4	Efficient use of all light in the design to improve quality of life.	
8.1.5	Use of good design to improve productivity and wellbeing of workers.	
8.1.6	How good design can deliver project outcomes within budget.	
8.1.7	Layout and efficient use of space.	
8.2 Students must understand the principles of design for a construction project		
8.2.1	Aesthetics of design: <ul style="list-style-type: none"> • use of design features to provide symmetry • use of repeated elements • proportion of design features • use of contrasting materials to provide emphasis • use of colour and texture • integration of elements to provide continuity of design. 	CS3
8.2.2	Buildability: <ul style="list-style-type: none"> • ability to construct within a short timescale • provision and integration of services • identification of clashes and solutions • opportunities to incorporate modern methods of construction. 	CS3
8.2.3	Spatial requirements of buildings: <ul style="list-style-type: none"> • provision of space for services • provision of space for access. 	CS3

What students need to learn		
8.2 Students must understand the principles of design for a construction project		
8.2.4	Environmental protection and sustainability: <ul style="list-style-type: none"> • use of sustainable technologies and solutions • use of sustainable materials • energy reduction technologies and systems • designs sympathetic to the local natural environment • impact of floods. 	CS3
8.2.5	Safety: <ul style="list-style-type: none"> • allowing safe construction methods • safety requirements for the client and end user. 	CS3
8.3 Students must understand the design process for construction projects, from conception to completion		
8.3.1	Functional factors: <ul style="list-style-type: none"> • how the building operates within its defined use • the project's spatial requirements – building size, layout, circulation space, number of floors, number and use of rooms • future-proofing of designs: extension potential to meet residential needs and business expansion, flexibility and remodelling potential • external and internal aesthetics • types and use of materials • sustainability, energy efficiency, alternate types of energy sources and sustainable technologies • target market sector – age demographic of the building user(s), needs of different building users, corporate image and branding requirements • security requirements for the building and client operations life expectancy – design life of buildings. 	CS3
8.3.2	Site information factors: <ul style="list-style-type: none"> • site features – location, size, configuration, orientation, access, topography, flood risk • borehole report used to provide information on geotechnical and ground conditions • contaminated land • building services availability • existing buildings and structures • neighbouring structures and the need for temporary and permanent support • restrictions – trees and tree preservation orders, rights of way/wayleaves and underground transport. 	E3 CS3

What students need to learn		
8.3.3	Planning factors: <ul style="list-style-type: none"> • planning consent/approval • local plan requirements • being sympathetic to the local environment • planning objections and pressure groups • listed building consent • environmental factors: protection of green belt land, conservation areas, Areas of Outstanding Natural Beauty (AONBs), Sites of Special Scientific Interest (SSSIs) and tree preservation orders (TPOs). 	E3 CS3
8.3.4	Statutory constraints and their requirements and impacts on inclusivity: <ul style="list-style-type: none"> • Equality Act • Access to and use of buildings – Approved Document M • restrictive covenants on land and property. 	CS3
8.3.5	Indoor Environmental Quality (IEQ), covering: <ul style="list-style-type: none"> • indoor air quality • thermal comfort • lighting • acoustics. 	CS3
8.3.6	Social constraints: <ul style="list-style-type: none"> • neighbours' rights – shared access, not being overlooked • local community objections • green space requirements • environmental requirements • mixed and balanced development. 	CS3
8.3.7	Project budget and economic constraints: <ul style="list-style-type: none"> • cost/benefit analysis • local land prices • available funds • sources of additional funding for business premises – grants, government incentives • home ownership and funding – shared-ownership schemes and government incentives for developers and buyers • funding of infrastructure projects - local authority, government, private investment • life cycle costs. 	D1 D2 CS3

What students need to learn		
8.3.8	Stages of the design process for construction projects: <ul style="list-style-type: none"> • definition of the project • establish client needs • feasibility study • concept designs • detail design • production information • ongoing design development 	
8.4 Students must understand the principles and benefits associated with a life cycle assessment (LCA)		
8.4.1	Stages of life cycle assessment in construction: <ul style="list-style-type: none"> • raw material or recycled material supply • manufacture of construction products • the construction process stage • occupation, use and maintenance stage • demolition • material disposal or recycling. 	CS3
8.5 Students must understand applications of manual and computer-aided (CAD) techniques for graphical detailing, and be able to produce construction drawings, charts and diagrams		
8.5.1	Manual and CAD drawing techniques, application and use, including: <ul style="list-style-type: none"> • drawing lines and shapes – regular and irregular shapes, line conventions • drawing to a scale • lettering and dimensioning • 2D drawings, including the use of orthographic projection, schematic plans and layout diagrams, elevations, site layout plans and cross-sections • 3D drawings, including the use of isometric projection, single and two-point perspective. 	M1 M9
8.5.2	CAD techniques to produce 2D and 3D drawings: <ul style="list-style-type: none"> • use of set-up, drawing, editing and zoom commands • setting up floor and external levels • drawing with composite elements • inserting standard components • layers in drawing production • Basic 3D virtual building models, including producing camera views and rendered images. 	M1 M9 D1 D2 D3 D5

What students need to learn

8.5.3	<p>Graphic conventions and standard symbols in accordance with British and international standards for construction, design, surveying, building services and planning detail, including:</p> <ul style="list-style-type: none">• electrical and plumbing – basic symbols used in domestic, industrial and commercial installations• ventilation – basic symbols used in commercial and industrial installations• construction materials – basic symbols used in industrial, domestic and commercial installations• construction components – basic symbols used in domestic and commercial installations• civil engineering – basic symbols used in domestic and commercial installations.	
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Content Area 9: Construction and the built environment industry

Students must be able to apply knowledge and understanding of the structure of the construction industry and the activities completed by different sectors. They must also demonstrate an understanding of the benefits of construction projects on both local and national levels. Students must understand the practices and processes involved with developing documentation for quantification and costing activities. They will also be able to complete calculations as part of costing activities and understand the roles of construction professionals.

What students need to learn		
9.1 Students must understand the structure of the construction industry and the activities carried out by different sectors		
9.1.1	Types of activity undertaken by sectors in the construction industry: <ul style="list-style-type: none">• sectors – infrastructure, industrial, residential, commercial, health, education, leisure and recreation• design and construction of buildings, structures and infrastructure• refurbishment of existing buildings• repairs and maintenance of buildings• estates and facilities management• demolition of buildings and infrastructure.	
9.2 Students will understand how the construction industry serves the economy as a whole		
9.2.1	The wealth generated by property and land development: <ul style="list-style-type: none">• benefits to the UK economy, built environment and local communities• regeneration of inner-city areas.	
9.2.2	The contribution to infrastructure: <ul style="list-style-type: none">• transport networks• provision of services – gas, electricity, water and communications technology• water management – drainage, sewer systems, flood defences• renewable energy projects.	
9.2.3	The contribution to the community: <ul style="list-style-type: none">• housing – private, social, shared ownership• employment – in construction and the wider community• transport – roads, railways, footpaths, cycle routes, buses• security• industrial and commercial developments.• health - hospitals, health centres• education - schools, colleges, academies• leisure/recreation - parks, communities centres	

What students need to learn		
9.2.4	<p>The benefits to the local community of the redevelopment of brownfield sites:</p> <ul style="list-style-type: none"> • removal of chemical or toxic contamination • reuse of waste land • economic uplift in the area • environmental protection of local habitats and resources. • improvement of safety and security, removal of anti-social behaviour and general blight. 	
9.3 Students will understand the principles of the integration of the supply chain through partnering and collaborative practices		
9.3.1	<p>Inventory management and supply chain components:</p> <ul style="list-style-type: none"> • logistics activities in the supply chain – materials handling, production, inventory management, transportation and security of supplies • monitoring and controlling inventory – just-in-time supply and Kanban systems in prefabrication and on-site construction. 	
9.3.2	<p>Integrating supply chains:</p> <ul style="list-style-type: none"> • sharing requirements and the need for goods, services and quality standards • integrating computer systems – common data and communication standards, electronic data interchange (EDI) • specifying and agreeing responsibilities of individual businesses. 	
9.4 Students must know how projects are procured within the construction sector		
9.4.1	<p>Documentation and basic information required for procurement and tendering:</p> <ul style="list-style-type: none"> • expression of interest • a letter of invitation to tender • pre-construction information • a tender pricing document • design drawings • specifications • bills of quantities • schedules – schedules of work, activity schedules • emerging modern methods of construction. 	E1 E2 E3 E4 E5 E6 M8 D4 D5 M9 M10

What students need to learn		
9.4.2	<p>Students must understand types of procurement, how the client and contractors interact within the supply chain and who holds the commercial risk:</p> <ul style="list-style-type: none"> • traditional contract • single-stage and two-stage design and build • construction management • custom build • emerging cost contracts • fast-track construction • guaranteed maximum price • lump sum contract. 	M9 M10 CS2
9.5 Students must understand the principles and application of quantification and costing		
9.5.1	<p>Application of standards in the production of quantities, including: descriptions for bills of quantities</p> <ul style="list-style-type: none"> • variations • interim payments • final account work • claims and disputes • cost-reporting guidance notes. 	E2 E4 M2 M4 D4
9.5.2	<p>Descriptions and quantities used when producing tender documents:</p> <ul style="list-style-type: none"> • compilation of descriptions for works • mensuration techniques. 	
9.6 Students must understand the principles of financial controls and apply these to construction situations		
9.6.1	<p>Calculation of all-in rates for materials, labour and plant are completed, including:</p> <ul style="list-style-type: none"> • material costs – calculation of material quantities • cost of construction works, based on unit costs of materials • labour rates – calculation of all-in rates for craft workers (skilled, unskilled, gang rates) • application of labour costs in unit rates and hourly rates • plant rates – calculation of fixed and operating costs, units and hourly rates • calculation of unit rates and hourly rates – substructure, superstructure, first fix, second fix • completion of documentation. 	M9
9.6.2	Use of rate tables, standard price books, historical rates.	M9

What students need to learn		
9.7 Students must be able to understand the roles, responsibilities and interactions of construction and trade professionals, including the stages where they are involved in the design of a construction project		
9.7.1	<p>Construction professionals:</p> <ul style="list-style-type: none"> • contractors • land surveyors • quantity surveyors (main contractors and professional) • hazardous materials surveyors • structural engineers • heating engineers • electrical engineers • civil engineers • building services engineers • architects • project managers. 	CS2
9.7.2	<p>Trade professionals:</p> <ul style="list-style-type: none"> • carpenters • joiners • painters and decorators • bricklayers • ground workers • plasterers • electricians • plumbers • roofers • HVAC technicians. 	CS2
9.8 Students will understand the role development and Continuing Professional Development (CPD) have in developing the knowledge and skills of those working in the construction sector, and the organisations that may provide it		
9.8.1	<p>The role of development and CPD to further careers and keep up to date with the current standards and practices:</p> <ul style="list-style-type: none"> • types of development – apprenticeships, degree apprenticeships, graduate training programmes, higher technical qualifications • types of CPD – in-house training, formal training, updating of qualifications and skills, gaining experience, becoming chartered, progression qualifications, self-learning. 	

What students need to learn		
9.9 Students must understand how Building Information Modelling (BIM), the Digital Plan of Works (DPoW), Employer's Information Requirements (EIR) and the Common Data Environment (CDE) are used in construction projects and how the exchange of information can affect project delivery		
9.9.1	<p>The stages of the RIBA Digital Plan of Work (DPoW) and its application to construction projects:</p> <ol style="list-style-type: none"> 1. Preparation and brief 2. Concept design 3. Developed design 4. Technical design 5. Build and commission 6. Handover and close out 7. Operation 8. End of life. 	D1 D2 D3 E6 E4 CS1
9.9.2	<p>The characteristics and protocols associated with BIM and the implementation of BIM within the RIBA DPoW:</p> <ul style="list-style-type: none"> • enables digital technology design and communication • embeds key product and asset data in all project stages • manages information throughout the project life cycle, using three-dimensional (3D) computer modelling • provides an information repository for digital data project information throughout a design and construction project, with the capability to manipulate and produce information and support information sharing • produces unified information output for the client at handover • provides a model of the building through the life cycle that can be updated • the model is used as part of the decommissioning and recycling of the building at the end of its life. 	D1 D2 D5 D3 E1 E2
9.9.3	<p>The characteristics and measures associated with a Common Data Environment (CDE) and how CDE supports the operation of a BIM-led design and construction project:</p> <ul style="list-style-type: none"> • a construction project's CDE is up to date throughout the life cycle of the building • the content is suitable, accurate and accessible to all. 	D1 D2 D5 D3 E1 E2 CS3 CS2
9.9.4	<p>The characteristics and applications of Employer's Information Requirements (EIR) as part of a BIM Execution Plan, including the use of EIR as part of the appointment and tender documents, and the scope of information that is needed:</p> <p>Who is sharing information?</p> <p>What information is needed by stakeholders?</p> <p>When is information needed by stakeholders?</p> <p>What is the purpose of the information?</p> <p>What are the effects on project outcome and delivery?</p>	D1 D2 D5 D3 E1 E2 CS2

What students need to learn

9.10 Students must understand what PESTLE analysis is and be able to apply current examples of PESTLE factors to situations that may impact on the construction industry

9.10.1	<p>Political: these factors determine the extent to which a government may influence the economy or a certain industry.</p> <p>Economic: these factors are determinants of an economy's performance that directly impact on a company and have resonating long-term effects.</p> <p>Social: these factors scrutinise the social environment of the market, and gauge determinants such as cultural trends, demographics and population analytics.</p> <p>Technological: these factors pertain to innovations in technology that may affect the operations of the industry and the market favourably or unfavourably.</p> <p>Legal: the implications of legislation to the project, including contract law, building regulations, building control, HSWA, civil law.</p> <p>Environmental: these factors include all those that influence or are determined by the surrounding environment.</p>	CS3
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Content Area 10: Sustainability

Students will be able to show and apply knowledge and understanding of sustainability as applied to construction projects. This will include the considerations of materials, methods and technologies that can be used to improve sustainability and reduce the environmental impact of a project. They will be able to apply their understanding of the principles of conservation and heritage that apply to given construction contexts.

What students need to learn		
10.1 Students will understand the importance of sustainability when planning and delivering a construction project		
10.1.1	Minimisation of the impact of construction activities.	
10.1.2	Designing to use sustainable construction methods and materials.	
10.1.3	Use of construction site practices that minimise the effect on the natural and physical environment.	
10.1.4	Reduced reliance on finite fuels and natural resources.	
10.1.5	Designing for future effects of climate change.	
10.1.6	The Green Guide to Specification.	
10.2 Students must understand the impact of sustainable solutions on social, environmental, economic and human factors, and be able to apply sustainable solutions for design, surveying and planning of construction		
10.2.1	Types of sustainable solution: <ul style="list-style-type: none"> • straw bale construction • timber framed/panelled construction • modular and pre-fabrication construction techniques • use of thermal mass within buildings to absorb and emit heat • use of low embodied energy materials • insulation • water saving solutions • use of Sustainable Urban Drainage Systems (SUDS) • energy-efficient heating, ventilation and lighting systems • glazing – smart glass, double/triple glazing, low-emissivity glass • use of materials to enable easier recycling at the end of their life. 	

What students need to learn		
10.2.2	<p>How sustainable materials are used in sustainable solutions:</p> <ul style="list-style-type: none"> • timber-based products – cedar boarding, shingles, recycled particleboard sheets, engineered eco joists, engineered timber joists, timber framing (softwood and hardwood) and structural insulated panels (SIPs) • roofing materials – thatch and reconstituted slates • insulation materials – recycled glass mineral wool, sheep's wool insulation, hemp and flax • recycled building materials – crushed hardcore from demolition, recycled bricks, recycled slates. 	
10.2.3	<p>Embodied energy</p> <p>Code for Sustainable Homes ratings (the code continues to operate for legacy buildings)</p> <p>Embodied energy of construction materials</p> <p>Factors that contribute to embodied energy – extraction of resources, processing, assembling, transportation, construction, maintenance and repair, demolition, disposal</p>	
10.3 Students must understand obligations under environmental legislation		
10.3.1	<p>Current environmental law that concerns the protection of the environment in the United Kingdom with respect to:</p> <ul style="list-style-type: none"> • climate change • biodiversity • the Clean Air Act • the Water Act • the Wildlife and Countryside Act. 	
10.3.2	<p>Ground contamination:</p> <ul style="list-style-type: none"> • surveying of potentially contaminated land • types of contaminant, including radioactive, toxic and biological (including non-native plant species) • safe disposal of waste material, including radioactive, toxic and biological (including non-native plant species) • treatment of contaminated land for radioactive, toxic and biological contaminants • containment of contaminants. 	CS4

What students need to learn		
10.4 Students must understand environmental policies, initiatives and performance measures, and how they impact on design and construction		
10.4.1	Conservation of fuel and power – Approved Document L.	
10.4.2	Environmental and sustainability assessment tools: <ul style="list-style-type: none"> • Building Research Establishment Environmental Assessment Method (BREEAM). • CEEQUAL • Home Quality Mark 	
10.4.3	Government subsidies for using environmental technologies.	
10.4.4	Environmental Performance Certificate (EPC) to rate a building on its energy usage and carbon footprint.	

What students need to learn		
10.5 Students must understand the principles of heritage and conservation within a construction environment		
10.5.1	Restrictions associated with listed and historical buildings: <ul style="list-style-type: none"> • listed building grading – Grade I, Grade II* and Grade II • permissions for buildings to be demolished, extended or altered • notification of work to a listed building that involves any element of demolition. 	
10.5.2	Legislation and guidance relating to listed buildings and heritage sites: <ul style="list-style-type: none"> • Planning (Listed Buildings and Conservation Areas) Act • Heritage Protection Bill. 	
10.6 Students must understand the principles of 'lean construction' and how it applies to the construction industry		
10.6.1	Aims of lean construction: <ul style="list-style-type: none"> • eliminating waste and errors through reduction, recycling and repurposing • improving work planning and forward scheduling • identifying the processes that deliver best value • eliminating activities that do not add value • ensuring the working environment is clean, safe and efficient • continuous improvement • just-in-time deliveries. 	CS3
10.7 Students must understand waste management, including sources of waste and types of materials that require specific actions, and the related measures put in place by construction organisations		
10.7.1	Plan safe transportation and disposal of waste: <ul style="list-style-type: none"> • the categorisation of waste materials for general disposal • specialist disposal of hazardous waste • using licensed disposal contractors • incineration for specialist disposal • use of Environment Agency registered waste carriers. 	CS3
10.7.2	Plan methods to minimise pollutants associated with construction-related activities: <ul style="list-style-type: none"> • how to reduce the noise from construction operations (use of silencers, maintenance of machinery) • reduction of emissions from construction traffic, plant and machinery (use of modern fuel-efficient vehicles and equipment, regular maintenance, servicing, use of locally sourced materials, buying in bulk, ordering a variety of materials from one supplier to cut travel distances and the number of journeys to the site) • reduction of high carbon emissions created during the manufacture of high energy materials 	CS3

What students need to learn		
	<ul style="list-style-type: none"> • reduction of dust from excavation and demolition work (damping down, road sweeping, use of dust suppression equipment, wheel cleaning) • reduction of land contamination, waste treatment and correct waste disposal (general waste disposal, specialist waste disposal handling by trained and licensed contractors, site drainage damage minimisation by washing out cement plant and equipment, use of settlement tanks to filter debris, minimisation of fuel and oil spillages by use of bunded tanks, bund walls and absorbent mats). 	
10.8 Students must understand the advantages of alternative methods of energy production and the impact of energy use		
10.8.1	Ground source – ground source heat pump (horizontal and vertical).	
10.8.2	Air source – air source heat pump (indoor heat exchanger, outdoor heat exchanger, air to air, air to water).	
10.8.3	Wind – micro wind generator (horizontal axis, vertical axis).	
10.8.4	Solar – solar photovoltaic (PV) panels, solar panels (thermal).	
10.8.5	Combined heat and power.	
10.8.6	Biomass fuel heating systems.	

Content Area 11: Relationship management

Students will demonstrate knowledge and understanding of the various stakeholders with interests in construction projects, the need to collaborate and ways in which collaboration can be encouraged. Students must understand key principles of customer service and teamwork. They will also understand the importance of equality, diversity, negotiation and conflict management techniques. They will gain an understanding of methods of communication, including social media, in addition to the rights of both employers and employees, and ethical behaviours.

What students need to learn		
11.1 Students must understand roles, expectations and interrelationships of different stakeholders throughout the construction project delivery		
11.1.1	Types of stakeholder – client, construction team, community and end user.	E1
11.1.2	Expectations and interrelationships of different stakeholders during stages of a construction project: <ul style="list-style-type: none">• during the start of a project• during the design stage• during the construction phase• at the handover of the project• once the project is completed and in use.	E1 CS2 CS1
11.2 Students must understand the importance of a collaborative approach during a project, and how this is applied in practice at different stages of a project		
11.2.1	Collaborative approaches during project delivery: <ul style="list-style-type: none">• delivery – meeting deadlines and specifications• reporting – awareness of progress and issues• presenting information and ideas to technical and non-technical audiences to convey different project information• summarising information – requesting information and recording for later use• synthesising information – using more than one source to interpret and respond to different situations.	E2 E4 E5 CS2

What students need to learn		
11.3 Students must understand the principles and importance of customer service		
11.3.1	Importance, implications and benefits of building good customer relationships: <ul style="list-style-type: none"> • enhanced reputation of business • repeat business • customer confidence in business • job satisfaction for employees. 	CS1
11.3.2	Principles of customer service: <ul style="list-style-type: none"> • good communication, meeting agreed timescales, timely customer responses and monitoring of progress • good product knowledge – building trust and meeting expectations. 	CS1
11.4 Students must understand the effects of team dynamics on a team's success and the importance of teamwork to team and project performance		
11.4.1	Positive effects of good teamwork: <ul style="list-style-type: none"> • improved efficiency and performance • less reliance on managers to make decisions in response to changing circumstances • high levels of staff morale • improved innovation and willingness to suggest new ideas • complementary skills sets • mutual accountability. 	E1 CS2
11.5 Students must understand team dynamics, the characteristics of an effective team, the qualities and expectations of a team member and how these qualities are demonstrated		
11.5.1	Qualities and characteristics of an effective team and team members: <ul style="list-style-type: none"> • effective communication between team members • increased morale • knowledge of organisation, product and service • organisation in job roles – clear leadership, defining job roles and responsibilities • adaptable/flexible approach • working to team members' strengths and weaknesses. 	E2 E6 CS2
11.6 Students must understand the importance of equality, diversity and representation, including related legislation		
11.6.1	Legislation: Equality Act, Employment Rights Act, Human Rights Act.	
11.6.2	Trade unions – right to representation, right to membership.	

What students need to learn		
11.7 Students must understand negotiation techniques and how they are used when taking part in discussions with clients, contractors and other relevant stakeholders		
11.7.1	Negotiation techniques: <ul style="list-style-type: none"> • win-win • lose-lose • I win, you lose • I win/lose some, you win/lose some • I lose, you win. 	E6 CS1
11.8 Students must understand conflict management techniques		
11.8.1	Conflict resolution techniques: <ul style="list-style-type: none"> • collaborating or problem solving • compromising • smoothing • forcing • withdrawing or avoiding • mediation. 	CS1 CS2 CS3
11.9 Students must understand methods and styles of communication and the suitability of these for different situations that may arise throughout a construction project		
11.9.1	Formal and informal styles of communication to convey technical information to different audiences: <ul style="list-style-type: none"> • discussions with the client • communicating information to stakeholders – local authority, general public, planning notices and applications. 	E1 E2 CS1
11.9.2	Methods of verbal and non-verbal communication: <ul style="list-style-type: none"> • verbal – pitch and tone of voice, open and closed questions, using the telephone, presentations • non-verbal – written, sign and body language, listening skills. 	E1 E2 E4 E6 CS1
11.9.3	Communication skills and how they can be applied in construction situations, including face-to-face meetings and conversations, discussions, presentations, email or other electronic media, telephone, written, drawn information.	E1 E2 E4 E6 CS1 CS2

What students need to learn		
11.10 Students must understand employment rights and the responsibilities of the employer and employee		
11.10.1	<p>Employment rights available to all employees, including:</p> <ul style="list-style-type: none"> • national minimum wage, national living wage, illegal deductions, timing of payment, pension • health and safety • time off – holiday entitlements (full- and part-time employees), time off for trade union duties, weekly and daily rest breaks • access to a trade union representative in the event of a grievance • not being harassed or discriminated against • maternity leave, paternity leave and unpaid parental leave. 	
11.10.2	<p>Responsibilities of employers and employees:</p> <ul style="list-style-type: none"> • employer to an employee – providing work, pay and health, safety and welfare compliance • employee to an employer – obeying reasonable instructions/orders, not stealing, complying with health and safety requirements. 	
11.11 Students must understand ethics and ethical behaviour as applied to working in the construction industry		
11.11.1	Ethics and ethical behaviours: honesty, fairness and equality.	
11.12 Students will understand how using sources of information, including social networking, contributes to knowledge sharing		
11.12.1	<p>Use of information, including web-based sources for knowledge sharing with stakeholders:</p> <ul style="list-style-type: none"> • collaborating on ideas using social networking • promoting products and services through social media and advertisements • gathering customer feedback. 	CS2

Content Area 12: Commercial business

Students must be able to apply knowledge and understanding of the different sizes of business that carry out design, surveying and planning activities in the construction sector. They will develop an understanding of the objectives and values of businesses, and approaches that can be used to measure the success of construction projects in varying contexts and situations.

What students need to learn		
12.1 Students must understand types of business structure and the roles each may play in a construction project		
12.1.1	Types of business structure: <ul style="list-style-type: none"> • small and medium enterprises (SMEs) • private – including sole partnerships, partnerships, limited liability, corporations • not-for-profit: community interest companies (CIC), public organisations. 	
12.2 Students must understand business objectives of organisations in the construction industry		
12.2.1	Financial business objectives: <ul style="list-style-type: none"> • private organisations – profitability, growth, market leadership • not-for profit-organisations – alleviating poverty, cost control, value for money. 	M6 M9
12.2.2	Social business objectives: <ul style="list-style-type: none"> • private organisations – provision of employment • not-for profit-organisations – provision of education, provision of housing, provision of healthcare, service provision, service quality, meeting government standards. 	M9
12.3 Students must understand the need for business values and ethical and transparent business practices		
12.3.1	Commitment to customer service.	
12.3.2	Environmental values: Fair Trade, Forestry Stewardship Council (FSC).	
12.3.3	Company code of conduct.	
12.4 Students must understand the principles of corporate social responsibility		
12.4.1	Approaches to corporate social responsibility (CSR): <ul style="list-style-type: none"> • incorporating sustainable development into a company's business model • positive impacts on social, economic and environmental factors • use of local resources – local trades, local suppliers and locally produced materials • community design – community-led designs, inclusive design. 	

What students need to learn		
12.5 Students must understand the role of innovation and entrepreneurship within the construction industry		
12.5.1	Innovation and entrepreneurship: <ul style="list-style-type: none"> • product or service development • successfully exploiting a new idea • adding value to buildings and structures to differentiate the project from the competitors • having a vision for opportunities to develop projects. 	
12.6 Students must understand how businesses measure success		
12.6.1	Key performance indicators (KPIs), including their use with target setting: <ul style="list-style-type: none"> • input KPIs – purchases made, resources, funding for training • process KPIs – efficiency or productivity, average daily rate, production time • output KPIs – gross/net profit margin, operating margin, return on investment. 	CS1
12.6.2	The characteristics of benchmarking and target setting as a measure of success, including: <ul style="list-style-type: none"> • meeting/exceeding client expectations • clearly defining the service level agreement (SLA) • setting the performance standard required. 	CS1

Content Area 13: Project management

Students will be able to demonstrate and apply knowledge and understanding of successful project management, including aspects linked to quality and risk management. They will understand activities that are completed during the four stages of a project life cycle, and how project management tools can be used to plan and monitor progress of a project. They will demonstrate their understanding of the tendering process and documentation that forms tenders.

What students need to learn		
13.1 Students must understand the principles of project management		
13.1.1	The common roles and responsibilities of stakeholders, project teams and the project manager.	
13.1.2	Principles of project management – goals, objectives, milestones.	
13.2 Students must have an understanding of the importance of quality management techniques used in the construction industry		
13.2.1	Quality management techniques: <ul style="list-style-type: none">• quality assurance and control• total quality management• benchmarking• continuous improvement process• value engineering.	
13.3 Students must understand approaches to project management throughout the whole life cycle and work stages of a construction project		
13.3.1	Stages of the project management life cycle: <ul style="list-style-type: none">• initiation – identification and justification of project need, assessing the size, scope and feasibility of the project• planning – establishing project requirements (costs, schedule, deliverables, delivery dates), resources, quality, communication planning and risk analysis• execution – status and tracking, quality, KPIs, forecasting• performance and control – objectives, quality deliverables, cost tracking• closure – snagging, reporting, lessons learned.	CS3
13.3.2	Interpretation and production of project management tools and documentation; planning and management tools – Gantt charts, bar charts, critical path analysis, line of balance and suitable planning software.	CS3

What students need to learn		
13.4 Students must understand the management of the procurement process		
13.4.1	<p>The characteristics of the following procurement routes:</p> <ul style="list-style-type: none"> • traditional/conventional • design and build • management • integrated. 	
13.4.2	<p>Common methods of tendering and how to create texts for different purposes and audiences:</p> <ul style="list-style-type: none"> • methods of tendering relevant to the scale, size and value of the construction works • types of work tendered for (building, civil engineering, surveying and building services work). 	E3 E5
13.4.3	<p>Documentation required for procurement and tendering, and how to create texts for different purposes and audiences, including:</p> <ul style="list-style-type: none"> • drawings, such as site layout plans • schedules – schedules of work, activity schedules • specifications • bills of quantities • method statements. 	E3 E5 CS1
13.5 Students must understand the principles of project, construction and commercial risk management		
13.5.1	<p>Commercial risk for clients and contractors:</p> <ul style="list-style-type: none"> • client risk – ensuring funding, potential profit analysis • contractor risk at tender stage – the need for an accurate bill of quantities, safety margins, timescales. 	CS3
13.5.2	<p>Risk management techniques:</p> <ul style="list-style-type: none"> • identification of risks • reviewing and monitoring risks • mitigation techniques. 	CS3

Content Area 14: Law

Students will develop an understanding of the legal aspects of design, surveying and planning activities within the construction industry. They will be able to show their awareness of different types of law, including those related to property ownership, the permissions that need to be obtained to complete surveying activities and the types of contract used for construction projects. They will also become aware of the implications of breaches of regulations. They will also demonstrate their knowledge and understanding of intellectual property rights, and the protections that different rights bring.

What students need to learn		
14.1 Students must understand the different types of law that are present in the English and Welsh legal systems, the differences between them and the sanctions that can be applied under each type of law		
14.1.1	Case law – a set of past rulings by tribunals that meet their respective jurisdictions’ rules to be cited as precedent.	
14.1.2	Legislation – a law that has been enacted by a legislature or other governing body, or the process of making it.	
14.1.3	Civil law – a body of rules that defines and protects the private rights of citizens.	
14.1.4	Criminal law – the body of law that relates to crime.	
14.2 Students must understand the principles and implications of land law with respect to the built environment		
14.2.1	Different types of land ownership: <ul style="list-style-type: none">• sole proprietor/owner• government/council owned• concurrent ownership – joint tenancy, joint mortgages, rights of survivorship, the four unities (time, title, interest, possession), shared ownership, tenants in common.	
14.2.2	Features of leasehold and freehold ownership and the differences between them.	
14.2.3	Legislation and regulations impacting on use of land and buildings: <ul style="list-style-type: none">• implications for construction where there are boundaries and party walls• planning regulations• easements and wayleaves.	
14.3 Students must understand the permissions required to undertake survey work, and the implications of non-compliance		
14.3.1	Persons and organisations from which permission to carry out surveys may be required: the land or building owner, local authority, Ministry of Defence, Civil Aviation Authority (drone use/unmanned aircraft systems).	

What students need to learn		
14.4 Students must understand the implications of the law of contract for construction projects, including the scope of types of contract		
14.4.1	Types of contract used in construction: <ul style="list-style-type: none"> • Joint Contracts Tribunal (JCT) • Association of Consultant Architects (ACA) Building Agreement • ICE conditions of contract • International Federation of Consulting Engineers (FIDIC) • New Engineering Contract (NEC). 	
14.4.2	Implications of law on contracts used in construction: <ul style="list-style-type: none"> • rights and obligations under contracts • conditions of contract • variations in construction contracts. 	
14.5 Students must understand case law related to the law of tort and the law of landlord and tenant, including duty of care		
14.5.1	Law of tort – liabilities, civil liability for damages, negligence.	
14.5.2	Law of landlord and tenant – duties of landlords, duties of tenants, leases, eviction, damages, rents.	
14.6 Students must understand the implications of building regulations, and of breaches of or failure to comply with building regulations for the construction project and key stakeholders		
14.6.1	Implications of the failure to comply with building regulations: <ul style="list-style-type: none"> • implications for stakeholders – prosecution (financial penalties, prison sentences), damage to reputation • implications for the project – impact on selling property, enforcement notices. 	
14.7 Students must understand the importance, implications and ways of protecting intellectual property rights		
14.7.1	Types of intellectual property rights that give automatic protection: <ul style="list-style-type: none"> • copyright • design rights. 	
14.7.2	Types of intellectual property where protection needs to be applied for: <ul style="list-style-type: none"> • trademarks • patents • registered designs. 	

Scheme of Assessment – Core Component

There are three assessments in the Core Component of the *T Level Technical Qualification in Design, Surveying and Planning for Construction*:

1. Examination Paper 1: Science and Building Technology
2. Examination Paper 2: Construction Industry and Sustainability
3. Employer Set Project.

The mapping, timings and scheduling and preparation for assessment shown below are for the current specimen assessment material, the assessment will have the same overarching number of tasks and overall focus but the order of tasks and the detail within the task may change each series.

Core examinations

Paper 1: Science and Building Technology
Written examination: 2 hours 30 minutes 33.33% of the Core Assessments 100 marks Graded A* – E
Content overview: Sampled assessment of application of knowledge and understanding. Content area 1 – Health and safety Content area 2 – Science Content area 3 – Measurement Content area 4 – Building technology Content area 5 - Information and data Content area 6 – Digital technology Content area 7 - Construction mathematical techniques
Assessment overview: <ul style="list-style-type: none">• An externally assessed written examination comprising two sections. Students answer all questions in Section A and Section B. The exam papers will ramp up in difficulty. The test questions will start at the lower end of the grade range and ramp up to questions at the higher end of the grade range.• The examination will include short, medium and extended open-response calculations and questions, as well as drawing questions and labelling questions.• It will be set and marked by Pearson.• It will be timetabled at a time and date specified by Pearson.

Paper 2: Construction Industry and Sustainability

Written examination: 2 hours 30 minutes

33.33% of the Core Assessments

100 marks

Graded A* - E

Content overview:

Content area 8 – Design

Content area 9 – Construction and the built environment industry

Content area 10 – Sustainability

Content area 11 – Relationship management

Content area 12 – Commercial business

Content area 13 – Project management

Content area 14 – Law

Assessment overview:

- An externally assessed written examination comprising two sections. Students answer all questions in Section A and Section B. The exam papers will ramp up in difficulty. The test questions will start at the lower end of the grade range and ramp up to questions at the higher end of the grade range.
- The examination will include short, medium and extended open-response questions, as well as drawing and labelling questions.
- It will be set and marked by Pearson.
- It will be timetabled at a time and date specified by Pearson.

Both examinations will follow the same paper structure but they will assess different Core content, and will be available paper-based. There are two sections in each paper:

- Section A is weighted 40%.
- Section B is weighted 60%.

Core Examination Assessment Objectives

Assessment Objective			% Weighting		Paper 1	Paper 2
AO1	1a	Demonstrate knowledge and understanding of the content (Knowledge)	12	(i) In isolation	4%	5%
				(ii) Embedded	8%	7%
AO1	1b	Demonstrate knowledge and understanding of the content (Understanding)	22		22%	22%
AO2		Apply knowledge and understanding of the content to different situations and contexts	45		45%	45%
AO3	3a	Analyse and evaluate information and issues related to the content (Analysis)	12		12%	12%
AO3	3b	Analyse and evaluate information and issues related to the content (Evaluation)	9		9%	9%

Employer Set Project

Employer Set Project
<p>Externally assessed project: 15.5 hours</p> <p>33.33% of the Core Assessments</p> <p>100 marks</p> <p>Graded A* - E</p>
<p>Content overview</p> <p>Sampled assessment of application of knowledge and skills.</p> <p>Content area 1 – Health and safety</p> <p>Content area 2 – Science</p> <p>Content area 3 – Measurement</p> <p>Content area 4 – Building technology</p> <p>Content area 5 – Information and data</p> <p>Content area 6 – Digital technology</p> <p>Content area 7 – Construction mathematical techniques</p> <p>Content area 8 – Design</p> <p>Content area 9 – Construction in the built environment industry</p> <p>Content area 10 – Sustainability</p> <p>Content area 11 – Relationship management</p> <p>Content area 12 – Commercial business</p> <p>Content area 13 – Project management</p> <p>Content area 14 – Law</p>
<p>Assessment overview</p> <p>The project will be set and marked by Pearson and will take place within a four-week window.</p> <p>The majority of the tasks will be timetabled by the Provider, with the exception of one task which will be timetabled by Pearson to ensure all students undertake it at the same time.</p> <p>Students will be provided with a client brief and specification, to which they will need to prepare designs and project management documentation. They will need to develop costing documentation and respond to challenges as a group.</p> <p>The project will be validated by our Employer Validation Panel.</p> <p>Pre-release</p> <p>Students will be provided with a shortened client brief and specification, and given time to research similar projects. This research will inform the students' understanding of the challenges that that project might present, the legal constraints within which the project will need to operate, the probable duration for different stages of the project, and the types of designs that have been used for similar projects.</p>

Employer Set Project

There are four tasks in the project:

Task 1: Response to a client brief and initial designs

The students will be given the full brief and specification. They will have to prepare a report that explores the potential challenges for the project, initial design ideas and probable timelines. Students will need to prepare project management documentation that shows these timelines.

Task 2: Designs

Students will need to prepare designs for the proposed building project. They will need to produce sketches of the exterior of the building and the internal layout. They will need to produce a CAD plan or elevation showing a specific detail of the design. Students will produce a presentation with detailed speaker notes that justifies how their design meets the requirements of the brief.

Task 3: Costs

Students will be required to produce costing documentation for an aspect of the project.

Task 4: Responding to problems as a team

Students will be asked to work as a team to respond to problems arising within the scenario. Students will be given time to carry out research and will then need to produce a group presentation/hold a group discussion to present potential solutions to the problem.

Employer Set Project Assessment Objectives

The Assessment Objectives for the Employer Set Project are as follows:

Assessment Objective	Strand	Descriptor
A01	1. Planning	Plan and research information necessary to present solutions to a brief.
A02	2. Application	Apply knowledge and skills using a logical approach, working with others to identify issues, solve problems and propose solutions.
A03	3. Select relevant techniques and resources	Select relevant techniques and resources to respond to a brief.
A04	4a. English	Use appropriate English in response to a brief to communicate effectively with both technical and non-technical audiences.
	4b. Digital	Use appropriate digital skills in response to a brief to present information and data in a clear and logical way.
	4c. Maths	Use appropriate mathematical skills in response to a brief to identify solutions.
A05	5a. Project Outcome	Produce proposed construction solutions in response to a brief.
	5b. Review	Review and justify how well the proposed construction solutions meet the brief.

5. Occupational Specialist Component: Surveying and Design for Construction and the Built Environment

Content Summary

The Occupational Specialist content is separated into four Performance Outcomes, with the skills needed to achieve threshold competence and the knowledge to underpin skill application across the following areas.

Performance Outcome	Key content areas	Skills
1. Measure the built environment	<p>K1 Law</p> <p>K1.1 Permissions required to undertake survey work, including geospatial</p> <p>K2 Digital technology</p> <p>K2.1 How the Internet of Things contributes to the measurement of the built environment</p> <p>K2.2 Geospatial equipment, their applications, suitability and use</p> <p>K2.3 Digital engineering techniques and appropriate software</p> <p>K2.4 Geospatial information conveyance and sourcing, including GIS, cartographic and other commercially available data</p> <p>K3 Measurement</p> <p>K3.1 Types of measurement and detection</p> <p>K3.2 How to capture, process, manage, use and quality assure data, including geospatial</p> <p>K3.3 Calculations required and how to undertake them</p> <p>K3.4 The principles and limitations of measurement, e.g. parallax</p>	<p>S1.1 Explore requirements of the task, using open questioning and listening.</p> <p>S1.2 Gather information from appropriate sources specific to the scope of works, including Geographical Information Systems (GIS).</p> <p>S1.3 Determine the level of accuracy required.</p> <p>S1.4 Capture data, using appropriate measurement methods.</p> <p>S1.5 Process data, using appropriate techniques.</p> <p>S1.6 Extract and manage data, using appropriate techniques.</p> <p>S1.7 Quality assure the surveying measurements.</p> <p>S1.8 Communicate health and safety risks associated with the task and environment, using appropriate methods.</p>

Performance Outcome	Key content areas	Skills
	<p>K3.5 Techniques used to gather data, including geospatial data, e.g. Global Navigation Satellite Systems (GNSS), photogrammetry</p> <p>K3.6 The importance of coordinating systems, projects, transformations and datums</p> <p>K3.7 Construction industry measurement standards, guidance and practice, including measurement rules</p> <p>K3.8 Good survey practice, e.g. whole to the part, local vs national and error propagation</p>	<p>S1.9 Assess health and safety risks associated with the task and environment.</p> <p>S1.10 Select and use tools and equipment with accuracy and efficiency.</p> <p>S1.11 Operate equipment and perform tasks safely.</p> <p>S1.12 Manage waste, including the quantification, classification and disposal of waste.</p>
2. Analyse the built environment	<p>K4 Project management</p> <p>K4.1 Project programmes</p> <p>K4.2 Digital workflows</p> <p>K5 Sustainability</p> <p>K5.1 Digital workflows</p> <p>K5.2 How and why sustainability seeks to balance economic, environmental and social objectives</p>	<p>S2.1 Sequence and prioritise tasks.</p> <p>S2.2 Analyse information available to determine requirements of the task.</p> <p>S2.3 Interpret information and data, including from visual and other sources.</p> <p>S2.4 Convey data.</p>
3. Design the built environment	<p>K2 Digital technology</p> <p>K2.5 Digital design tools, e.g. computer-aided design (CAD)</p> <p>K2.6 Digital specification tools, e.g. the National Building Specification (NBS), BS 1192</p> <p>K2.7 Digital data, e.g. spreadsheets and schedules</p> <p>K2.8 Digital presentation, image handling and desktop publishing, e.g. brochures and reports</p>	<p>S3.1 Identify information and data required to complete the task.</p> <p>S3.2 Quality assure information and data, including third-party expertise.</p> <p>S3.3 Conduct precedent research, including best practice, benchmarks and design guides.</p>

Performance Outcome	Key content areas	Skills
	<p>K6 Design</p> <p>K6.1 How designs are prepared, including design briefs, work stages, schedules, specifications, recommendations and programmes</p> <p>K6.2 The level of detail needed in designs for different situations, and the importance of detail in communicating the design intent</p> <p>K6.3 The implications of statutory obligations to designs, e.g. utility diversion</p> <p>K6.4 The use and importance of specifications, e.g. as applicable to design guides and legislation</p> <p>K6.5 The relevance of measurement in the design process, e.g. area (net and gross) volume, height and length</p> <p>K6.6 Technical drawing techniques</p> <p>K6.7 Inclusive design, including equality and diversity by impact</p> <p>K7 Health and safety</p> <p>K7.1 The CDM Regulations 2015 and the duties of the designer</p> <p>K7.2 The identification and design of hazards, and risks and methods of assessment, e.g. Design Risk Assessments (CDM 2015)</p> <p>K7.3 Fire and emergency safety, e.g. the Hackitt Review</p>	<p>S3.4 Use suitable data, quality assured in line with best practice.</p> <p>S3.5 Model design, using digital software and other tools and techniques.</p> <p>S3.6 Present appropriate design information and data, using different methods and formats.</p> <p>S3.7 Manage data in a collaborative environment.</p> <p>S3.8 Communicate design and construction risks, using appropriate methods.</p> <p>S3.9 Manage relationships.</p> <p>S3.10 Provide creative solutions to challenges arising from requirements.</p> <p>S3.11 Adapt design proposals in response to design constraints and stakeholder feedback, in terms of time, cost and material factors.</p>

Performance Outcome	Key content areas	Skills
	<p>K8 Relationship management</p> <p>K8.1 Negotiation, mediation and conflict management techniques, and their suitability for different situations</p> <p>K8.2 Consultation requirements, e.g. the expertise and input of third-party knowledge</p> <p>K8.3 Processes of collaborative design, e.g. coordination of team input and clash management</p>	
4. Verify delivery of the built environment	<p>K3 Measurement</p> <p>K3.9 Types of measurement for the combined data</p> <p>K3.10 Techniques for value engineering</p> <p>K3.11 Rules of measurement and contractual implications</p> <p>K5 Sustainability</p> <p>K5.2 How and why sustainability seeks to balance economic, environmental and social objectives</p> <p>K5.3 Legal obligations relating to pollution and waste.</p> <p>K5.4 Environmental performance measures that must be met and how they are measured</p> <p>K5.5 Principles of heritage and conservation</p> <p>K9 Valuations</p> <p>K9.1 Industry valuation standards, guidance and practice and how these are used to verify delivery of the built environment</p> <p>K9.2 Valuation benchmarking and how this is used to verify delivery of the built environment</p>	<p>S4.1 Verify suitability of information and data from appropriate sources specific to the scope of works.</p> <p>S4.2 Interpret information and data, including from visual and other sources.</p> <p>S4.3 Present information, using oral, visual and written communication.</p> <p>S4.4 Use software with accuracy to verify specific items, utilising appropriate tools.</p> <p>S4.5 Complete costings analysis through the use of market rates and spreadsheet software, including best value and whole life costing.</p> <p>S4.6 Apply appropriate mathematical techniques in a construction context.</p>

Detailed content

The detailed content for each Performance Outcome represents the different activities and associated skills performed in Surveying and Design for Construction and the Built Environment. Each skill has underpinning knowledge to support skill application.

Performance Outcome 1: Measure the built environment

1.1 Preparation for task, desk study and building survey

Skill content	Knowledge
S1.1 Explore requirements of the task, using open questioning and listening.	<p>Students will apply their knowledge of the different types of guidance on permissions required to undertake survey work, including geospatial and digital survey to the survey task. This will include: (E2, E3, E4, D3, K2.2)</p> <ul style="list-style-type: none">• relevant legislation relating to survey work: (K1.1)<ul style="list-style-type: none">○ Civil Aviation Authority (CAA) permission○ permissions from landowners or controllers of land○ restrictions for filming in public areas• survey terminology, e.g. back sight, fore sight, datum, reduced level, control points, base line, azimuth, zenith angle, offset, check lines, bearings. <p>Students will explore different types of survey method:</p> <ul style="list-style-type: none">• topographical• geological• linear• structural• ecological• boundary• façade• ground• measured.
S1.2 Gather information from appropriate sources specific to the scope of works, including Geographical Information Systems (GIS).	<p>Students will understand how the internet can provide information on a building's locality in relation to its surrounding geography, and the building's shape and orientation, which supports the measurements in the built environment: (K2.1, K2.3, K2.4)</p> <ul style="list-style-type: none">• Ordnance Survey maps• Printed and online maps• Geographic Information System (GIS)• Historic maps and drawings• Cartographic information• Other commercially available data.

Skill content	Knowledge
	<p>Students will study techniques used to gather and convey data, including geospatial data and other digital engineering techniques that support construction: (E1, E2, E3, E4, E5, K2.2, K2.3, K2.4)</p> <ul style="list-style-type: none"> • desk study • smart buildings • topographical data, including photographic mapping • building information management automated monitoring. <p>Students will learn how to capture, process, manage, use and quality assure data, including geospatial: (E1, E2, E3, E4, E5, K2.2)</p> <ul style="list-style-type: none"> • limitations of use – cost, accuracy, training requirements, accessibility • measurement standards, guidance and practice, including measurement rules • point cloud surveying, 3D surveys, laser scanning, data collection, cloud to cloud meshed and surfaced models.
<p>S1.3 Determine the level of accuracy required.</p>	<p>Students will study the application, suitability and use of geospatial equipment in a construction context. This will include: (K2.2, K2.3, K2.4)</p> <ul style="list-style-type: none"> • the principles and limitations of measurement • units of measurement, using appropriate units and contractual arrangements, BS 5606 • converting between common alternative units – degrees, minutes and seconds from decimal measurements, imperial to metric • scientific principles – temperature, atmospheric conditions and how they affect measurements • point density requirements for laser scans • standard units, planning surveys to minimise errors • point marking and control points. <p>Students will understand the importance of coordinating systems, projects, transformations and datums: (K3.6, K3.7, K3.8)</p> <ul style="list-style-type: none"> • a coordinate system is a reference system used to represent the locations of geographic features, imagery and observations, such as Global Positioning System (GPS) locations • datum terminology: <ul style="list-style-type: none"> ○ Ordnance Survey Benchmark (OSBM) ○ Temporary Benchmark (TBM) ○ reduced level. • offsetting, triangulation, base lines • positioning of profiles, control points, TBMs.

Skill content	Knowledge
<p>S1.8 Communicate health and safety risks associated with the task and environment, using appropriate methods.</p> <p>S1.9 Assess health and safety risks associated with the task and environment.</p>	<p>Students will apply health, safety and welfare knowledge and understanding to the construction surveying process, and communicate health and safety risks. (E1, E2, E3, E4, E5, K3.2, K3.3, K3.4)</p> <p>Type of accidents and ways to avoid them:</p> <ul style="list-style-type: none"> ● falls from height: <ul style="list-style-type: none"> ○ make sure access equipment is in good condition ○ prevent people and materials falling from roofs, gable ends, working platforms and open edges, using guard rails, mid rails and toe boards ○ make sure fragile roof surfaces are covered, or secure working platforms with guard rails are used on or below the roof ● working in excavations: <ul style="list-style-type: none"> ○ shore, cover or barrier excavations to prevent people or vehicles from falling in ○ no lone workers in excavations. ● collapse of structures: <ul style="list-style-type: none"> ○ support structures (such as walls, beams, chimney breasts and roofs) with props; ensure props are installed by a competent person <p>The materials used in buildings that are hazardous to health and the periods in history they were in use.</p> <p>Have knowledge of the guidance published by the Health & Safety Executive on hazardous materials in buildings. Understand how to recognise the key hazardous materials commonly used in building and be aware of the historical hazards due to the age of the building. Have an awareness of their danger to health, how they can be protected or safely removed.</p> <ul style="list-style-type: none"> ● Asbestos: <ul style="list-style-type: none"> ○ Total ban in 2003 with materials being phased out from the 1970s ○ Types of asbestos, 'blue asbestos' (crocidolite), 'brown asbestos' (amosite) and 'white asbestos' (chrysotile) and the dangers of each type ○ Where asbestos was used and the products it was incorporated in, insulation, ceiling tiles, cement products, gaskets in pipework, protection in electrical boards, pipe and tank lagging, fire stopping and flooring ● Electrical: <ul style="list-style-type: none"> ○ Fluorescent lamps and tubes ○ Electrical equipment, insulating chemicals, early 20th century

Skill content	Knowledge
	<ul style="list-style-type: none"> • Lead: <ul style="list-style-type: none"> ○ Lead paint was in general use until the 1980s ○ Lead pipes were unlikely to be in use after 1970, more likely in Victorian buildings • Lime plaster with horse hair: <ul style="list-style-type: none"> ○ Was in general use until beginning of the twentieth century, but may be some instances up until the middle of the twentieth century. • Exposure to hazardous materials: <ul style="list-style-type: none"> ○ asbestos ○ biological hazards ○ animal waste • Ground contamination: <ul style="list-style-type: none"> ○ Factory sites, tanning factories, foundries ○ Chemical plants ○ Gas storage, coal gas, natural gas ○ Hospital buildings, radioactive waste, oil <p>Safe working practices:</p> <ul style="list-style-type: none"> • electricity: <ul style="list-style-type: none"> ○ use correct voltage tools, 110V safety isolating transformer or batteries ○ do not use excavators or power tools near suspected buried services • protect members of the public, the client and others: <ul style="list-style-type: none"> ○ secure the site – netting, signage. • Completion of risk assessment and method statements.

1.2 Collection of survey data

Skill content	Knowledge
<p>S1.10 Select and use tools and equipment with accuracy and efficiency.</p>	<p>Students will understand good survey practice. (K3.1, K3.2, K3.3, K3.4, K3.5, K3.6, K3.7, K3.8)</p> <ul style="list-style-type: none"> • Whole and part, local versus national and understand the types of error to support error propagation: <ul style="list-style-type: none"> ○ how errors impact on the accuracy of fieldwork surveys ○ plastic tapes – stretching ○ levels – calibration errors ○ theodolites: <ul style="list-style-type: none"> – bubble and electronic plummets off-centre errors – horizontal collimation errors – vertical collimation errors ○ electronic distance measurement: (D1) <ul style="list-style-type: none"> – scale and index errors ○ performance of systematic checks on surveying instruments: <ul style="list-style-type: none"> – tapes (calibration against standardised steel tapes) – levels (two-peg test) ○ theodolites <ul style="list-style-type: none"> – vertical axis check – transit axis check – spire check. • The principles and limitations of measurement. (K3.4) • Calculations required. (K3.3) • Adjustment of errors, closing the survey/traverse. • Geospatial equipment; its applications, suitability and use. (D1) (K2.2) • Traditional equipment: total stations, theodolites, levels (automatic, spirit, water), tapes. • Laser levels, mobile mapping, 3D laser scanning, Global Navigation Satellite System (GNSS) (GPS, GLONASS, Galileo etc.) (D1) (K5.5) • Drone surveys, antennae and accessories. (D1)

Skill content	Knowledge
<p>S1.4 Capture data, using appropriate measurement methods.</p> <p>S1.11 Operate equipment and perform tasks safely.</p>	<p>Students will understand types of measurement and detection method. (K3.1, K3.2, K3.3, K3.4, K3.5, K3.6)</p> <p>Students will understand linear measurements, offsets, heights, points, angular measurements (circle bearings, inclination), contouring, gridding.</p> <p>Students will understand methods of collecting and recording data, including manual methods, data collectors, mobile apps. (D1) (D2) (D3) (D4)</p> <ul style="list-style-type: none"> • Good survey practice, e.g. whole to the part, local versus national, error propagation, reducing angular errors. • The importance of coordinating systems, projects, transformations and datums. • Offsetting, triangulation, base lines. • Positioning of profiles, control points, temporary benchmarks (TBMs).

1.3 Process survey data

Skill content	Knowledge
S1.1 Quality assure the surveying measurements.	<ul style="list-style-type: none"> • Checking calibration certificates, closing measurements, checking digital measurements with approximate manual methods, two-peg test. • Calibration and human error; correcting for curvature, sag, slope. (M10) • Survey logs, Internet of Things, e.g. machine to machine. (M6) • Identifying anomalous results. • Adjustment of errors, closing the survey/traverse. • Smart buildings, building information management, automated monitoring.
S1.6 Extract and manage data, using appropriate techniques.	<ul style="list-style-type: none"> • Primary GIS data capture techniques: (D1, D3, D4, K3.2, K3.3, K3.6, K3.7, K3.8) <ul style="list-style-type: none"> ◦ using remote sensing and surveying technologies to capture the data, using either raster data capture or vector data capture. • Secondary GIS data capture techniques: (D1, D3, D4, K3.2, K3.3, K3.6, K3.7, K3.8) <ul style="list-style-type: none"> ◦ using technologies such as scanning, manual digitising, vectorisation and photogrammetry to capture data. • Traditional methods of collecting and recording data: <ul style="list-style-type: none"> ◦ data collectors, mobile apps.
S1.5 Process data, using appropriate techniques.	<ul style="list-style-type: none"> • Downloading data into CAD and modelling programs. • Using and incorporating data into drawings. • Calculations required and how to undertake them, using spreadsheets, tables, big data. • Rise and fall, height of collimation. • Traverse adjustment. • Digital engineering techniques and appropriate software. (D5, D4, K2.3) • Area and volume calculations, trigonometry, Pythagoras, addition and subtraction of angles.

Skill content	Knowledge
<p>S1.12 Manage waste, including the quantification, classification and disposal of waste.</p>	<p>Students will apply methods used to quantify site waste produced from excavations, demolition and general site waste:</p> <ul style="list-style-type: none"> • mathematical techniques: <ul style="list-style-type: none"> ○ regular areas and volumes ○ irregular areas and volumes ○ trapezium rule ○ mid-ordinate rule ○ Simpson's rule • calculation of waste material from site levelling and cut activities by using grid levels and site contours • how bulking factors are applied to materials • the classification of site waste as hazardous and non-hazardous; disposal methods. (E2)

Performance Outcome 2: Analyse the built environment

2.1 Analysis of construction process

Skill content	Knowledge
S2.2 Analyse information available to determine requirements of the task.	<p>Students will develop an understanding of the information that is required to plan and organise construction activities: (E1, (E2, E4, E5, E2, D1, D2, D4, K4.1)</p> <ul style="list-style-type: none"> • scoping for a project – inception, assessing client objectives, feasibility studies, cost-benefit analysis • adhering to current legislation – global warming, ethical approach to the built environment • information and documentation: <ul style="list-style-type: none"> ○ site plans ○ planning constraints ○ resource documents ○ contractor requirements ○ considerate constructors. <p>Students will understand how and why sustainability seeks to balance environmental and social objectives and the need for an ethical approach to the built environment: (K5.2)</p> <ul style="list-style-type: none"> • embedded energy/carbon, short- and long-term, payback, flexible design, re-appropriation of land and buildings • cost-benefit analysis • whole life, including decommissioning • adhering to current legislation • impact of global warming.
S2.3 Interpret information and data, including from visual and other sources.	<p>Students will understand how information is applied to a project in order to develop accurate plans and programmes of work. (E1, E2, E3, E4, E5, D1, D2, D4, K4.2, K5.2)</p> <ul style="list-style-type: none"> • Project programs, relevance and techniques for reporting: <ul style="list-style-type: none"> ○ contractual arrangements ○ embedded energy/carbon, short- and long-term, payback, flexible design, re-appropriation of land and buildings. • How sustainability is embedded into solutions: <ul style="list-style-type: none"> ○ supply chain – sustainable certification, local supplies, waste management ○ off-site construction methods ○ low-energy solutions, reduced embodied energy ○ water use and removal, including on-site solutions ○ land usage, brownfield sites. • Legal obligations relating to pollution and waste: (K5.3) <ul style="list-style-type: none"> ○ Environmental Protection Act 1990 ○ Water – The Environmental Permitting Regulations 2010 ○ local enforcement and fines.

2.2 Production of planning documentation for the construction process

Skill content	Knowledge
<p>S2.1 Sequence and prioritise tasks.</p>	<p>Students will plan and programme construction activities for small and medium-sized developments using the following: (D1, D2, D4, K4.1)</p> <ul style="list-style-type: none"> • long- and short-term programmes • types of reporting: <ul style="list-style-type: none"> ○ critical path ○ activity lists ○ Gantt charts ○ site storage ○ just-in-time ○ activity lists ○ schedules ○ progress reports ○ health and safety reports ○ waste management plans and reports ○ materials ordering and usage • workforce management techniques • noise and planning constraints, Control of Pollution Act 1974, Sec. 60–61 • cost and time implications, including cash flow, payment schedules and payment terms • constraints: hours of work, site location, area and neighbouring properties, funding, planning.
<p>S2.4 Convey data.</p>	<p>Students will develop an understanding and application of digital workflows in a construction design environment to convey data such as measurement and cost data, using appropriate techniques. (E3, E2, E4, E5, D1, D2, D4, K4.1, K4.2)</p> <p>The relevance and use of digital engineering techniques:</p> <ul style="list-style-type: none"> • protocols • BIM • BEPs • Employer's Information Requirements (EIR) • Common Data Environments (CDE).

Performance Outcome 3: Design the built environment

Research and production of design brief and proposal

Skill content	Knowledge
<p>S3.1 Identify information and data required to complete the task.</p>	<p>Students will understand how designs are prepared, including design briefs, work stages, schedules, specifications, recommendations and programs.</p> <p>(D1, D2, K2.2, K2.3, K5.1, K5.2)</p> <ul style="list-style-type: none"> • Key considerations: <ul style="list-style-type: none"> ○ design briefs ○ work stages ○ schedules ○ specifications ○ statutory obligations ○ recommendations ○ programmes. • The design team: (K5.6, K5.7) <ul style="list-style-type: none"> ○ roles and responsibilities, legal obligations ○ drawing techniques ○ inclusive design, including equality and diversity, impact assessment. • Client brief: <ul style="list-style-type: none"> ○ outline and detailed proposals ○ pre-contract information ○ communication between the different parties ○ design freeze. • Concept: <ul style="list-style-type: none"> ○ detailed design ○ production information. • Measurement in design: amounts, volumes, distances. (K5.5) • Principles of heritage and conservation. (K5.3) • Listed buildings, Historic England, National Heritage List. (K5.3) • Conservation areas: designation, management, restrictions.

Skill content	Knowledge
<p>S3.2 Quality assure information and data, including third-party expertise</p> <p>S3.7 Manage data in a collaborative environment.</p> <p>S3.4 Use suitable data, quality assured in line with best practice.</p>	<p>Students will understand about the use, application and land management of design data and information. (D1, D2, D4, K2.2, K2.3)</p> <ul style="list-style-type: none"> • Key design details: <ul style="list-style-type: none"> ○ sketch drawings ○ models ○ site plans ○ plans and sections ○ detail drawings ○ schedules ○ non-standard items ○ adjoining structures ○ designs for temporary structures ○ method statements ○ specifications. • The importance of communicating design intent to the client to meet contractual requirements to the construction development team. • Communication between the different parties. • Use of different consultants in pre-construction, construction and post-construction.
<p>S3.9 Manage relationships.</p>	<p>Students will develop an understanding of the importance of relationship management in the work environment and throughout the project development process: (E2, E3, E4, K8.1, K8.2, K8.3)</p> <ul style="list-style-type: none"> • team development • design team – roles, responsibilities, legal obligations • consultation requirements – third-party expertise, input and knowledge • negotiation, mediation and conflict management techniques • communication planning and meetings • processes of collaborative design, e.g. coordination of team input and clash management.

Skill content	Knowledge
<p>S3.3 Conduct precedent research, including best practice, benchmarks and design guides.</p>	<p>Students will use information and research to develop construction designs:</p> <ul style="list-style-type: none"> • site plans, plans and sections, detail drawings, schedules, non-standard items, adjoining structures, designs for temporary structures, method statements and specifications • concept production • influencing factors – local vernacular, reference to recent developments, client’s vision, architectural styles • the use and importance of specifications, as applicable to design guides and legislation • environmental performance measures that must be met, and how they are measured (K5.4) • Constructing Excellence, Environmental Management Systems (EMS).

3.2 Production of design information

Skill content	Knowledge
<p>S3.10 Provide creative solutions to challenges arising from requirements.</p>	<p>Students will develop the skills required to adapt and make changes to designs following changes to requirements. (K2.2, K2.3, K6.1, K6.2, K6.3, K6.4, K6.5, K6.6, K6.7)</p> <ul style="list-style-type: none"> • Client's brief, outline and detailed proposals, pre-contract information, BREEAM. • The implications of statutory obligations to designs: <ul style="list-style-type: none"> ○ utility diversion ○ water management ○ accessibility for waste removal ○ planning guidance ○ building regulations ○ best practice guides ○ highways. <p>Students will produce sketch drawings, architectural drawings and digital models, and apply the following design methods:</p> <ul style="list-style-type: none"> • understanding the relevance of measurement in the design process – area (net and gross) volume, height and length • ergonomics and anthropometrics, approved documents, standard sizes for materials and components • inclusive design, including equality and diversity, by impact assessment • access for all, flexibility, fitness for purpose, being accommodating, being realistic.

Skill content	Knowledge
<p>S3.5 Model design, using digital software and other tools and techniques.</p> <p>S3.6 Present appropriate design information and data, using different methods and formats.</p>	<p>Students will understand techniques used to produce accurate construction drawings and models: (K2.1, K2.5, K2.6, K2.7, K2.8, K6.6)</p> <ul style="list-style-type: none"> • the level of detail needed in designs for different situations, and the importance of detail in communicating the design intent • technical drawing techniques – manual and digital methods • use of appropriate scales for drawings • production of virtual models, different views and walkthroughs • detailed design and production information • standard specifications – content, methods of construction, construction details • digital design tools and photorealism (K2.5) • production of manual design section, plan and detail sketches/drawings • use of computer-aided design (CAD) to produce section, plan and detail drawings (K2.5) • types of 2D and 3D CAD • line type, wireframe, surface modelling, solid modelling • Autodesk, SolidWorks, Bentley MicroStation, Archima, SketchUp, TurboCAD (K2.5) • digital specification tools – the NBS (national building specification), BS 1192 • digital data – spreadsheets and schedules (K2.5, K2.6) • digital presentation, PowerPoint, image handling and desktop publishing, brochures and reports. (K2.8)

Skill content	Knowledge
<p>S3.8 Communicate design and construction risks, using appropriate methods.</p>	<p>Students will understand the duties of the designer in relation to design risks, produce designers risk assessments and the CDM regulations: (K7.1, K7.2, K7.3)</p> <ul style="list-style-type: none"> • CDM Regulations 2015, the duties of the designer, the identification of design of hazards and risks, and methods of assessment, e.g. Design Risk Assessments (CDM 2015) • safety schemes in procurement (SSIP) • further development of risk assessments, including for changing design, site or weather conditions • risks through the whole life cycle of the development – design, procurement, construction, operation, decommissioning • implementation of the principles of prevention – eliminate/avoid, control/reduce, adapt to new techniques/technologies, replace dangerous with less dangerous, give collective measures priority over individual measures • use of red, amber, green lists for items to eliminate, control or encourage within designs • fire and emergency safety – the Hackitt Review, escape routes, compartmentation, alarms, emergency service access (K7.3) • the key outcomes of the Hackitt Review and how they apply to designers (K7.3) • designer safety skills, knowledge and experience • use of Building Information Modelling (BIM) to identify potential hazards during construction and in-use; facilities management.
<p>S3.11 Adapt design proposals in response to design constraints and stakeholder feedback, in terms of time, cost and material factors.</p>	<p>Students will understand how designs sometimes need to be altered and changed following changes in circumstances. These could include:</p> <ul style="list-style-type: none"> • changes to budget • site conditions • legislative changes • incorrect pre-contract information • issues with material supplies and labour. <p>Students will understand methods used to implement design changes:</p> <ul style="list-style-type: none"> • architects' instructions – change of orders, confirmation of verbal instructions • production of new contracts and design information • planning alterations.

Performance Outcome 4: Verify delivery of the built environment

4.1 Research and verification of information

Skill content	Knowledge
S4.1 Verify suitability of information and data from appropriate sources specific to the scope of works.	<p>Students will understand verification of appropriate project information:</p> <ul style="list-style-type: none">• plans and drawings• contracts and tender documentation• variations• progress reports• site instructions• drawing changes and versions• consultant reports. <p>Students will understand information from appropriate enforcement authorities that could influence the final project: (E1, E2, E3, E4)</p> <ul style="list-style-type: none">• planning and building control notices• Health and Safety Executive notices:<ul style="list-style-type: none">○ improvement notices○ prohibition notices. <p>Students will understand types of measurement for combined data: (K3.9)</p> <ul style="list-style-type: none">• checking interfaces• valuations. <p>Students will understand about sustainability:</p> <ul style="list-style-type: none">• environmental performance measures that must be met, and how they are measured (K5.4)• principles of heritage and conservation. (K5.5)

Skill content	Knowledge
<p>S4.2 Interpret information and data, including from visual and other sources.</p>	<p>Students will interpret different types of project information. As well as the information above, these could include:</p> <ul style="list-style-type: none"> • cash flow projections • variations • key performance indicators (KPIs) • project schedules • design statements • contents of the project file • legal obligations relating to pollution and waste management: <ul style="list-style-type: none"> ○ Environmental Protection Act 1990 ○ Water: Environmental Permitting Regulations 2010 • environmental sustainability assessment methods, BREEAM, BRE Home Quality Mark, Latham Report and Egan Report • Considerate Constructors Scheme (CCS) • requirements of Ultra Site status • consultant reports • financial control (QS) report: <ul style="list-style-type: none"> ○ budget ○ cost plan ○ contingency funds.
<p>S4.3 Present information, using oral, visual and written communication.</p>	<p>Students will develop an understanding of the different methods to communicate and present project information. These methods can include: (E1, E2, E3, E4, E5, D1, D2, D4)</p> <ul style="list-style-type: none"> • progress reporting processes • variation documents • extensions of time • presentations • meetings • emails and letters • noticeboards • weekly/monthly/quarterly cost reporting.

4.2 Production of measured quantities and prices for proposed development

Skill content	Knowledge
<p>S4.5 Complete costings analysis through the use of market rates and spreadsheet software, including best value and whole life costing.</p>	<p>Students will learn techniques used in the costing and valuation of construction projects: (E1, E2, E3, E4, D1, D2, K3.10, K9.1, K9.2)</p> <ul style="list-style-type: none"> • techniques for value engineering, e.g. cost, quality and time, and critical analysis of the process • industry valuation standards, guidance and practice, and how they are used to verify delivery of the built environment • advance payments, retention guarantees, milestone payments, contingencies, claims and damages • whole life cycle costing • selection of plant, materials and equipment • assessing alternatives • cost allocation.
<p>S4.6 Apply appropriate mathematical techniques in a construction context.</p>	<p>Students will complete calculations of areas, volumes, quantities, units and tolerances, as required for the measurement process to be conducted:</p> <ul style="list-style-type: none"> • production of final quantities and bills of quantities • valuation benchmarking and how it is used to verify delivery of the built environment (K9.1, 9.2) • tender prices, preliminary costs, preambles, measured work, prime costs and provisional sums • identification and analysis of elements and their functions • building up rates and costs • rules of measurement and contractual implications, including RICS rules (K3.11) • final summaries.
<p>S4.4 Use software with accuracy to verify specific items, utilising appropriate tools.</p>	<p>Students will use digital methods as applied to the verification of the built environment. These will include: (D1, D3, D4, D5)</p> <ul style="list-style-type: none"> • project management software • spreadsheets • quantity take-off software • databases • CAD • BIM.

Scheme of Assessment – Surveying and Design for Construction and the Built Environment

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* consists of four Occupational Specialist Components:

1. Surveying and Design for Construction and the Built Environment

2. Civil Engineering
3. Building Services Design
4. Hazardous Materials Analysis and Surveying.

Students will be able to take **one** of the Occupational Specialist Components as part of their *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

There is a single synoptic assessment for the Occupational Specialist Component, which is an extended 'design, development and implementation' project. The synoptic element of the project is important in order to ensure that students are able to demonstrate threshold competence: this is the principal reason why the occupational specialism is assessed via a single extended project assessment to ensure that students are able to evidence all the skills required by the Performance Outcomes.

The mapping, timings and scheduling and preparation for assessment shown below are for the current specimen assessment material, the assessment will have the same overarching number of tasks and overall focus but the order of tasks and the detail within the task may change each series.

Occupational Specialism assessment: Surveying and Design for Construction and the Built Environment

Externally assessed project: 30 hours

100% of the Occupational Specialist Component assessment

180 marks

Graded P, M and D

Content overview

Students are required to:

- measure the built environment
- analyse the built environment
- design the built environment
- verify delivery of the built environment.

Assessment overview

This project will be externally set and marked by Pearson.

Students will respond to a client brief to measure a site, analyse information, design construction solutions and verify delivery of those construction solutions.

The project will consist of a portfolio of evidence, including an observation report to evidence practical skills, where they occur, to meet threshold competence where appropriate. This will be accompanied by video evidence.

The project will show students demonstrating the following tasks:

Task 1: Planning a survey

Students will produce a detailed plan and risk assessment to survey a site within given constraints. They will produce an email that summarises this plan.

Task 2: Practical surveying

Students will undertake a practical surveying task. Measurements will be recorded using surveying equipment. Data will be used to create a graphical representation of the survey.

Task 3: Completed pre construction survey, calculations and report to the groundworks contractor

Students will perform calculations in relation to the survey that will take place on the site. They will produce a report that covers an aspect of waste management.

Task 4: Quantity surveying

Students will produce a spreadsheet and valuations for the project.

Task 5: Redesign of given buildings

Students will redesign based on given information, using annotated sketches.

Task 6: Project management and stakeholder management

Students will produce project management documentation and a stakeholder engagement plan.

Task 7: Design

Students will produce a 3D model and a supporting report and presentation.

Timings and scheduling

Task	Assessment session	Assessment scheduling	Time
Task 1	1	Taken in a window of assessment, with the assessment sessions scheduled by the Provider	3h 0m
Task 2	2	Taken in a window of assessment, with the assessment sessions scheduled by the Provider	3h 0m
Task 3	3	Taken in a single session at a time specified by Pearson.	2h 30m
Task 4	4	Taken in a single session at a time specified by Pearson.	3h 0m
Task 5	5	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	3h 0m
Task 6	6	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	3h 0m
Task 7	7	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	12h 30m

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* Occupational Specialist Component projects consist of a number of activities grouped into a number of substantive tasks.

Each task will be completed during a window set by Pearson, during which you will schedule supervised assessment sessions. In some cases, tasks will also involve opportunities for unsupervised assessment, where the requirements of the skills being assessed make this necessary.

Performance Outcomes

In this assessment, students will:

Surveying and Design for Construction and the Built Environment		
Performance Outcome	Descriptor	Weightings
1	Measure the built environment	25%
2	Analyse the built environment	23%
3	Design the built environment	25%
4	Verify delivery of the built environment	27%

Preparation for assessment

Students will submit evidence for tasks in either hard copy or electronic/digital format. Where an electronic/digital submission is made, students need access to computers and the appropriate software. A summary of the submission requirements for each task is given below.

Task	Evidence type
1	Electronic submission: report, risk assessment and correspondence.
2	Electronic submission: observation record, survey data, video, CAD drawing.
3	Hard copy submission: calculations and report.
4	Electronic submission: valuation report and spreadsheet
5	Hard copy submission: sketches, justification and designers' risk assessment.
6	Electronic submission: project management report.
7	Electronic submission: 3D model, report justifying design, presentation.

A summary of preparation work that providers need to carry out before assessments take place is given below.

Task	Preparation work required
Task 2	Providers will need to source a site of a suitable size to carry out a practical task.

6. Occupational Specialist Component: Civil Engineering

Content Summary

The content is separated into three Performance Outcomes, with the skills needed to achieve threshold competence and the knowledge to underpin skill application across the following areas.

Performance Outcome	Key content areas	Skills
1. Analyse civil engineering solutions	K1 Health and safety	S1.1 Sequence and prioritise individual tasks.
	K1.1 Task-specific risk management, including hazards, risk assessment, controls	S1.2 Identify information and data requirements.
	K2 Sustainability	S1.3 Assess health and safety risks associated with the task.
	K2.1 How sustainability is embedded into solutions	S1.4 Adapt actions to the level of risk.
	K2.2 How and why sustainability seeks to balance economic, environmental and social objectives, e.g. whole life, including decommissioning	S1.5 Select data collection and analysis methods.
	K3 Project management	S1.6 Inspect the suitability of tools and equipment.
	K3.1 Project and construction risk management, e.g. consideration of project management solutions	S1.7 Gather relevant information and data, i.e. relevant to the task.
	K4 Design	S1.8 Use tools and equipment with accuracy.
	K4.1 Inclusive design, including equality and diversity by impact assessment	S1.9 Operate safely and apply good housekeeping.
	K4.2 Methods used to test structures, e.g. stress, aerodynamics	
	K5 Material properties	
	K5.1 Concrete, glass, timber, steel, including mass and density, strength (tensile, compressive, shear), bending stiffness, fatigue and creep, degradation and resistance to degradation (including corrosion and chemical degradation), embedded energy, recycling potential and material failure	
	K6 Structural elements, loading and potential failure	

Performance Outcome	Key content areas	Skills
	<p>K6.1 Beams, frames, walls; effect of different loading conditions and failure of, e.g. beams, walls, frames, struts and ties</p> <p>K7 Maths for structural analysis</p> <p>K7.1 Relationship between force (load), mass and acceleration; coplanar forces; Hooke's law; loading, shear forces and bending moments of beams</p> <p>K8 Structural mechanics</p> <p>K8.1 How structural elements (e.g. beams, columns, frameworks) behave under load</p> <p>K8.2 Structural mechanics problems, e.g. reactive forces, maximum load</p> <p>K9 Mathematical techniques</p> <p>K9.1 Algebra, including indices, logarithms, linear equations</p> <p>K9.2 Trigonometric and standard formulae, including circular and triangular measures</p> <p>K9.3 Elementary calculations and techniques, including integration and differentiation</p> <p>K9.4 Statistical methods, including averages, tendency and dispersion</p> <p>K10 Geology/ substructure beyond the core</p> <p>K10.1 Bore holes, trial pits; groundwater – water table, contamination; ground load bearing capacity</p> <p>K11 Setting out</p> <p>K11.1 Techniques for setting-out points and developing the physical positions of elements of a building from the plan</p>	<p>S1.10 Extract relevant information from appropriate sources.</p> <p>S1.11 Quality assure the processes used to collect information and data against protocols and standards.</p> <p>S1.12 Analyse environments against client brief to identify potential issues and problems.</p> <p>S1.13 Carry out calculations related to the scope of work.</p> <p>S1.14 Use appropriate techniques to check accuracy of analysis.</p> <p>S1.15 Produce sketches based on information and data.</p> <p>S1.16 Model analysed information and data, including geotechnical, structural and materials, as appropriate for audience, using digital software.</p> <p>S1.17 Collate information and data into digital engineering software.</p>

Performance Outcome	Key content areas	Skills
	K12 Earthworks K12.1 Excavation, cuttings, embankments, earth moving equipment and concreting equipment	
2. Design civil engineering solutions	K4 Design K4.3 How designs are prepared, including design briefs, work stages, schedules, specifications, recommendations and programmes K4.4 The level of detail needed in designs for different situations, and the importance of detail in communicating the design intent K4.5 The implications of statutory obligations to designs K4.6 The use and importance of specifications K4.7 The relevance of measurement in the design process K5 Material properties K5.2 Concrete, glass, timber, steel, including mass and density, strength (tensile, compressive, shear), bending stiffness, fatigue and creep, degradation and resistance to degradation (including corrosion and chemical degradation), embedded energy, recycling potential and material failure K6 Structural elements, loading and potential failure K6.2 Beams, frames, walls; effect of different loading conditions and failure of, e.g. beams, walls, frames, struts and ties	S2.1 Extract relevant information and data. S2.2 Quality assure provided data. S2.3 Conduct precedent research into potential solutions to a problem, including best practice, benchmarks and design guides. S2.4 Think creatively, adapting to challenges arising from requirements. S2.5 Assess commercial risk related to potential solutions. S2.6 Apply mathematical principles to the scope of work. S2.7 Resolve technical issues in the design. S2.8 Select methods to present information. S2.9 Determine performance of materials. S2.10 Use appropriate techniques to confirm validity of calculations.

Performance Outcome	Key content areas	Skills
	<p>K7 Maths for structural analysis</p> <p>K7.2 Relationship between force (load), mass and acceleration; coplanar forces; Hooke's law; loading, shear forces and bending moments of beams</p> <p>K8 Structural mechanics</p> <p>K8.3 How structural elements behave under load</p> <p>K8.4 Structural mechanics problems</p> <p>K9 Mathematical techniques</p> <p>K9.5 Algebra, including indices, logarithms, linear equations</p> <p>K9.6 Trigonometric and standard formulae, including circular and triangular measures</p> <p>K9.7 Elementary calculations and techniques, including integration and differentiation</p> <p>K9.8 Statistical methods, including averages, tendency and dispersion</p> <p>K10 Geology/ substructure beyond the core</p> <p>K10.2 Bore holes, trial pits; groundwater – water table, contamination; ground load bearing capacity</p> <p>K11 Setting out</p> <p>K11.2 Techniques for setting-out points and developing the physical positions of elements of a building from the plan</p> <p>K12 Earthworks</p> <p>K12.2 Excavation, cuttings, embankments, earth moving equipment and concreting equipment</p> <p>K13 Measurements</p> <p>K13.1 Measurement standards, guidance and practice</p> <p>K13.2 Types of surveying equipment</p>	<p>S2.11 Model information, using appropriate digital software and other tools.</p> <p>S2.12 Use appropriate techniques to check accuracy of measurements, including scale and proportion, e.g. Ground Validation Points (GVP), known measurements.</p> <p>S2.13 Draw on a range of media to communicate a design proposal.</p>

Performance Outcome	Key content areas	Skills
	K14 Digital technology K14.1 Digital design tools K14.2 Digital specification tools K14.3 Digital data K14.4 Digital presentation, image handling and desktop publishing	
3. Verify delivery of civil engineering solutions	K5 Material properties K5.3 Concrete, glass, timber, steel, including mass and density, strength (tensile, compressive, shear), bending stiffness, fatigue and creep, degradation and resistance to degradation (including corrosion and chemical degradation), embedded energy, recycling potential and material failure K6 Structural elements, loading and potential failure K6.3 Beams, frames, walls; effect of different loading conditions and failure of K7 Maths for structural analysis K7.3 Relationship between force (load), mass and acceleration; coplanar forces; Hooke's law; loading, shear forces and bending moments of beams K8 Structural mechanics K8.5 How structural elements behave under load K8.6 Solve structural mechanics problems K9 Mathematical techniques K9.9 Algebra, including indices, logarithms, linear equations K9.10 Trigonometric and standard formulae, including circular and triangular measures	S3.1 Extract relevant information from provided sources. S3.2 Process geotechnical and structural behaviour and human factors information, and data related to the performance of a proposed solution. S3.3 Interpret information and data, including from visual and other sources. S3.4 Complete technical reports. S3.5 Use digital engineering software with accuracy. S3.6 Complete costings analysis. S3.7 Apply appropriate mathematical techniques to solve structural mechanics problems, including algebra, statistics, trigonometry, calculus.

Performance Outcome	Key content areas	Skills
	<p>K9.11 Elementary calculus and techniques, including integration and differentiation</p> <p>K9.12 Statistical methods, including averages, tendency and dispersion</p> <p>K10 Geology/ substructure beyond the core</p> <p>K10.3 Bore holes, trial pits; groundwater – water table, contamination; ground load bearing capacity</p> <p>K11 Setting out</p> <p>K11.3 Techniques for setting-out points and developing the physical positions of elements of a building from the plan</p> <p>K12 Earthworks</p> <p>K12.3 Excavation, cuttings, embankments, earth moving equipment and concreting equipment</p> <p>K13 Measurements</p> <p>K13.3 Types of measurement for the combined data</p> <p>K13.4 Techniques for value engineering</p> <p>K13.5 Rules of measurement and contractual implications</p> <p>K15 Valuations</p> <p>K15.5 Industry valuation standards, guidance and practice, and how these are used to verify delivery of the built environment</p> <p>K15.2 Valuation benchmarking and how this is used to verify delivery of the built environment</p>	

Detailed content

The detailed content for each Performance Outcome represents the skills associated with performing Civil Engineering activities. Each skill has underpinning knowledge to support skill application.

Performance Outcome 1: Analyse civil engineering solutions

1. Analysis of project information and calculations

Knowledge specific to Performance Outcome 1

The analysis of project information to achieve civil engineering solutions requires underpinning knowledge in the following areas:

- K1** Health and safety
- K2** Sustainability
- K3** Project management
- K4** Design
- K5** Material properties
- K6** Structural elements, loading and potential failure
- K7** Maths for structural analysis
- K8** Structural mechanics
- K9** Mathematical techniques
- K10** Geology/substructure beyond the core
- K11** Setting out
- K12** Earthworks

Skills for Performance Outcome 1

The skills will draw on underpinning knowledge appropriate to the context of the scenario. Please refer to the *Occupational Specialism Civil Engineering – Specimen Assessment Material (SAM)* for an example of how underpinning knowledge can be drawn on to meet skills for Performance Outcome 1.

- S1.1** Sequence and prioritise individual tasks.
- S1.2** Identify information and data requirements.
- S1.3** Assess health and safety risks associated with the task.
- S1.4** Adapt actions to the level of risk.
- S1.5** Select data collection and analysis methods.
- S1.6** Inspect the suitability of tools and equipment.
- S1.7** Gather relevant information and data, i.e. information relevant to task.
- S1.8** Use tools and equipment with accuracy.
- S1.9** Operate safely and apply good housekeeping.
- S1.10** Extract relevant information from appropriate sources.
- S1.11** Quality assure the processes used to collect information and data against protocols and standards.
- S1.12** Analyse environments against client brief to identify potential issues and problems.
- S1.13** Carry out calculations related to the scope of work.
- S1.14** Use appropriate techniques to check accuracy of analysis.
- S1.15** Produce sketches based on information and data.
- S1.16** Model analysed information and data, including geographical, structural and materials, as appropriate for audience, using digital software.
- S1.17** Collate information and data into digital engineering software.

1.1 Preparation for the task

Skill content	Knowledge
<p>S1.2 Identify information and data requirements.</p> <p>S1.5 Select data collection and analysis methods.</p> <p>S1.7 Gather relevant information and data – information relevant to the task.</p>	<p>Review of task set to identify the key information and data required to complete the task. (E1, E2, E3, E4, E5)</p> <p>Key considerations for design preparations:</p> <ul style="list-style-type: none"> • requirements and constraints, and their impact on the initial project brief and design process, for combinations of rural, urban, greenfield and brownfield settings • types of civil engineering work undertaken – civil engineering construction methods and techniques to be considered for the following: <ul style="list-style-type: none"> ○ foundations and substructure – different types of foundation (strip, pad, raft, piles in plain or reinforced concrete, basements), relevant techniques, processes, materials and associated construction plant ○ superstructures – frames, connections, floors, wall claddings, roof coverings, relevant techniques, processes, materials and associated construction plant, structural steel frames, precast concrete frames, in-situ frames, timber frames. (K5.1) ○ portal frames – structural steel, timber, concrete. (K5.1) ○ external works – flexible, composite and rigid pavement construction, retaining walls (concrete, brick, drainage), SUDS (sustainable urban drainage systems), culverts, manholes, separate systems, combined systems, relevant techniques, processes and associated construction plant ○ bridges – beam, arch, truss, suspension, cable-stayed, cantilever ○ railway track engineering – methods for earthwork construction in a rail context • client requirements for the project outcomes – building use, to include domestic, industrial, commercial, retail, health, cultural and recreation • surveying of construction projects, to provide relevant information and data requirements to support the design solution. <p>Risk assessments for projects or part of a project on review of scenario: (K1.1, K3.1)</p> <ul style="list-style-type: none"> • identification of hazards • control measures • pre-survey: (K3.1, K4.1) <ul style="list-style-type: none"> ○ data and information from pre-survey ○ geological survey – bore holes, trial pits; groundwater – water table, contamination, ground load bearing, foundations. (K10.1, K10.2)

Skill content	Knowledge
	<p>Select data collection, analysis methods and techniques appropriately for civil engineering tasks.</p> <p>Statistical methods: (K9.4)</p> <ul style="list-style-type: none"> • select and apply statistical techniques correctly to solve practical construction problems • statistical sampling methods to ensure samples are collected without bias and that results will be reliable • sampling methods, e.g. systematic, stratified, simple random • statistical techniques – processing large groups of data to achieve mean, median, mode and standard deviation, cumulative frequency, quartiles, quartile range, methods of visual presentation. <p>How to capture, process and manage data for a construction task:</p> <ul style="list-style-type: none"> • types of survey • identification of the correct tools and equipment to be used • permissions required to undertake survey work. • compliance with legislation, i.e. health and safety. <p>Statistical methods: (K9.4, K14.3, K14.4)</p> <ul style="list-style-type: none"> • Use statistical techniques: <ul style="list-style-type: none"> ○ processing large groups of data to achieve mean, median, mode and standard deviation, cumulative frequency, quartiles, quartile range ○ methods of visual presentation. • Select and apply statistical techniques correctly to solve practical construction problems. • Use statistical sampling methods to ensure samples are collected without bias and that results will be reliable. <p>Research activities:</p> <ul style="list-style-type: none"> • precedent research • benchmarks • case studies • previous surveys • historical data and information.

1.2 Site investigation requirements of a project

Skill content	Knowledge
<p>S1.6 Inspect the suitability of tools and equipment.</p>	<p>The set-up and use of different tools and equipment to undertake a site investigation for a project:</p> <ul style="list-style-type: none"> • correct PPE • appropriate surveying equipment in accordance with landowner requirements, including drones (private landowner, Network Rail, Port Authority, Highways Agency, etc.) • appropriate surveying equipment to record measurements: (K11.1, K11.2) <ul style="list-style-type: none"> ○ lasers ○ Global Positioning System (GPS) ○ digital levels ○ machine guidance ○ automated total stations ○ Global Navigation Satellite System (GNSS) • testing of surveying equipment • uses and advantages of emerging technology in setting out.
<p>S1.8 Use tools and equipment with accuracy.</p> <p>S1.9 Operate safely and apply good housekeeping.</p>	<p>Use and operate surveying tools and equipment safely, with accuracy and understanding:</p> <ul style="list-style-type: none"> • use of appropriate PPE – comply with health and safety in differing construction environments, surveying of contaminated land • how errors in measurement may occur and how they could be reduced • identification of types of measurement error: <ul style="list-style-type: none"> ○ systematic ○ cumulative errors • the set-up and use of different equipment • types of measurement: <ul style="list-style-type: none"> ○ linear – running, offset ○ levelling – height measurement ○ angular – horizontal, vertical height ○ cross checking ○ area (net and gross) ○ volumes ○ height ○ length

Skill content	Knowledge
	<ul style="list-style-type: none"> • how measurement relates to the design process: <ul style="list-style-type: none"> ◦ using the correct measurement for its intended purpose ◦ setting out, techniques for setting-out points and developing the physical position of elements of a building from the plan. • measurement standards, guidance and practice • identification of types of measurement error: systematic, cumulative errors • advantages of using different types of surveying equipment in reducing measurement errors • Civil Engineering Standard Method of Measurement (CESMM) – measurement of quantities • specification of tolerances.

1.3 Planning of civil engineering projects

Skill content	Knowledge
<p>S1.1 Sequence and prioritise individual tasks.</p>	<p>Understand and apply project management techniques that could be used in civil engineering projects considering project and construction risk management, including the personnel involved in the project and project management solutions to problems. (K3, E1, E2, E3, E4, D1, D2, D3, D5)</p> <p>Project and construction risk management:</p> <ul style="list-style-type: none"> • stages of a construction process: <ul style="list-style-type: none"> ○ feasibility studies ○ design ○ construction ○ maintenance ○ repair ○ alteration ○ refurbishment ○ contractor procurement ○ commissioning ○ handover • members of the building/construction team involved in project management and their interaction: <ul style="list-style-type: none"> ○ management at head office or site level ○ technical and professional roles <ul style="list-style-type: none"> – architect – planner – buyer – estimator – quantity surveyor – civil engineer – structural engineer – resident engineer ○ supervisory roles <ul style="list-style-type: none"> – contract supervisor – general foreperson – site supervisor ○ general operative roles <ul style="list-style-type: none"> – labourer – drain layer – steel fixer – plant operative – driver ○ craft roles <ul style="list-style-type: none"> – joiner – bricklayer – plasterer – electrician – plumber

Skill content	Knowledge
	<ul style="list-style-type: none"> • planning techniques: <ul style="list-style-type: none"> ○ resource planning – human, plant and machinery, materials, domestic, nominated subcontractors ○ production of long- and short-term programmes ○ scheduling of material requirements ○ requisitioning ○ ordering ○ receiving and checking ○ site layout plan showing planned storage, site circulation, sight lines, tower cranes, concentric load limits, access and egress routes ○ labour management techniques (work and method study; control and organisation of labour) ○ plant management (hire, lease or purchase; utilisation and control) ○ relevant documentation ○ software for producing a construction programme ○ software for monitoring a construction programme • documentation: <ul style="list-style-type: none"> ○ head office and site documentation (schedules, requisitions, method statements, budgets, cost plans) ○ bar charts ○ Gantt diagrams ○ schedules ○ critical path analysis • advantages and disadvantages of resource management techniques, including Building Information Modelling (BIM). • comparison of software systems that can facilitate planning and organisation, and control processes • techniques for value engineering: (K13.4) <ul style="list-style-type: none"> ○ cost ○ quality ○ time • value engineering: <ul style="list-style-type: none"> ○ alternative time, labour and materials to determine an economic design ○ cost ○ quality ○ collaborative working risk management • use of Building Information Modelling (BIM) in the collaborative production of construction information; advantages and disadvantages.

Skill content	Knowledge
<p>S1.3 Assess health and safety risks associated with the task.</p>	<p>Conduct risk assessments associated with civil engineering work to reduce health and safety risks. Consider stages of construction to develop suitable risk assessments: (K1.1)</p> <ul style="list-style-type: none"> • specific risk managements developed for different stages of civil engineering projects, including: <ul style="list-style-type: none"> ○ identification of hazards ○ likelihood of harm ○ control measures • people at risk • risk assessments to be completed, including excavation of deep trenches, construction of retaining walls, etc. (K12.1, K12.1) • statutory constraints and their requirements, including subsequent updates: <ul style="list-style-type: none"> ○ Health and Safety at Work Act 1974 ○ Construction (Design and Management) Regulations 2015. <p>Understand the materials used in buildings that are hazardous to health and the periods in history they were in use. Have knowledge of the guidance published by the Health & Safety Executive on hazardous materials in buildings. Understand how to recognise the key hazardous materials commonly used in building and be aware of the historical hazards due to the age of the building. Have an awareness of their danger to health, how they can be protected or safely removed.</p> <ul style="list-style-type: none"> • Asbestos: <ul style="list-style-type: none"> ○ Total ban in 2003 with materials being phased out from the 1970s ○ Types of asbestos, 'blue asbestos' (crocidolite), 'brown asbestos' (amosite) and 'white asbestos' (chrysotile) and the dangers of each type ○ Where asbestos was used and the products it was incorporated in, insulation, ceiling tiles, cement products, gaskets in pipework, protection in electrical boards, pipe and tank lagging, fire stopping and flooring • Electrical: <ul style="list-style-type: none"> ○ Fluorescent lamps and tubes ○ Electrical equipment, insulating chemicals, early 20th century • Lead: <ul style="list-style-type: none"> ○ Lead paint was in general use until the 1980s ○ Lead pipes were unlikely to be in use after 1970, more likely in Victorian buildings

Skill content	Knowledge
	<ul style="list-style-type: none"> • Lime plaster with horse hair: <ul style="list-style-type: none"> ○ Was in general use until beginning of the twentieth century, but may be some instances up until the middle of the twentieth century. • Exposure to hazardous materials: <ul style="list-style-type: none"> ○ asbestos ○ biological hazards ○ animal waste • Ground contamination: <ul style="list-style-type: none"> ○ Factory sites, tanning factories, foundries ○ Chemical plants ○ Gas storage, coal gas, natural gas ○ Hospital buildings, radioactive waste, oil
S1.4 Adapt actions to the level of risk.	Review processes to adapt construction methods to reduce the level of risk: (K3.1, E1, E2, E3, E4) <ul style="list-style-type: none"> • consider further development of risk assessments, including changing design, site or weather conditions • consider statutory constraints and their requirements, including subsequent updates: <ul style="list-style-type: none"> ○ Health and Safety at Work Act 1974 ○ Construction (Design and Management) Regulations 2015.

1.4 Analysing the client brief and its requirements to develop civil engineering solutions

Skill content	Knowledge
<p>S1.12 Analyse environments against client brief to identify potential issues and problems.</p>	<p>Review the task set to identify the changing environment, to develop and present solutions to civil engineering construction projects. This should include consideration of sustainable construction methods, structural testing methods, inclusive design and use of materials: (K2, K4, E1, E2, E4, E5, K2.1, K2.2, K4.1, K4.2)</p> <ul style="list-style-type: none"> ● the need to embed sustainability into solutions: <ul style="list-style-type: none"> ○ consideration of sustainability in feasibility of projects as a key consideration in the design of projects ○ balancing economic, environmental and social objectives ● the different techniques: <ul style="list-style-type: none"> ○ energy-based techniques: <ul style="list-style-type: none"> – reduced energy consumption – improved energy efficiency – use of renewable and alternative sources of energy ○ materials-based techniques: <ul style="list-style-type: none"> – specification of renewable materials – specification of durable and long-lasting materials requiring minimum maintenance – consideration of embodied energy – low-energy manufacture of materials and components ○ waste-based techniques: <ul style="list-style-type: none"> – producing less waste and recycling more – off-site prefabrication – modern methods of construction ● brownfield reuse of sites ● inclusive design, including equality and diversity through impact statements; designing to meet Equality Act 2010: <ul style="list-style-type: none"> ○ accessibility to buildings ○ consideration for people with disabilities ○ car parking design for people with disabilities

Skill content	Knowledge
	<ul style="list-style-type: none"> • material properties: (K5.1, 5.2, 5.3) <ul style="list-style-type: none"> ○ types of material, including mass and density: <ul style="list-style-type: none"> – concrete – glass – timber ○ steel ○ impact of the environment on building materials for various scenarios, degradation methods and types, preventive and reduction measures, and impact of failure of a single material in a composite element ○ sources of degradation, including corrosion, chemical degradation and their cause; natural agents ○ embedded energy ○ recycling potential • earthworks and excavation: <ul style="list-style-type: none"> ○ groundwater control by pumping ○ embankments ○ cuttings ○ retaining walls ○ relevant techniques ○ processes ○ earth moving equipment ○ remedial measures to prevent and reduce degradation, and their benefits and drawbacks; use of special paints and protective coatings; use of sulphate resisting cement (SRC); importance of water/cement ratio • material failure: <ul style="list-style-type: none"> ○ concrete and reinforced concrete ○ brickwork ○ timber – external and internal applications ○ steel ○ mortars • effects of temperature changes on construction materials • types of heat: latent, sensible • the effect of temperature change on the properties of materials: <ul style="list-style-type: none"> ○ changes of state, evaporation, expansion and contraction.

Skill content	Knowledge
<p>S1.15 Produce sketches based on information and data.</p>	<p>Produce sketch diagrams to support civil engineering design solutions, and to demonstrate understanding of civil engineering construction techniques and methods: (E1)</p> <ul style="list-style-type: none"> • outline solution – to communicate use of space and appropriate form of construction: <ul style="list-style-type: none"> ○ 2D and 3D sketches of initial ideas, including internal and external views, plans and elevations: <ul style="list-style-type: none"> – freehand sketched – single-point perspective – two-point perspective – isometric views • design production: <ul style="list-style-type: none"> ○ production of designs for commercial and industrial building design, including foundation details, and the design of beams and columns ○ external works, including retaining walls, drainage, highway construction details, portal frame design and basic bridge design components • communicating information effectively through sketches: <ul style="list-style-type: none"> ○ clear communication, using technical annotations to ensure correct information is shared and clear understanding of the design is communicated ○ clear communication of key features, including external fabric, roof type, service access, circulation space, windows, doors, linking elements, columns to foundations, beams to columns, retaining wall types, highway pavement specifications, drainage details.

Skill content	Knowledge
<p>S1.10 Extract relevant information from appropriate sources.</p>	<p>Review the task set to identify the key source information and data required to complete sub-tasks. Understand the level of detail needed in designs: (E1, E4, E5)</p> <ul style="list-style-type: none"> • project information: <ul style="list-style-type: none"> ○ information used in the production of building designs: (K2.2) <ul style="list-style-type: none"> – client requirements – site constraints – planning constraints – statutory constraints – environmental constraints – social constraints – economic constraints – sustainability ○ initial project brief – its purpose and content: <ul style="list-style-type: none"> – spatial requirements – desired project outcomes – site information – budget requirements ○ initial project brief to generate and develop design ideas and specifications.
<p>S1.11 Quality assure the processes used to collect information and data against protocols and standards.</p>	<p>Understand the testing of materials processes and procedures to quality assure the collection of subsequent test data results: (D1, D3)</p> <ul style="list-style-type: none"> • methods used to test construction materials: <ul style="list-style-type: none"> ○ concrete test methods – slump, concrete cube ○ timber – stress grading ○ steel – tensile testing ○ soil sampling – trial holes, boring ○ sieve analysis and grading tests ○ chemical composition tests ○ plate compaction tests • statistical sampling methods to ensure samples are collected without bias and that results will be reliable. • sampling methods, including systematic, stratified, simple random.

1.5 Using calculation techniques to support analysis of civil engineering projects

Skill content	Knowledge
<p>S1.13 Carry out calculations related to the scope of work.</p>	<p>Complete mathematical calculations to support design and development and understand how these are used in civil engineering projects: (K9.1, K9.2, K9.3, K9.4)</p> <ul style="list-style-type: none"> • application of mathematical techniques and formulae to support civil engineering projects: <ul style="list-style-type: none"> ○ practical construction problems involving perimeters, areas and volumes, including for simple and compound shapes: <ul style="list-style-type: none"> – rectangles – trapeziums – triangles – prisms – circles – spheres – pyramids – cones – regular and irregular surface areas and volumes ○ use of mensuration formulae and basic calculus in civil engineering (mid-ordinate rule, trapezoidal rule, Simpson's rule) ○ practical construction problems, including surveying, setting out, dimensions of pitched roof and similar: <ul style="list-style-type: none"> – geometric techniques to determine length, area and volume for shapes containing straight lines and curves – use of trigonometry to determine dimensions in 2D and 3D (K9.2) ○ trigonometric techniques: <ul style="list-style-type: none"> – sine rule – cosine rule – triangle area rules • understanding the need for accuracy in calculations: <ul style="list-style-type: none"> ○ techniques and methods – mathematical operations, rounding, decimal places, significant figures, approximation, truncation errors and accuracy

Skill content	Knowledge
	<ul style="list-style-type: none"> analysis of structural elements, including beams, walls, struts, ties, frames and columns (K6.1, K6.2, K6.3); effect of different loading conditions and failure under load to enable design of structural elements (K8.1, K5.1) relationship between force (load), mass and acceleration; coplanar forces; Hooke's law; loading, shear forces and bending moments of beams (K7.1, 7.2, 7.3) determining the centroid of regular and irregular rectangular structural/engineering sections, including calculations of first moment of area, second moment of area, the parallel axis theorem and section modulus coplanar forces; Hooke's law; loading, shear forces and bending moments of beams. <p>Solve structural mechanics problems: (K5.1, K8.2, K8.3, K8.4, K8.5, K8.6)</p> <ul style="list-style-type: none"> problems relating to beams, columns, frames beams – different loading conditions, point loads, uniformly distributed loads (UDLs), combined loads, reactions, shear force values, bending moment values, relationship between shear force and bending moment, point of contraflexure, simply supported beams with cantilever ends, simply supported beams without cantilever ends columns – different loading conditions, point loads, axially loaded, eccentrically loaded, effective length, maximum stress frameworks – different loading conditions, point loads, statically determinate, pin-jointed, subject to dead loads and wind loads.

Skill content	Knowledge
<p>S1.14 Use appropriate techniques to check accuracy of analysis.</p> <p>S1.17 Collate information and data into digital engineering software.</p> <p>S1.16 Model analysed information and data, including geotechnical, structural and materials, as appropriate for audience, using digital software.</p>	<p>Use and application of procedures to check the accuracy of the civil engineering solutions obtained: (D1) (D3)</p> <ul style="list-style-type: none"> • computer software to analyse and verify manual solutions are correct • predictive models • application of the principles of moments and the laws of static equilibrium. <p>Application of mathematical techniques of approximation and estimations to check accuracy.</p> <p>Application and use of digital software to support and confirm design solutions developed: (K14.1, 14.2, 14.3)</p> <ul style="list-style-type: none"> • design of retaining walls to relevant factors of safety • shear force and bending moments diagrams • cut-and-fill solutions • use of digital presentation, image handling and desktop publishing. (K14.4)

Performance Outcome 2: Design civil engineering solutions

Knowledge specific to Performance Outcome 2

The analysis of project information for civil engineering solutions requires underpinning knowledge in the following areas:

- K4** Design – new content
- K5** Material properties
- K6** Structural elements, loading and potential failure
- K7** Maths for structural analysis
- K8** Structural mechanics
- K9** Mathematical techniques
- K10** Geology/substructure beyond the core
- K11** Setting out
- K12** Earthworks
- K13** Measurements
- K14** Digital technology

Skills for Performance Outcome 2

The skills will draw on underpinning knowledge appropriate to the context of the scenario. Please refer to the *Occupational Specialism Civil Engineering – Specimen Assessment Material (SAM)* for an example of how underpinning knowledge can be drawn on to meet skills for Performance Outcome 2.

- S2.1** Extract relevant information and data, e.g. geotechnical, structural, visual materials, from a range of secondary sources.
- S2.2** Quality assure provided data, e.g. in terms of accuracy, currency, authenticity, validity and reliability.
- S2.3** Conduct precedent research into potential solutions to a problem, including best practice, benchmarks and design guides.
- S2.4** Think creatively, adapting to challenges arising from requirements.
- S2.5** Assess commercial risk related to potential solutions.
- S2.6** Apply mathematical principles to the scope of work.
- S2.7** Resolve technical issues in the design.
- S2.8** Select methods to present information, e.g. software and drawing techniques.
- S2.9** Determine performance of materials.
- S2.10** Use appropriate techniques to confirm validity of calculations, e.g. case studies, historic records.
- S2.11** Model information, using appropriate digital software and other tools.
- S2.12** Use appropriate techniques to check accuracy of measurements, including scale and proportion, e.g. Ground Validation Points (GVP), known measurements.
- S2.13** Draw on a range of media to communicate a design proposal.

2.1 Initial design considerations

Skill content	Knowledge
<p>S2.1 Extract relevant information and data.</p>	<p>Design preparation requirements: (K4, E1, E2, E3, E4, D4)</p> <ul style="list-style-type: none"> • preparation of design briefs • consideration of work stages • schedules • specifications • recommendations • programmes. • Extract key information and data required to complete civil engineering problems: <ul style="list-style-type: none"> ○ types of data and information: <ul style="list-style-type: none"> – geotechnical – bore holes, trial pits; groundwater – water table, contamination, ground load bearing – structural – visual – materials for secondary sources ○ client requirements for the project outcomes. • Extract key data to design structural components: <ul style="list-style-type: none"> ○ consideration of solutions for structural elements, loading issues and potential failure in design ○ structural elements, including effect of different loading conditions and modes of failure: (K6.2, 6.3) <ul style="list-style-type: none"> – beam – column – retaining wall – framework design problems – studs, ties, struts. • Extract relevant information to consider the appropriateness of materials to be used in civil engineering projects: <ul style="list-style-type: none"> ○ use of special paints, protective coatings; use of sulphate resisting cement (SRC); importance of water/cement ratio ○ materials: structural steel, masonry, timber, reinforced concrete, glass, bricks.

Skill content	Knowledge
<p>S2.3 Conduct precedent research into potential solutions to a problem.</p>	<p>Undertake precedent research to solve civil engineering project problems: (M1, M2, E1, E2, E3)</p> <ul style="list-style-type: none"> • best practice • benchmarks • design guides • case study research of forms of construction, including methods of excavation, types of foundation, structural forms, retaining walls, drainage, highway design, earthworks, etc. • valuation benchmarking and how this is used to verify delivery of the built environment • technical audits to confirm design and outputs • comparison with similar projects.
<p>S2.5 Assess commercial risk related to potential solutions.</p>	<p>Analyse civil engineering projects to assess the commercial risk. (M5) (D4)</p> <p>Consideration of feasibility of projects and a key consideration in the design of projects.</p> <ul style="list-style-type: none"> • Design and specification of construction projects: <ul style="list-style-type: none"> ○ reduction in energy usage ○ minimisation of pollution ○ reduction in embedded energy ○ specification of environmentally friendly/renewable materials ○ reuse of existing buildings and sites. • Project management considerations: <ul style="list-style-type: none"> ○ simple environmental impact assessments (EIAs) (K4.1) ○ improved management of construction sites ○ clear policies and objectives: <ul style="list-style-type: none"> – reduction in wastage – increase in recycling – noise management – dust and dirt control – light pollution ○ sharing of good practice ○ raising awareness; communication of information.

Skill content	Knowledge
	<ul style="list-style-type: none"> • Fit-for-purpose construction design to meet the needs of the present without compromising the ability of future generations to meet their own needs: <ul style="list-style-type: none"> ○ social progress that recognises the needs of everyone ○ effective protection of the environment ○ prudent use of natural resources ○ maintenance of high and stable levels of economic growth and employment. • Economic role of infrastructure in economic growth; relationship of public and private sectors; role of civil engineering professionals in assessing demand; construction and financing. • Life cycle issues: development, adaptation, maintenance and repair, demolition and sustainability of infrastructure. • Analysis of existing site conditions to plan for future project proposals. • Verification of initial analysis during construction, to include: <ul style="list-style-type: none"> ○ site investigation: <ul style="list-style-type: none"> – site history – site surveys – site geology – ground investigation – potential ground contaminants, water table, contamination – ground load bearing capacity – soil type, settlement, subsistence – earthworks – general excavation, earth moving equipment, concreting equipment – groundwater control by pumping – embankments – cuttings – retaining walls – relevant techniques and processes – materials and associated construction plant. • Balancing benefits and opportunities with constraints (cost-benefit analysis, environmental benefits, health and safety risks, product life cycle considerations).

2.2 Site survey requirements of a project

Skill content	Knowledge
<p>S2.12 Use appropriate techniques to check accuracy of measurements.</p>	<p>Complete fieldwork activities to capture, process and manage data with accuracy.</p> <ul style="list-style-type: none"> • Techniques for setting-out points and developing the physical positions of elements of a building from the plan: (K11.2) <ul style="list-style-type: none"> ○ establishing level datums on a construction site and to carry out control surveys to determine coordinates of stations ○ control surveys – procedures, calculations ○ procedures – to determine coordinates and stations, traversing, free station ○ setting out and checking corner pegs for a small building, using appropriate equipment and techniques; setting out pegs and profiles to control construction of a small house, constraints on positioning; application of arithmetic and simple trigonometry ○ process to set out a framed building ○ the uses and advantages of emerging technology in setting out ○ the use of traditional surveying equipment ○ the use of modern surveying technology: lasers, Global Positioning Systems (GPS), digital levels, machine guidance, automated total stations. • Ground Validation Points (GVP): <ul style="list-style-type: none"> ○ known measurements ○ scale and proportion. • Types of measurement and relevance: <ul style="list-style-type: none"> ○ linear – running, offset ○ levelling – height measurement ○ angular – horizontal, vertical height ○ cross checking ○ area (net and gross) ○ volume ○ height ○ length.

Skill content	Knowledge
	<ul style="list-style-type: none"> • How measurement relates to the design process: (K4.7) <ul style="list-style-type: none"> ○ use of methods to predict estimated costs of future projects ○ use of correct measurement for its intended purpose. • Measurement standards, guidance and practice: (K13.1) <ul style="list-style-type: none"> ○ identification of types of measurement error – systematic, cumulative errors ○ evaluation of the advantages of using different types of surveying equipment in reducing measurement errors (K13.2, 13.3) ○ Civil Engineering Standard Method of Measurement (CESMM) – measurement of quantities ○ specification of tolerances ○ valuations. (K15.1, K15.2)
<p>S2.2 Quality assure provided data, in terms of accuracy, currency, authenticity, validity and reliability.</p>	<p>Understand material testing procedures in order to meet design requirements. Ensure sampled materials are collected without bias or affecting the reliability of test results.</p> <ul style="list-style-type: none"> • Methods used to test materials: <ul style="list-style-type: none"> ○ concrete test methods – slump, concrete cube ○ timber – stress grading ○ steel – tensile testing ○ soil sampling – trial holes, boring ○ sieve analysis and grading tests ○ chemical composition tests ○ plate compaction tests. • Statistical sampling methods to ensure samples are collected without bias and that results will be reliable. • Sampling methods, including systematic, stratified, simple random.

2.3 Civil engineering design option considerations

Skill content	Knowledge
<p>S2.8 Select methods to present information – software and drawing techniques.</p>	<p>Select and use software and drawing techniques to support civil engineering design solutions and to demonstrate understanding of civil engineering construction techniques and methods. (E1)</p> <ul style="list-style-type: none"> • Digital design tools: (K14.1, 14.2, 14.3) <ul style="list-style-type: none"> ○ production of manual design section, plan and detail sketches/drawings ○ use of computer-aided design (CAD) to produce section, plan and detail drawings ○ types of CAD: <ul style="list-style-type: none"> – Autodesk AutoCAD – Autodesk AutoCAD LT – Autodesk Revit – Autodesk 3D Max – Autodesk Inventor ○ SolidWorks ○ Bentley MicroStation ○ Archima ○ SketchUp ○ CAD freeware. • Production of a range of accurate scale construction drawings: <ul style="list-style-type: none"> ○ floor plans, detailed sections through civil engineering components ○ component drawings, site plans, block plans, isometric drawings ○ digital specification tools, e.g. the NBS, BS 1192 (K14.2) ○ digital data – spreadsheets and schedules ○ digital presentations, PowerPoint, image handling and desktop publishing – brochures and reports. (K14.3, K14.4) <p>The level of detail needed in designs: (K4, E4)</p> <ul style="list-style-type: none"> • design production: <ul style="list-style-type: none"> ○ production of designs for commercial and industrial building design, including foundation details and the design of beams and columns ○ external works, including retaining walls and embankments/cuttings ○ infrastructure: drainage, including separate and combined systems, SUDs design, culverts, types of manhole (concrete or brick)

Skill content	Knowledge
	<ul style="list-style-type: none"> ○ highway construction forms (flexible, rigid, composite forms of construction), including footpath details and drainage requirements ○ portal frame design ○ basic bridge design components, including abutments, foundation design ○ consideration of port infrastructure, including access roads, portal frame construction of sheds, concrete pier decking ○ outline solution – to communicate use of space and appropriate form of construction, 2D and 3D sketches of initial ideas, including internal and external views, plans and elevations – freehand sketched, single-point perspective, two-point perspective, isometric views ● importance and ways of communicating effectively. ● clear communication using technical annotations to ensure correct information is shared and clear understanding of the design is communicated. ● techniques used to produce accurate construction drawings: (E4) ● conventions used in survey drawings – appropriate scales for survey drawings ● production of survey drawings to incorporate: <ul style="list-style-type: none"> ○ level survey plan ○ plotting linear survey lines accurately to scale ○ spot levels ○ grid levels ○ contours ○ site cross section ○ long section detail ○ cut-and-fill cross section ● Application of corrected traverse station coordinates to plot a closed traverse.

Skill content	Knowledge
<p>S2.4 Think creatively, adapting to challenges arising from requirements.</p>	<p>Consider the scenario and changing environment to develop civil engineering solutions to civil engineering construction projects: (E1, E2, E3, E4)</p> <ul style="list-style-type: none"> • types of civil engineering work undertaken – civil engineering construction methods and techniques to be considered for the following: <ul style="list-style-type: none"> ○ foundations and substructure – different types of foundation (strip, pad, raft, piles in plain or reinforced concrete, basements), relevant techniques, processes, materials and associated construction plant ○ superstructures – frames, connections, floors, wall claddings, roof coverings, relevant techniques, processes, materials and associated construction plant, structural steel frames, precast concrete frame, in situ frames, timber frames ○ portal frames – structural steel, timber, concrete ○ external works – flexible, composite and rigid pavement construction, retaining walls (concrete, brick, drainage), SUDS (sustainable urban drainage systems), culverts, manholes, separate systems, combined systems, relevant techniques, processes and associated construction plant ○ bridges – beam, arch, truss, suspension, cable-stayed, cantilever ○ railway track engineering – methods for earthwork construction in a rail context ○ role and responsibilities of civil engineers from inception to completion of small civil engineering projects – design, development, construction, maintenance ○ infrastructure (road, rail, harbour, airports, major services; component parts of infrastructure). • Design appropriate structural components to take into account ground conditions present.

2.4 Selection of techniques and materials for a civil engineering project

Skill content	Knowledge
<p>S2.7 Resolve technical issues in the design.</p>	<p>Identify and resolve technical issues in the design of civil engineering design projects.</p> <p>Technical issues in design preparations:</p> <ul style="list-style-type: none"> • meeting requirements and constraints • change of client requirements in relation to project outcomes, structure use and form, external works • potential remodelling • future extension potential to meet residential needs and business expansion • external and internal aesthetics • technical issues • issues with the types and use of materials • need for sustainability • need for energy efficiency • using alternative types of energy source • schedule issues • specification issues • statutory considerations • implications of statutory obligations to design: (K4.5) <ul style="list-style-type: none"> ○ statutory constraints and their requirements, including subsequent updates: <ul style="list-style-type: none"> – Construction (Design and Management) Regulations 2015 – CDM Regulations, the duties of the designer, the identification of hazards/risks at design and methods of assessment, e.g. Design Risk Assessments (CDM 2015) – safety schemes in procurement (SSIP) – further development of risk assessments, including for changing design, site or weather conditions – risks through the whole life cycle of the development – design, procurement, construction, operation, decommissioning ○ environmental constraints: <ul style="list-style-type: none"> – avoidance of air, water and noise pollution – the findings of Environmental Impact Assessments (EIAs) and their use in developing designs for a project ○ importance of specifications to design guides: (K4.6) <ul style="list-style-type: none"> – ensuring designs are safe – following best practice – producing economical designs – producing sustainable designs

Skill content	Knowledge
	<ul style="list-style-type: none"> ○ how specifications relate to legislation: (K4.7) <ul style="list-style-type: none"> – compliance with Health and Safety at Work Act (HASAWA) 1974 – compliance with Construction (Design and Management) Regulations 2015 – compliance with British standards and approved codes of practice. ● social constraints: <ul style="list-style-type: none"> ○ neighbours' rights ○ local community objections ○ green space requirements ○ environmental requirements ○ mixed and balanced development ● utility diversion: <ul style="list-style-type: none"> ○ compliance with drainage and other services; building and design requirements.
<p>S2.9 Determine performance of materials.</p>	<p>Select an appropriate material to meet an economical and sustainable design for a civil engineering project. Verify the specification of materials used in the construction of a project and the application of structural mechanics calculations and tests. (E1, E2, E3)</p> <p>Understand the properties of materials: (K5.2)</p> <ul style="list-style-type: none"> ● strength: <ul style="list-style-type: none"> ○ tensile ○ compressive ○ shear ○ hardness ○ toughness ● mass and density ● bending stiffness ● fatigue and creep ● embedded energy ● recyclability. <p>Understand the degradation of construction materials:</p> <ul style="list-style-type: none"> ● the impact of the environment on building materials for various scenarios, degradation methods and types, prevention and reduction measures, and impact of failure of a single material in a composite element

Skill content	Knowledge
	<ul style="list-style-type: none"> • sources of degradation and their causes: <ul style="list-style-type: none"> ○ natural agents – ageing, ultraviolet (UV) radiation timber infestation – insect attack, fungal ○ timber decay – wet rot, dry rot, lichens and mosses ○ moisture movement – capillary action, shrinkage ○ exposure conditions – weathering, freeze-thaw, thermal ageing, creep, humidity, loadings ○ chemical degradation – acid rain, sulphate, alkalis, leaching ○ corrosion in metals – oxidation. • use of special paints and protective coatings; use of sulphate resisting cement (SRC); importance of water/cement ratio • material failure: <ul style="list-style-type: none"> ○ concrete and reinforced concrete ○ brickwork ○ timber – external and internal applications ○ steel ○ mortars • effects of temperature changes on construction materials • types of heat: latent, sensible <ul style="list-style-type: none"> ○ effect of temperature change on the properties of materials: changes of state, evaporation, expansion and contraction ○ behaviour of structural elements under load: beams, columns, frameworks. (K8.3)
S2.11 Model information, using appropriate digital software and other tools.	<p>Use digital software to model civil engineering design solutions: (D1, D2, D3)</p> <ul style="list-style-type: none"> • assessment of the use of BIM in the production of accurate structural design information and the collaborative environment of structural design • use of CAD (Revit) or equivalent software to present solutions in 2D and 3D format • sketching/drawing.
S2.13 Draw on a range of media to communicate a design proposal.	<ul style="list-style-type: none"> • Select and use a range of media to communicate civil engineering design proposals: use of digital presentations, image handling and desktop publishing, e.g. brochures and reports. (E2, E2, E3, D3)

2.5 Use of calculation techniques to support design of civil engineering projects

Skill content	Knowledge
<p>S2.6 Apply mathematical principles to the scope of work.</p>	<p>Complete mathematical calculations to support the design and development of civil engineering projects: (K9.5, K9.6, K9.7, K9.8)</p> <ul style="list-style-type: none"> • application of mathematical techniques and formulae to support civil engineering projects: <ul style="list-style-type: none"> ○ practical construction problems involving perimeters, areas and volumes, including for simple and compound shapes: <ul style="list-style-type: none"> – rectangles – trapeziums – triangles – prisms – circles – spheres – pyramids – cones – regular and irregular surface areas and volumes ○ mensuration formulae and numerical integration methods (mid-ordinate rule, trapezoidal rule, Simpson's rule) ○ practical construction problems, including surveying, setting out, dimensions of pitched roof and similar: (K11.2) <ul style="list-style-type: none"> – geometric techniques to determine length, area and volume for shapes containing straight lines and curves – use of trigonometry to determine dimensions in 2D and 3D ○ trigonometric techniques: <ul style="list-style-type: none"> – sine rule – cosine rule – triangle area rules • understanding the need for accuracy in calculations • ability to select and apply statistical techniques correctly to solve practical construction problems • statistical techniques – processing large groups of data to achieve mean, median, mode and standard deviation, cumulative frequency, quartiles, quartile range, methods of visual presentation (K14.4) • practical construction problems – use of graphs to solve construction problems; use of statistics to present data and make decisions based on statistical data

Skill content	Knowledge
	<ul style="list-style-type: none"> relationship between force (load), mass and acceleration; coplanar forces; Hooke's law; loading, shear forces and bending moments of beams (K7.2, K7.1) determining the centroid of regular and irregular rectangular structural/engineering sections, including calculations of first moment of area, second moment of area, the parallel axis theorem and section modulus.
<p>S2.10 Use appropriate techniques to confirm validity of calculations.</p> <p>S2.11 Model information, using appropriate digital software and other tools.</p>	<ul style="list-style-type: none"> Use techniques to confirm validity of calculations: (E1) <ul style="list-style-type: none"> case studies historic records estimation methods alternative calculation methods. <p>Use computer software and apply mathematical techniques to analyse beam and retaining wall load in order to verify manual solutions are correct, check solutions and model proposed design solutions: (D1) (D3)</p> <ul style="list-style-type: none"> principles of moments and the laws of static equilibrium use of approximation/estimation techniques to check calculations use of computer software to analyse beam and retaining wall load to verify manual solutions are correct.

Performance Outcome 3: Verify delivery of civil engineering solutions

Knowledge specific to Performance Outcome 3

The analysis of project information for civil engineering solutions requires underpinning knowledge in the following areas:

- K5** Material properties
- K6** Structural elements, loading and potential failure
- K7** Maths for structural analysis
- K8** Structural mechanics
- K9** Mathematical techniques
- K10** Geology/substructure beyond the core
- K11** Setting out
- K12** Earthworks
- K13** Measurements – new content
- K15** Valuations

Skills for Performance Outcome 3

The skills will draw on underpinning knowledge appropriate to the context of the scenario. Please refer to the *Occupational Specialism Civil Engineering – Specimen Assessment Material (SAM)* for an example of how underpinning knowledge can be drawn on to meet skills for Performance Outcome 3.

- S3.1** Extract relevant information from provided sources.
- S3.2** Process geotechnical, structural behaviour and human factors information, and data related to the performance of a proposed solution.
- S3.3** Interpret information and data, including from visual and other sources.
- S3.4** Complete technical reports.
- S3.5** Use digital engineering software with accuracy.
- S3.6** Complete costings analysis.
- S3.7** Apply appropriate mathematical techniques to solve structural mechanics problems, including algebra, statistics, trigonometry, calculus.

3.1 Development of final design solutions for civil engineering projects

Skill content	Knowledge
S3.1 Extract relevant information from provided sources.	<p>Justify how extracted relevant information from a civil engineering project has been applied to develop design solutions:</p> <ul style="list-style-type: none"> • verify how structural elements, materials, beams, columns, frameworks and retaining walls behave under load • analyse structural elements under load to enable verification of structural elements • assess impact of chosen materials on structural elements: structural steel, masonry, timber, reinforced concrete.
S3.2 Process geotechnical, structural, behavioural and human factors information, and data related to the performance of a proposed solution.	<p>Justify proposed civil engineering solutions in terms of geotechnical and structural behaviour, human factors information and data: (D1, D2, D3, D5, K10.3, K12.3)</p> <ul style="list-style-type: none"> • geotechnical survey information, bore holes, trial pits; groundwater – water table, contamination, ground load bearing capacity, soil type; settlement and subsidence, soil shrinkage • earthwork design, excavation, cuttings, embankments, earth moving equipment and concreting equipment • information related to the behaviour of structural elements: <ul style="list-style-type: none"> ○ beams in bending and shear ○ stresses and deflection ○ foundations ○ columns and struts under direct load and eccentric load ○ effect of restraint on members in compression ○ retaining walls in relation to overturning, sliding and overstressing • resource planning • labour management techniques (work and method study; control and organisation of labour) • plant management (hire, lease or purchase; utilisation and control) • factors considered during the planning process that can have an impact on the planning outcomes: <ul style="list-style-type: none"> ○ labour factors: <ul style="list-style-type: none"> – availability and cost – skill levels – motivation – productivity

Skill content	Knowledge
	<ul style="list-style-type: none"> ○ plant factors: <ul style="list-style-type: none"> – output rates – efficiency ○ material factors: <ul style="list-style-type: none"> – availability – delivery periods – lead times – design approval – site handling – waste – sustainability issues ○ community/stakeholder issues. ● structural behaviour of materials as a result of their properties, degradation and resistance to degradation, including corrosion, chemical degradation, embedded energy, recycling potential ● materials testing results ● structural testing results.
<p>S3.3 Interpret information and data, including from visual and other sources.</p>	<p>Demonstrate interpretation of information and data to design civil engineering solutions, with labelled sketches, diagrams and supporting data – effect of different loading conditions and failure of, e.g. beams, columns, retaining walls, frames, struts and ties: (E1, E2, E3, D1, D3, K5.3, K8.5)</p> <ul style="list-style-type: none"> ● consideration of structural elements, loading and potential failure in analysis, design and verification ● use of special paints and protective coatings; use of sulphate resisting cement (SRC); importance of water/cement ratio ● materials – structural steel, masonry, timber, reinforced concrete ● loading, including point, uniform and wind loading ● types of failure – tension, compression, shear ● beams – point of contraflexure consideration; use and application of the bending theory equation; limit state design ● columns – safe axial design load, including allowance for eccentric loaded columns; limit state design ● retaining wall: factors of safety against sliding, overturning and overstressing; middle third rule ● frames: forces in members and if they are struts or ties.

Skill content	Knowledge
	<p>Relationship between force (load), mass and acceleration:</p> <ul style="list-style-type: none"> • determine the centroid of regular and irregular rectangular structural/engineering sections; this should include calculations of first moment of area, second moment of area, the parallel axis theorem and section modulus • coplanar forces; Hooke's law; loading, shear forces and bending moments of beams. <p>Rules of measurement and contractual implications (CESMM): (K13.5)</p> <ul style="list-style-type: none"> • financial implications of works not being priced correctly • use of manual methods and their application to price the bill of quantities, produced in accordance with CESMM4 (Civil Engineering Standard Method of Measurement 4) to complete an estimate • building up unit rates for measured work sections; selection of material price to use; use of coverage rates; use of appropriate wastage percentage; offloading and storage costs; use of 'all-in' labour rates; use of labour 'constants'; sundry plant requirements; addition of overheads and profits • inclusion of subcontractor quotations – unit rates, lump sums, pricing attendance and special attendance, addition of overheads and profit • completing PC sums and provisional sums (PS) – inclusion of PS and PC sums: <ul style="list-style-type: none"> ○ addition for overheads and profit ○ addition for attendance and special attendance • inclusion of contingency sums • pricing dayworks – labour, materials, plant • pricing preliminary items – employer's requirements; management and staff; security, safety and protection; site establishment and accommodation; temporary services; safety and environmental protection; fixed plant; scaffolding and temporary works; insurances, bonds, guarantees and warranties; allowance for fixed or fluctuating price • use of computer software to verify manual solutions are correct • types of measurement for the combination of data, cross checking and valuations (K15.1, K15.2) • value engineering techniques. (K13.4)

3.2 Application of professional techniques in the production of technical reports

Skill content	Knowledge
<p>S3.4 Complete technical reports.</p>	<p>Demonstrate the ability to complete and present technical reports to a non-technical audience. Support the completion of technical reports with the use of digital software techniques. (D1, D2, D3, D5)</p> <p>Digital design tools: (K14.1, K14.2, K14.3)</p> <ul style="list-style-type: none"> • types of digital presentation - PowerPoint, image handling and desktop publishing; brochures and reports • production of design section, plan and detail sketches/drawings • use of computer-aided design (CAD) to produce section, plan and detail drawings: <ul style="list-style-type: none"> ○ Autodesk AutoCAD, Autodesk AutoCAD LT, Autodesk Revit, Autodesk 3D Max, Autodesk Inventor ○ SolidWorks, Bentley MicroStation, ArchiCAD ○ SketchUp, CAD freeware • production of a range of accurate scale construction drawings: <ul style="list-style-type: none"> ○ floor plans, detailed sections through whole buildings and of specific construction components (substructure, superstructure to eaves, roof and floors), elevation details ○ component drawings, site plans, block plans, isometric drawings ○ digital specification tools, e.g. the NBS, BS 1192 ○ digital data, e.g. spreadsheets and schedules ○ digital presentations, image handling and desktop publishing, e.g. brochures and reports. (K14.4) <p>Rationalise choices made when generating a developed proposition to improve an engineering product.</p> <p>Understand industry valuation standards, guidance and practice, and how these are used to verify delivery of the built environment: (K15.1, K15.2)</p> <ul style="list-style-type: none"> • objective referencing against product design specification/criteria • objective referencing against weighted matrix • indirect benefits and opportunities • balancing benefits and opportunities with constraints (cost-benefit analysis, environmental benefits, health and safety risks, product life cycle considerations) • design for manufacturing • further modifications (technology-led adaptations).

3.3 Use and application of calculation techniques to verify civil engineering solutions

Skill content	Knowledge
<p>S3.7 Apply appropriate mathematical techniques to solve structural mechanics problems, including algebra, statistics, trigonometry, calculus.</p> <p>S3.6 Complete costings analysis.</p>	<p>Verify mathematical calculations and costings analysis to support a construction project, e.g. calculations of irregular areas of land, cut and fill, use of trigonometry and geometric techniques to solve applied construction contextualised problems. Complete calculations of structural mechanics problems related to beam, column and retaining wall design to demonstrate understanding of how to analyse civil engineering structures. (K9.9, K9.10, K1.11, K9.12)</p> <p>Solve structural mechanics problems - reactive forces, maximum load: (K8.2, K8.5, K8.6)</p> <ul style="list-style-type: none"> • materials – structural steel, masonry, timber • structural mechanics problems – relating to beams, columns, frames • beams – point loads, uniformly distributed loads (UDLs), combined loads, reactions, shear force values, bending moment values, relationship between shear force and bending moment, point of contraflexure, simply supported beams with cantilever ends, simply supported beams without cantilever ends • columns – axially loaded, eccentrically loaded, effective length, maximum stress • frameworks: statically determinate, pin-jointed, subject to dead loads and wind loads. <p>Algebra, including indices, logarithms, linear equations: (K9.9)</p> <ul style="list-style-type: none"> • techniques and methods – mathematical operations, factorisation, expansion, transposition, substitution and elimination, rounding, decimal places, significant figures, approximation, truncation errors and accuracy, calculator functions and use, indices, logarithms • formulae, equations and algebraic expressions – linear, simultaneous, quadratic equations • solving algebraically or via graphic methods, simultaneous equations.

Skill content	Knowledge
	<p>Trigonometric, geometric and standard formulae, including circular and triangular measures: (K9.10)</p> <ul style="list-style-type: none"> • ability to select and apply mathematical techniques correctly to solve practical construction problems involving perimeters, areas and volumes • mathematical techniques: simple mensuration formulae and numerical integration methods (mid-ordinate rule, trapezoidal rule, Simpson's rule) • practical construction problems involving perimeters, areas and volumes – calculations for simple and compound shapes (rectangles, trapeziums, triangles, prisms, circles, spheres, pyramids, cones) and regular and irregular surface areas and volumes • ability to select and apply geometric and trigonometric techniques correctly to solve practical construction problems • geometric techniques – properties of points, lines, angles, curves and planes, Pythagoras' theorem, radians, arc lengths and areas of sectors • practical construction problems – geometric techniques to determine length, area and volume for shapes containing straight lines and curves; use of trigonometry to determine dimensions in 2D and 3D; surveying, setting out, dimensions of pitched roof and similar (K11.3) • trigonometric techniques – sine, cosine, tangent ratios, sine rule, cosine rule, triangle area rules. <p>Elementary calculations and techniques including integration and differentiation: (K9.11)</p> <ul style="list-style-type: none"> • use of calculus to solve practical engineering problems • differential calculus – basic differentiation techniques applied to algebraic, trigonometric and logarithmic functions, products and quotients; function of a function • integral calculus – indefinite and definite integration techniques applied to algebraic, trigonometric and exponential functions.

Skill content	Knowledge
	<p>Statistical methods including averages, tendency and dispersion: (K9.12)</p> <ul style="list-style-type: none"> • ability to select and apply statistical techniques correctly to solve practical construction problems • statistical techniques – processing large groups of data to achieve mean, median, mode and standard deviation, cumulative frequency, quartiles, quartile range, methods of visual presentation • practical construction problems – use of graphs to solve construction problems; use of statistics to present data and make decisions based on statistical data. • Managing costs: selection and application of techniques available to break down, itemise and control the project cost, including: <ul style="list-style-type: none"> ○ unit costing ○ element costing ○ marginal costing ○ variance analysis.
<p>S3.5 Use digital engineering software with accuracy.</p>	<p>Use digital engineering software with confidence and accuracy to verify structural design solutions. Use and present digital software solutions with accuracy for civil engineering projects. (D1, D2, D3)</p> <p>Digital design tools:</p> <ul style="list-style-type: none"> • production of design section, plan and detail sketches/drawings • use of computer-aided design (CAD) to produce section, plan and detail drawings: <ul style="list-style-type: none"> ○ Autodesk AutoCAD, Autodesk AutoCAD LT, Autodesk Revit, Autodesk 3D Max, Autodesk Inventor ○ SolidWorks, Bentley MicroStation, ArchiCAD ○ SketchUp, CAD freeware ○ digital specification tools - the NBS, BS 1192 ○ digital data – spreadsheets and schedules ○ digital presentations, image handling and desktop publishing – brochures and reports. (K14.4)

Scheme of Assessment – Civil Engineering

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* consists of four Occupational Specialist Components:

1. Surveying and Design for Construction and the Built Environment
- 2. Civil Engineering**
3. Building Services Design
4. Hazardous Materials Analysis and Surveying.

Students will be able to take one of the Occupational Specialist Components as part of their *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

There is a single synoptic assessment for the Occupational Specialist Component, which is an extended 'design, development and implementation' project. The synoptic element of the project is important in order to ensure that students are able to demonstrate threshold competence: this is the principal reason why the occupational specialism is assessed via a single extended project assessment to ensure that students are able to evidence all the skills required by the Performance Outcomes.

The mapping, timings and scheduling and preparation for assessment shown below are for the current specimen assessment material, the assessment will have the same overarching number of tasks and overall focus but the order of tasks and the detail within the task may change each series.

Occupational Specialism assessment: Civil Engineering
Externally set project: 25 hours 100% of the Occupational Specialist Component assessment 180 marks Graded P, M and D
Content overview Students are required to: <ul style="list-style-type: none">• analyse civil engineering solutions• design civil engineering solutions• verify delivery of civil engineering solutions.
Assessment overview This project will be externally set and marked by Pearson. Students will respond to a client brief to analyse information, design construction solutions and verify delivery of those construction solutions. The project will consist of a portfolio of evidence, including an observation report to evidence practical skills to meet threshold competence where appropriate. This will be accompanied by video evidence.

The project will show students demonstrating the following tasks:

Task 1: Project analysis

Students will produce an analysis of the proposed project, considering potential risks and commercial viability, and performing calculations to support their report.

Task 2: Report on structural detail

Students will produce a report that explores the choice of structural form for the proposed building works and support this with sketch details.

Task 3: Column and beam design with related mathematics

Students will produce designs for beams and columns showing calculations and structural mechanics diagrams. Students will perform calculations that relate to their design.

Task 4: Design an external works component of the project including CAD drawing details

Students will produce draft designs showing their calculations and CAD design. They will then refine their designs using software.

Task 5: External works presentation and risk assessment

Students will produce a presentation that explores a proposal for an aspect of the external works that needs to take place on site. They will produce an accompanying risk assessment.

Task 6: Practical setting out

Students will undertake a setting-out task where they will be required to accurately set out two points according to the measurements given in the project brief.

Task 7: Tender and price comparison

Students will use a spreadsheet to complete an analysis comparing the original tender price of one aspect of the construction with the final account figures. They will provide commentary on variations, the reasons for changes in cost and any recommendations.

Task 8: Quality assurance and data analysis

Students will quality assure a testing process and carry out analysis of test results associated with this process.

Timings and scheduling

Task	Assessment Session	Assessment scheduling	Time
Task 1	1	Taken in a single session at a time specified by Pearson.	3h 0m
Task 2	2	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	3h 0m
Task 3a	3	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	3h 0m
Task 3b	4	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	2h 0m
Task 4	5	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	2h 0m
Task 5	6	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	3h 0m
Task 6	7	Taken in a window of assessment, with the assessment sessions scheduled by the Provider.	2h 0m
Task 7	8	Taken in a single session at a time specified by Pearson.	2h 0m
Task 8	9	Taken in a single session at a time specified by Pearson.	3h 0m

The Construction: Design, Surveying and Planning Occupational Specialist Component project consists of a number of activities grouped into a number of substantive tasks.

Each task will be completed during a window set by Pearson, during which you will schedule supervised assessment sessions. In some cases, tasks will also involve opportunities for unsupervised assessment, where the requirements of the skills being assessed make this necessary.

Performance Outcomes

In this assessment, students will:

Civil Engineering		
Performance Outcome	Descriptor	Weightings
1	Analyse civil engineering solutions	39%
2	Design civil engineering solutions	39%
3	Verify delivery of civil engineering solutions	22%

Preparation for assessment

Students will submit evidence for tasks in either hard copy or electronic/digital format. Where an electronic/digital submission is made, students need access to computers and the appropriate software. A summary of the submission requirements for each task is given below.

Task	Evidence type
1	Hard copy submission: report and supporting calculations.
2	Hard copy submission: written report and supporting sketch details.
3a	Hard copy: calculations and design diagrams.
3b	Hard copy: calculations.
4	Hard copy submission: civil engineering design and CAD drawings.
5	Digital submission: presentation slides and speaker notes, proposal and risk assessment.
6	Digital submission: observation form and video.
7	Digital submission: costing sheets and written report.
8	Hard copy submission: answer booklet with quality assurance, analysis and report.

A summary of preparation work that providers need to carry out before assessments take place is given below.

Task	Preparation work required
Task 6	Providers will need to source a site of a suitable size to carry out a practical task.

7. Occupational Specialist Component: Building Services Design

Content Summary

The content is separated into three Performance Outcomes, with the skills needed to achieve threshold competence and the knowledge to underpin skill application across the following areas.

Performance Outcome	Key content areas	Skills
1. Analyse building services solutions	<p>K1 Health and safety</p> <p>K1.1 Key requirements, roles and responsibilities associated with health and safety legislation</p> <p>K1.2 Legal health and safety obligations of existing installations</p> <p>K2 Sustainability</p> <p>K2.1 Key requirements, roles and responsibilities associated with environmental protection legislation</p> <p>K2.2 Financial incentives</p> <p>K2.3 Environmental performance measures associated with building services systems</p> <p>K2.4 Energy efficiency of building services systems</p> <p>K2.5 Types of fuel, including storage</p> <p>K3 Scientific concepts and principles and their application to building services systems</p> <p>K3.1 International System of Units (SI), including base units for length, mass, time, electrical current, temperature, amount of substance, luminous intensity</p> <p>K3.2 Derived SI units, including those associated with area, volume, weight, energy and force</p>	<p>S1.1 Analyse information to determine requirements of the task.</p> <p>S1.2 Gather required information.</p> <p>S1.3 Sequence and prioritise individual tasks.</p> <p>S1.4 Interpret information and data, including from visual and other sources.</p> <p>S1.5 Process data, using appropriate techniques.</p> <p>S1.6 Analyse and convey data, using appropriate techniques.</p> <p>S1.7 Calculate data required for design.</p>

Performance Outcome	Key content areas	Skills
	<p>K3.3 Gas laws, including Charles's law, Boyle's law</p> <p>K3.4 Electrical systems and properties, including current, magnetic flux, density, frequency, resistance, voltage, Ohm's law, power, acceleration</p> <p>K3.5 Mechanical properties, systems and units, including latent heat, capillary action, velocity, ductility, malleability, force, pressure, flow rates, dynamic pressure, humidity, atmospheric pressure, conduction, convection, heat transfer, heat losses, stack effects</p> <p>K3.6 Strength, including tensile, compressive, shear</p> <p>K3.7 Thermodynamics, including laws, material science, phase transition</p> <p>K3.8 Properties of materials, including acoustics, corrosion, pH, permeability, castability, brittleness, creep, durability, elasticity, flexibility, fatigue limit, hardness, resilience, size, toughness, viscosity, boiling point, flammability, flash point, melting point, thermal conductivity, vapour pressure</p> <p>K3.9 Combustion, including incomplete combustion, ventilation, stoichiometric, fuels, chemical, smouldering, diffusion, rapid, spontaneous, flue draft</p> <p>K4 Building structures</p> <p>K4.1 Purposes, importance and types of flues and chimneys</p>	

Performance Outcome	Key content areas	Skills
	<p>K5 Principles of building services engineering systems</p> <p>K5.1 Types of system, their purposes, similarities and differences in operation Mechanical components, their characteristics, function within the system and implications for the system of component failure Electrotechnical components, their characteristics, function within the system and implications for the system of component failure</p> <p>K5.2 Types of control system, their purposes, components, similarities and differences</p> <p>K5.3 Monitoring systems (digital, analogue) and how they collect and transmit data</p> <p>K6 Sources of information, their content and purpose</p> <p>K6.1 Visuals</p>	
2. Design building services	<p>K1 Health and safety</p> <p>K1.3 CDM responsibilities</p> <p>K1.4 Legal and health and safety implications of proposed designs for existing designs</p> <p>K2 Sustainability*</p> <p>K2.4 Energy efficiency of building services systems</p> <p>K2.5 Types of fuel, including storage</p>	<p>S2.1 Explore requirements of the task, using open questioning and listening.</p> <p>S2.2 Use appropriate data and information.</p> <p>S2.3 Conduct precedent research, including best practice, benchmarks and design guides.</p>

Performance Outcome	Key content areas	Skills
	<p>K3 Scientific concepts and principles and their application to building services systems*</p> <p>K3.1 International System of Units (SI), including base units for length, mass, time, electrical current, temperature, amount of substance, luminous intensity</p> <p>K3.2 Derived SI units, including those associated with area, volume, weight, energy and force</p> <p>K3.3 Gas laws, including Charles's law, Boyle's law</p> <p>K3.4 Electrical systems and properties, including current, magnetic flux, density, frequency, resistance, voltage, Ohm's law, power, acceleration</p> <p>K3.5 Mechanical properties, systems and units, including latent heat, capillary action, velocity, ductility, malleability, force, pressure, flow rates, dynamic pressure, humidity, atmospheric pressure, conduction, convection, heat transfer, heat losses, stack effects</p> <p>K3.6 Strength, including tensile, compressive, shear</p> <p>K3.7 Thermodynamics, including laws, material science, phase transition</p> <p>K3.8 Properties of materials, including acoustics, corrosion, pH, permeability, castability, brittleness, creep, durability, elasticity, flexibility, fatigue limit, hardness, resilience, size, toughness, viscosity, boiling point, flammability, flash point, melting point, thermal conductivity, vapour pressure</p>	<p>S2.4 Quality assure provided data.</p> <p>S2.5 Plan logistics, including life cycle, costing, maintenance and installation.</p> <p>S2.6 Apply appropriate mathematical techniques in a construction context.</p> <p>S2.7 Model design, using digital software and other tools.</p> <p>S2.8 Present appropriate design information and data, using different methods and formats.</p> <p>S2.9 Enter data into digital engineering software.</p> <p>S2.10 Provide creative solutions to challenges arising from requirements.</p> <p>S2.11 Adapt design proposals in response to design constraints and stakeholder feedback in terms of time, cost and material factors.</p>

Performance Outcome	Key content areas	Skills
	<p>K3.9 Combustion, including incomplete combustion, ventilation, stoichiometric, fuels, chemical, smouldering, diffusion, rapid, spontaneous, flue draft</p> <p>K4 Building structures*</p> <p>K4.1 Purposes, importance and types of flues and chimneys</p> <p>K5 Principles of building services engineering systems*</p> <p>K5.1 Types of system, their purposes, similarities and differences in operation Mechanical components, their characteristics, function within the system and implications for the system of component failure Electrotechnical components, their characteristics, function within the system and implications for the system of component failure</p> <p>K5.2 Types of control system, their purposes, components, similarities and differences</p> <p>K5.3 Monitoring systems (digital, analogue) and how they collect and transmit data</p> <p>K6 Sources of information, their content and purpose*</p> <p>K6.1 Visuals</p> <p>K7 Construction and the built environment industry</p> <p>K7.1 Planning permission and building regulations relating to all notifiable works</p>	

Performance Outcome	Key content areas	Skills
	<p>K8 Building technology</p> <p>K8.1 Properties of materials, including acoustics, corrosion, pH, permeability, castability, brittleness, creep, durability, elasticity, flexibility, fatigue limit, hardness, resilience, size, toughness, viscosity, boiling point, flammability, flash point, melting point, thermal conductivity, vapour pressure</p> <p>K8.2 Understanding mechanical, electrical and plumbing components</p> <p>K9 Digital technology</p> <p>K9.1 Specialist software and digital tools</p> <p>K9.2 Digital design tools</p> <p>K9.3 Digital specification tools</p> <p>K9.4 Digital data</p> <p>K9.5 Digital presentations, image handling and desktop publishing</p> <p>K10 Design</p> <p>K10.1 How designs are prepared, including design briefs, work stages, schedules, specifications, recommendations and programmes</p> <p>K10.2 The level of detail needed in designs for different situations, and the importance of detail in communicating the design intent</p> <p>K10.3 The implications of statutory obligations to designs</p> <p>K10.4 The use and importance of specifications</p> <p>K10.5 The relevance of measurement in the design process</p> <p>*Please see the knowledge content referred to in Performance Outcome 1. This knowledge is also underpinning knowledge for Performance Outcome 2.</p>	

Performance Outcome	Key content areas	Skills
3. Verify delivery of building services solutions	<p>K2 Sustainability*</p> <p>K2.4 Energy efficiency of building services systems</p> <p>K2.5 Types of fuel, including storage</p> <p>K3 Scientific concepts and principles and their application to building services systems*</p> <p>K3.1 International System of Units (SI), including base units for length, mass, time, electrical current, temperature, amount of substance, luminous intensity</p> <p>K3.2 Derived SI units, including those associated with area, volume, weight, energy and force</p> <p>K3.3 Gas laws, including Charles's law, Boyle's law</p> <p>K3.4 Electrical systems and properties, including current, magnetic flux, density, frequency, resistance, voltage, Ohm's law, power, acceleration</p> <p>K3.5 Mechanical properties, systems and units, including latent heat, capillary action, velocity, ductility, malleability, force, pressure, flow rates, dynamic pressure, humidity, atmospheric pressure, conduction, convection, heat transfer, heat losses, stack effects</p> <p>K3.6 Strength, including tensile, compressive, shear</p> <p>K3.7 Thermodynamics, including laws, material science, phase transition</p>	<p>S3.1 Collate information and data.</p> <p>S3.2 Verify suitability of information and data from appropriate sources specific to the scope of works.</p> <p>S3.3 Interpret information and data, including from visual and other sources.</p> <p>S3.4 Use software with accuracy to verify specific items, utilising appropriate tools.</p> <p>S3.5 Complete costings analysis through, for example, spreadsheet software.</p> <p>S3.6 Present information, using oral and written communication.</p>

Performance Outcome	Key content areas	Skills
	<p>K3.8 Properties of materials, including acoustics, corrosion, pH, permeability, castability, brittleness, creep, durability, elasticity, flexibility, fatigue limit, hardness, resilience, size, toughness, viscosity, boiling point, flammability, flash point, melting point, thermal conductivity, vapour pressure</p> <p>K3.9 Combustion, including incomplete combustion, ventilation, stoichiometric, fuels, chemical, smouldering, diffusion, rapid, spontaneous, flue draft</p> <p>K4 Building structures*</p> <p>K4.1 Purposes, importance and types of flues and chimneys</p> <p>K5 Principles of building services engineering systems*</p> <p>K5.1 Types of system, their purposes, similarities and differences in operation</p> <p>K5.1 Mechanical components, their characteristics, function within the system and implications for the system of component failure</p> <p>K5.1 Electrotechnical components, their characteristics, function within the system and implications for the system of component failure</p> <p>K5.2 Types of control system, their purposes, components, similarities and differences</p> <p>K5.3 Monitoring systems (digital, analogue) and how they collect and transmit data</p>	

Performance Outcome	Key content areas	Skills
	<p>K6 Sources of information, their content and purpose*</p> <p>K6.1 Visuals</p> <p>K8 Building technology**</p> <p>K8.3 Suitability and operation of performance measurement equipment</p> <p>K8.4 Surveying techniques</p> <p>K11 Valuations</p> <p>K11.1 Industry valuation standards, guidance and practice, and how these are used to verify delivery of the built environment</p> <p>K11.2 Valuation benchmarking and how this is used to verify delivery of the built environment</p> <p>K12 Measurements</p> <p>K12.1 Types of measurement for the combined data</p> <p>K12.2 Techniques for value engineering</p> <p>K12.3 Rules of measurement and contractual implications</p> <p>*Please see the knowledge content referred to in Performance Outcome 1.</p> <p>**Please see the knowledge content referred to in Performance Outcome 2. This knowledge is also underpinning knowledge for Performance Outcome 3.</p>	

Detailed content

The detailed content for each Performance Outcome represents the different activities and associated skills performed when designing building services. Each skill has underpinning knowledge to support skill application.

Performance Outcome 1: Analyse building services solutions

1. Analysis of project information and calculations

Knowledge specific to Performance Outcome 1

The analysis of project information to achieve building services solutions requires underpinning knowledge in the following areas:

K1 Health and safety

K2 Sustainability

K3 Scientific concepts and principles and their application to building services systems

K4 Building structures

K5 Principles of building services engineering systems

K6 Sources of information, their content and purpose

Skills for Performance Outcome 1

The skills will draw on underpinning knowledge appropriate to the context of the scenario. Please refer to *the Occupational Specialism Building Services Design – Specimen Assessment Material (SAM)* for an example of how underpinning knowledge can be drawn on to meet skills for Performance Outcome 1.

S1.1 Analyse information to determine requirements of the task.

S1.2 Gather required information.

S1.3 Sequence and prioritise individual tasks.

S1.4 Interpret information and data, including from visual and other sources.

S1.5 Process data, using appropriate techniques.

S1.6 Analyse and convey data, using appropriate techniques.

S1.7 Calculate data required for design.

Skill content

Analyse information to determine requirements of the task. (S1.1, E5)

- Analysis of a range of information, including:
 - plans
 - specifications
 - maintenance records
 - performance data
 - site and other constraints.
- Review of existing or proposed site.
- Further surveys and tests required to determine the full scope of the task.
- Understanding of information from a variety of sources to understand the existing performance of building services engineering systems, to set the design parameters for a new installation and to verify that a new system is meeting the design parameters:
 - test data
 - charts
 - tables
 - drawings to understand existing performance or design requirements.

Gather required information. (S1.2)

- Identify the information required.
- Identify what information is available and where it can be found.
- Identify how to gather information that is not available and make requests to third parties, or instigate or undertake surveys.
- Use correct survey equipment and techniques to capture information and data for building service engineering projects.
- Understand and comply with relevant health and safety requirements when undertaking surveys.

Sequence and prioritise individual tasks. (S1.3)

Identify, understand and use project management techniques that could be adopted into the solutions of the project and to present ideas and information: **(D1/E2)**

- resource planning
- bar charts
- Gantt diagrams
- critical path analysis
- use of BIM.

Skill content

Process data, using appropriate techniques. (S1.5)

Understand what data may be required for a specific purpose in a project at each stage, and be able to extract and present this through:

- sorting
- reordering
- manipulating
- carrying out calculations to enable appropriate information to be determined from data.

Understand how data can be presented to an audience using presentation techniques, with a variety of media:

- ways of classifying data and information
- ways that data can be presented.

Calculate, analyse and convey data, using appropriate techniques, in respect of the current provisions/services. (S1.4, S1.6, S1.7)

Understand the tools available to present information on current building services engineering installations to a variety of audiences.

Conduct calculations for the design of a typical building services engineering installation:

- analyse information **(E5)**
- select the information to be presented in a given situation **(E3)**
- understand how this can be put into a form understood by the audience
- understand ways to present data – sketches, drawings, tables, charts, graphs, results of calculations and photographs
- digital forms of presentation – podcasts, PowerPoint digital brochures, CAD drawings.

Underpinning knowledge

(Content in italics refers to content that has already been delivered in the core but which is also required underpinning knowledge for the occupational specialism skills.)

K1 Health and safety

K1.1 Key requirements, roles and responsibilities associated with health and safety legislation, and

K1.2 Legal health and safety obligations of existing installations

Understand how key legislation relates to the role of a Building Services Design Technician, to assist engineers and other construction professionals to provide design solutions:

- Gas Safety (Installation and Use) (Amendment) Regulations 2018:
 - purpose – for anyone involved in installation, service, repair or maintenance of gas appliances and other gas fittings
 - the qualifications required of people working on gas installations and appliances
- Gas Safety (Management) Regulations 1996
- Electricity at Work Regulations 1989, BS 7671 – Wiring Regulations, 'Requirements for Electrical Installations', IET Wiring Regulations.
- non-statutory regulations that 'relate principally to the design, selection, erection, inspection and testing of electrical installations, whether permanent or temporary, in and about buildings generally and to agricultural and horticultural premises, construction sites'
- *health and safety at work legislation:*
 - *duties of employers, employees*
 - *the Health and Safety Executive (HSE) and others*
 - *general prohibitions.*
- current Personal Protective Equipment (PPE) at Work Regulations:
 - types of PPE
 - assessing suitable PPE given the hazard
 - supply of instructions/training
 - correct use
 - maintenance and storage
- building regulations
- Control of Noise at Work Regulations 2005
- Control of Asbestos Regulations 2012
- Legionnaires disease. The control of legionnaires bacteria in water systems (HSE publication)
- Control of Substances Hazardous to Health Regulations (COSHH) 2002:
 - identifying harmful substances
 - assessing risks of exposure
 - types of exposure
 - safety data sheets
 - using/checking/maintaining control measures/equipment
 - training/instruction/information.

Name	Symbol	Quantity	In other SI units
Radian	rad	plane angle	
Hertz	Hz	frequency	
Newton	N	force, weight	
Pascal	Pa	pressure, stress	N/m^2
Joule	J	energy, work, heat	$\text{N}\cdot\text{m} = \text{Pa}\cdot\text{m}^3$
Watt	W	power, radiant flux	J/s
Coulomb	C	electric charge or quantity of electricity	
Volt	V	voltage (electrical potential), emf	W/A
Farad	F	capacitance	C/V
Ohm	Ω	resistance, impedance, reactance	V/A
Weber	Wb	magnetic flux	$\text{V}\cdot\text{s}$
Tesla	T	magnetic flux density	Wb/m^2
Henry	H	inductance	Wb/A
degree Celsius	$^{\circ}\text{C}$	temperature relative to 273.15 K	
Lumen	lm	luminous flux	$\text{cd}\cdot\text{sr}$
Lux	lx	illuminance	lm/m^2
seconds	s	time	
kilograms	kg	mass	
metres	m	length	

K2 Sustainability

Sustainability methods and techniques used in the design of modern construction projects and in the refurbishment, remodelling and extension of existing buildings, and how they can reduce pollution and the impact on the environment.

K2.1 Key requirements, roles and responsibilities associated with environmental protection legislation

- Environmental Protection Act 1990:
 - waste management, waste transporting, hazardous waste, recycling and safe disposal
 - emissions, reduction through alternative energy, high- and low- embodied materials.
- Environmental Act 1995:
 - enforcement via the Environment Agency
 - other enforcement bodies.
- Water Resources Act 1991:
 - the protection of underground, rivers and coastal water from pollution.

K2.2 Financial incentives

- Taxes and how they may reduce carbon footprint:
 - climate change levy
 - CRC Energy Efficiency Scheme
 - emission trading
 - capital allowance on energy-efficient items
 - landfill tax
 - aggregates levy.
- Life cycle costing:
 - technology solutions
 - selection of sustainable materials and components
 - maintenance requirements
 - running costs
 - demolition and recycling.

K2.3 Environmental performance measures associated with building services systems

- Use of Building Research Establishment Environmental Assessment Method (BREEAM) and the assessment process – sustainability assessment method for planning projects, infrastructure and buildings.
- Categories:
 - management
 - energy
 - health and wellbeing
 - innovation
 - land use and ecology
 - materials
 - transport
 - pollution
 - waste
 - water.

Name	Symbol	Quantity	In other SI units
Radian	rad	plane angle	
Hertz	Hz	frequency	
Newton	N	force, weight	
Pascal	Pa	pressure, stress	N/m^2
Joule	J	energy, work, heat	$\text{N}\cdot\text{m} = \text{Pa}\cdot\text{m}^3$
Watt	W	power, radiant flux	J/s
Coulomb	C	electric charge or quantity of electricity	
Volt	V	voltage (electrical potential), emf	W/A
Farad	F	capacitance	C/V
Ohm	Ω	resistance, impedance, reactance	V/A
Weber	Wb	magnetic flux	$\text{V}\cdot\text{s}$
Tesla	T	magnetic flux density	Wb/m^2
Henry	H	inductance	Wb/A
degree Celsius	$^{\circ}\text{C}$	temperature relative to 273.15 K	
Lumen	lm	luminous flux	$\text{cd}\cdot\text{sr}$
Lux	lx	illuminance	lm/m^2
seconds	s	time	
kilograms	kg	mass	
metres	m	length	

K3.2 Derived SI units, including those associated with area, volume, weight, energy and force

Know the different SI derived units used in building services design, with their associated symbols and quantity.

SI Derived unit	Symbol	Quantity	Symbol
square metre	m^2	area	A
cubic metre	m^3	volume	V
metre per second	$\text{m}\cdot\text{s}^{-1}$	speed, velocity	v
metre per second squared	$\text{m}\cdot\text{s}^{-2}$	acceleration	a
reciprocal metre	m^{-1}	wavenumber	$\sigma, \tilde{\nu}$
kilogram per cubic metre	$\text{kg}\cdot\text{m}^{-3}$	density	ρ
kilogram per square metre	$\text{kg}\cdot\text{m}^{-2}$	surface density	ρ_A
cubic metre per kilogram	$\text{m}^3\cdot\text{kg}^{-1}$	specific volume	V
ampere per square metre	$\text{A}\cdot\text{m}^{-2}$	current density	J
candela per square metre	$\text{cd}\cdot\text{m}^{-2}$	luminance	L_v

K3.3 Gas laws, including Charles's law, Boyle's law

Ideal gases and their application to building services engineering – the principles and calculations of gases and their impact on the design and performance of installations and equipment:

- the volume of a sample of a gas being inversely proportional to its pressure
- relationship of pressure to temperature, volume, mass.
- units of pressure, to include Pascal (Pa), Newtons per square metre (N/m^2)
- units of temperature, including degrees Celsius (C)
- units of volume, including cubic centimetres (cm^3), cubic metres (m^3), litres (l)
- units of mass, including kilograms (kg)
- application of general gas law, including systems under pressure
- application of characteristic gas equations to solve problems related to building services science
- application of Dalton's law ($P_{\text{total}} = P_1 + P_2 + \dots + P_n$) to solve problems involving multiple pressures.

K3.4 Electrical systems and properties

The standard units that are used in electrical systems, what they measure and their interrelationships.

- Basic electrical quantities:
 - charge
 - AC
 - DC
 - current
 - voltage
 - resistance
 - conductance

- reactance
- frequency
- standard symbols and their abbreviations.

Calculations and their use within electrical circuits and installations.

- Calculation of electrical power.
- Electrical energy.
- Electrical charge.
- Use of material resistivity to determine the resistance of materials in relation to length and cross-sectional area.
- Basic laws:
 - Ohm's law
 - Faraday's law
 - Lenz's law.
- Determination of values of resistance, voltage, current and power in series, parallel and combination circuits for DC.
- AC wave form.
- Power in AC and DC circuits, root mean squared (RMS).
- Resistance in AC circuits.

Electrical science calculations and applications.

- Calculations to determine:
 - magnetic flux
 - flux density
 - induced emf
 - electrostatic field strength for capacitors
 - energy stored in inductor
 - back emf
 - self-inductance
 - mutual inductance.
- Service head: ownership.
- Cut out: ownership and purpose.
- Meter: ownership and purpose.
- Consumer unit: types, purpose, isolation.
- Current density: density of current in an electrical conductor, measured in A/cm².
- Current: the flow of electrical energy.
- Electromagnetic field: force associated with electric charge in motion.
- AC circuits:
 - capacitance
 - inductance
 - reactance
 - imaginary impedance
 - mutual inductance.

- Load: calculation of electrical energy used.
- No-load consumption: calculation of energy loss when not on load, resistance of insulation.
- Parasitic consumption: calculation of load in standby, wasted energy.
- On-grid: a domestic dwelling that is connected to the national 230V AC supply grid.
- Protected circuit: an electrical circuit protected against fire.
- Supply-side: the generation, transmission and distribution of electricity up to and including the domestic meter.
- System: selection of cables and outlets for the load required.
- Single-phase supplies.
- Three-phase supplies.
- Efficacy: calculation of light output, lumens per watt (lm/W).
- Demand-side: a general term referring to everything that consumes electricity.

The statutory and non-statutory measures that should be met and implemented in the design of electrical installations, and their benefits and drawbacks.

- Electricity at Work Regulations (EWR) 1989.
- British Standards BS 7671 Requirements for Electrical Installations, on-site guide and guidance notes:
 - building regulations
 - Electrical Installation Condition Report (EICR)
 - permit to work.
- Special locations within BS 7671.
- Test methods and requirements, including their purpose:
 - sequence of tests:
 - visual inspection
 - continuity of CPC
 - continuity of ring final circuit
 - insulation resistance, polarity (dead then live), Z_s is earth fault loop impedance, Z_e at the origin (Prospective Fault Current is a calculation)
 - residual current device (RCD)
 - functional testing.
- Certification.
- Operation and maintenance manuals.

Earthing and bonding – the statutory measures that must be met in the design of electrical installations, and their impact on electrical safety.

- Earthing principles and TN-S, TN-CS and TT systems:
 - shock protection
 - principles of earthing
 - protective conductors
 - earth and ground rod.
- Bonding requirements and methods:
 - main
 - supplementary bonding
 - equipotential bonding.

Final circuits and circuit protection – the safety devices that must be incorporated within the consumer unit in the design of electrical installations, and the benefits that they provide.

- Breaker and circuit breakers (CB).
- Miniature circuit breaker (MCB).
- Residual current device (RCD).
- Residual current circuit breaker (RCCB).
- Residual current circuit breaker with overcurrent protection (RCBO).

K3.5 Mechanical properties, systems and units

Understand the properties and units, and their application on systems.

- Mechanical properties:
 - strength (tensile, shear, compressive)
 - hardness
 - toughness
 - ductility
 - malleability
 - elasticity
 - brittleness.
- Systems and units:
 - latent heat
 - capillary action
 - velocity
 - ductility
 - malleability
 - force
 - pressure
 - flow rates
 - dynamic pressure
 - humidity
 - atmospheric pressure
 - conduction
 - convection
 - heat transfer
 - heat losses
 - stack effects.

K3.6 Strength, including tensile, compressive, shear

Understand how strength of materials is a consideration in Building services design

- Yield (or proof strength): stress needed to produce a specified amount of plastic or permanent deformation. (Usually a 0.2 % change in length.)
- Ultimate tensile strength (UTS): the maximum stress a material can withstand before fracture.
- The relationship between stress and strain (load and elongation):
 - stress = load/original cross sectional area
 - strain = change in length under load/original length.
- The difference between compressive and tensile strength.
- Shear.

Understand properties, modes of failure, protection and lubrication of building services engineering materials and components that impact on their selection when designing an engineering product, including:

- mechanical properties
- physical properties
- thermal properties
- electrical and magnetic properties and behaviour of advanced materials (bio materials, smart alloys, nanoengineered materials)
- modes of failure
- surface treatments and coating
- lubrication (purposes, regimes).

K3.7 Thermodynamics, including laws, material science, phase transition

Understand the laws of thermodynamics and how it relates to the work of a building services design technician to support design solutions.

- Laws for thermodynamics.
- Thermodynamic properties and processes:
 - relationship between pressure, saturation temperature and enthalpy
 - thermodynamic properties for water and refrigerants
 - identification and interpretation of various zones of a pressure-enthalpy (P-H) diagram, to include:
 - sub-cooled liquid
 - latent heat
 - super-heated vapour
 - saturated liquid
 - saturated vapour.
- Graphical representation of thermodynamic processes:
 - isothermal evaporation
 - adiabatic compression
 - simple vapour compression
 - refrigeration cycles.
- Use of tables and P-H diagrams to obtain values in solving problems, to include:
 - saturation temperature and enthalpy of dry saturated vapour at n bar pressure
 - enthalpy at n bar pressure with x degrees of superheat
 - refrigeration plant and equipment.

- Changes of state:
 - kinetic theory of matter
 - reasons for change of state, to include changes in temperature, changes in pressure
 - sensible and latent heat, to include latent heat of fusion, latent heat of vaporisation
 - application of the theory of enthalpy to solve problems where change of state occurs and latent heat is encountered.
- Air conditioning systems and refrigeration:
 - air conditioning processes and cycles
 - psychrometric terms and properties of air and water vapour, to include calculation, measurement, tables, charts
 - psychrometric process lines, to include:
 - sensible heating and cooling
 - dehumidification and humidification (using different types of humidifiers)
 - resulting condition from mixture of two air streams.
- Plotting summer and winter psychrometric cycles for given arrangements of air-conditioning plant and operating conditions, to include:
 - heater batteries
 - cooler batteries (operating in sensible cooling and dehumidification mode)
 - humidification, to include steam, adiabatic, humidity ratio, relative humidity
 - air-mixing applications.
- Determine plant duties from psychrometric chart.

K3.8 Properties of materials used in building services engineering

How the properties' of materials impact on the installation of building services.

- Definition of material properties and how materials are used in building services engineering:
 - creep resistance
 - elasticity/stiffness
 - fatigue strength and endurance limit
 - toughness
 - hardness
 - acoustics
 - pH
 - permeability
 - castability
 - brittleness
 - durability
 - flexibility
 - resilience
 - size, viscosity
 - boiling point
 - flammability
 - flash point
 - melting point
 - thermal conductivity

- vapour pressure
- corrosion in metals
- oxidation.
- Key properties of construction materials, how they work together to provide composite performance and properties, how they impact on performance in use and on the specification of materials for different scenarios and levels of exposure to the elements:
 - bricks – facings, Class A engineering, Class B engineering, commons
 - concrete – prescribed mixes, design mixes, mixes by ratio of volume, mixes by ratio of weight, screed mixes
 - concrete blocks – aerated, high density, insulated
 - mortar mixes – cement mortar, lime mortar, cement lime mortar, coloured mortar
 - sand – building, sharp, silver
 - plasterboard
 - glass and glass finishes – smart, laminated, tempered, float, clear, obscured
 - insulation materials – fibreglass, expanded polystyrene, Celotex, mineral wool, cellulose
 - straw, polyurethane
 - plastics used for polythene damp-proof membranes (DPM), damp-proof courses (DPC)
 - plastics used for doors and window frames, soffits, bargeboards, fascia, guttering
 - polyvinylchloride (PVC), unplasticised polyvinylchloride (uPVC)
 - timber and manufactured boards – hardwoods, softwoods, plywood, chipboard
 - particle board, medium-density fibreboard (MDF)
 - roofing materials – slate, concrete, pantile, roofing felt, thatch, ridge, lead flashing
 - engineered timber – glulam beams, engineered joists
 - steel – mild, stainless, high strength
 - aluminium alloys.

K3.9 Combustion

Know the type of combustion and factors such as fuel air ratio, efficiency and products of combustion.

- Incomplete combustion.
- Stoichiometric.
- Fuels, solid, liquid, gas.
- Flash point.
- Smouldering.
- Diffusion.
- Rapid.
- Spontaneous.
- Flue draft, ventilation.

K4 Building structures

K4.1 Purpose, importance and types of flues and chimneys

Purpose of flues and chimneys – to vent products of combustion.

- Types of flue/chimney:
 - open
 - closed
 - balanced
 - power.
- The design and materials of flues for different fuels.
- Ventilation requirements.
- Commissioning.
- Regulations that apply to flues.
- Scientific concepts and principles, and their application to building services systems.

K5 Principles of building services engineering systems

K5.1 Types of system, their purposes, similarities and differences in operation.

Mechanical and electrotechnical components, mechanical, electrical and plumbing components, their characteristic, function within the system and implications for the systems of component failure.

Understand the purpose of building services engineering systems in buildings and know how systems operate to understand similarities and differences.

Cold water (mains, stored)

The practices associated with the provision of cold-water systems. The systems used to supply buildings with potable cold water for drinking, flushing toilets, bathing, laundry and to feed heating systems, and the situations in which each system would be appropriate.

- Direct cold-water systems:
 - distribution to buildings:
 - service pipe minimum of 750 mm below ground
 - pipe to pass through wall above foundations
 - pipe to be sealed at entrance to wall
 - first 600 mm of pipe to be insulated
 - stop valve
 - rising main to drinking water tap
 - storage cistern
 - internal layout of system, to include:
 - direct supply to all outlets
 - requirement for low-capacity cistern to feed a hot water storage cylinder if installed
 - annotated line diagram for the layout showing key components
 - selection of materials used, dimensions and capacities:
 - externally – 22 mm diameter service pipe, generally plastic (blue polyethylene or uPVC), although copper is acceptable
 - internally – copper or plastic pipes (generally 15 mm diameter, 20 mm for baths),
 - 115-litre feed cistern (with 22 mm diameter overflow and feed to copper hot water)
 - storage cylinder (if installed), cisterns made from polyethylene, polypropylene or polyvinyl chloride (galvanised steel in older systems)

- situations where system is appropriate:
 - where water pressure is high or where drinking water is required from all outlets; inappropriate when supply is cut off or reduced
 - in periods of peak demand, or where there is a danger of back-siphonage.
- Indirect cold water systems:
 - internal layout of system, to include:
 - cold water supplied to all outlets (except the sink) from a cold water storage cistern
 - sink connected directly to rising main for supply of potable water
 - annotated line diagram for the layout showing key components.
- Selection of materials used, dimensions and capacities, to include:
 - copper or plastic pipes (generally 15 mm diameter, 20 mm for bath), 115-litre feed
 - cistern (with 22 mm diameter overflow and feed to minimum 140-litre copper
 - hot water storage cylinder (if installed), 230-litre cisterns in polyethylene
 - polypropylene or polyvinyl chloride (galvanised steel in older systems)
 - situations where system is appropriate, to include where a reserve is required
 - should supply be cut off or reduced, where there is a risk of back-siphonage.

Hot water (direct, indirect)

The practices associated with the provision of hot water systems. The systems used to supply buildings with cold water to feed heating systems, including the provision of hot water, and the situations in which each system would be appropriate.

- Direct hot-water systems:
 - mains pressure systems, to include combi boilers
 - traditional systems, to include water heated in boiler, rises by convection to hot water
 - storage cylinder, replaced by colder water from bottom of storage cylinder, hot water drawn from storage cylinder is replaced with cold water from cistern
 - selection of materials used, dimensions and capacities to include copper pipes (28 mm)
 - diameter primary feed from boiler to hot water cylinder, 22 mm diameter cold feed from cistern to hot water cylinder, 22 mm for hot water supply to bath (otherwise 15 mm diameter), minimum 140-litre hot water cylinder, 230-litre cold water cistern
 - situations where system is appropriate, to include in soft water areas and where there is no associated central heating circuit.
- Indirect hot-water systems:
 - mains pressure system using pressure vessels
 - traditional system similar to direct system but with a separate small-capacity-feed cistern to charge and top up the primary circuit
 - hot water storage cylinder to act as a heat
 - exchanger providing heat for secondary circuit from which hot water is drawn
 - selection of materials used, dimensions and capacities:
 - as for direct systems plus 36-litre plastic feed and expansion cistern
 - situations where system is appropriate, to include hard water areas and systems with associated central heating circuits.

Drainage

Above-ground drainage

- The design of above-ground drainage systems, to include:
 - need for water seal
 - reduction of siphonage effect
 - provision of ventilation
 - fall for the waste pipes.

Above-ground drainage approaches

- Single-stack and two-pipe systems designed to prevent siphoning and discharge of gases.
- Single-stack and two-pipe systems, to include:
 - single-stack, to include waste from washbasins, sinks, baths and WCs, feeds into single 100-mm vertical waste pipe, vented to outside above the roof line
 - all appliances have U-bend trap full of water (exceptions may be kitchen sink and cloakroom WC)
 - two-pipe system, to include older properties only, WC waste fed into a large-bore soil pipe, leading directly to sewage network, remaining waste waters from washbasins, bath and kitchen sink are combined and led to a gully just below ground level.
- Selection of layout, materials used, dimensions and falls, to include:
 - all in uPVC or polypropylene
 - 100-mm diameter soil and vent pipe (SVP)
 - appliances connected separately into the stack to prevent induced and self-siphonage
 - limits on the length and levels of branch connections
 - all branch pipes to have 50 mm sweep into SVP
 - compliance with regulatory requirements
 - annotated line diagram for the layout showing key components.

Below-ground drainage

- The design of below-ground drainage systems, to include:
 - capacity
 - fall for self-cleansing flow
 - ventilation
 - support
 - avoidance of leakage
 - access at every change in gradient (inspection chambers, manholes, rodding points)
 - pipe size or bend
 - minimisation of pipe runs
 - all junctions oblique and in direction of flow.

Below-ground drainage approaches

- Separate systems used for surface and foul water as the standard modern method, to include:
 - separate systems used for surface and foul water where surface water and foul water are conveyed in separate drains and sewers
 - surface water requires no treatment before final outfall.

- Combined systems for surface and foul water where surface water and foul water are both conveyed in the same drain and sewer, to include:
 - entire effluent requires treatment
 - simpler and cheaper to construct, but more expensive to operate
 - a traditional approach not preferred in new constructions.
- Selection of layout, materials used, dimensions, falls and capacities:
 - rigid pipes, to include vitrified clay, concrete, cast iron
 - flexible pipes, to include uPVC, polyethylene, ductile iron, glass-reinforced plastic
 - appropriate falls for surface water and foul water drainage
 - appropriate bedding materials for pipes and surrounds
 - annotated line diagram for the layout showing key components.

Space cooling

- Air-conditioning systems and refrigeration:
 - air-conditioning processes and cycles
 - psychrometric terms and properties of air and water vapour, to include calculation, measurement, tables, charts
 - psychrometric process lines, to include
 - sensible heating and cooling
 - dehumidification and humidification (using different types of humidifiers)
 - resulting condition from mixture of two air streams.

Ventilation – extract fans/indoor air quality

The consideration and selection of appropriate ventilation and air-conditioning plant, equipment and materials.

Air-terminal devices

The use of air-terminal devices to control the flow of air to ensure a comfortable environment for building users and stakeholders.

- Installation requirements and application of supply and extract air-terminal devices:
 - characteristics
 - terminology
 - operational features
 - materials.
- Control of air quality and direction of air discharge in supply and extract devices:
 - operational features
 - installation requirements
 - materials
 - suction dynamics, to include booths, canopies, hoods and other extraction devices
 - used in commercial kitchens and industrial applications, to include grease filters
 - grease removal and fire prevention in kitchen canopies.

Ductwork, jointing and systems

The characteristics and selection of appropriate ductwork materials and related service components.

- Ductwork shapes and materials used for heating, ventilation and air-conditioning (HVAC) systems.
- Support systems.

- Characteristics and features of jointing:
 - assembly
 - installation procedures.
- Relationship between physical properties of ductwork materials and their application.
- Flexible and fire-rated ductwork.
- Criteria for selection of materials and shape.
- Published standards and specifications for ductwork.
- Ancillary components:
 - characteristics
 - operational features and selection criteria of various types of ductwork items, to include:
 - volume-control dampers
 - fire and smoke dampers
 - access doors
 - flexible connectors
 - test points.

Air-handling units

The different elements of air-handling units and plant, including reasons for their use and the benefits that they provide for the building users and stakeholders.

- Air-handling plant:
 - types of fan, to include characteristics, operational features and applications of fans
 - types of drive
 - installation requirements and ductwork connections.
- Heater/cooler batteries:
 - types, material characteristics, operational features and applications of
 - heater batteries
 - chilled water and direct expansion (DX) cooling coils, to include installation requirements and ductwork connections.
- Heat-recovery devices:
 - types of heat-recovery device
 - characteristics, operational features and application of heat-recovery devices, to include installation requirements and ductwork connections.
- Air-cleaning devices:
 - terminology and definitions associated with filters and air-cleaning devices
 - group and class of filters
 - filter testing methods
 - type, characteristics, operational features and applications of filters and dust
 - collection/removal devices for air-handling systems, to include installation requirements and ductwork connections.

- Humidifiers:
 - types of humidifier
 - characteristics, operational features and applications of humidifiers, to include:
 - installation requirements and ductwork connections
 - water supply
 - maintenance
 - health and safety implications of humidifiers.
- Refrigeration plant:
 - principles, components and application of vapour-compression refrigeration systems
 - application of refrigeration in air-conditioning systems
 - operation, features and applications of heat pumps.
- Air-handling units:
 - configuration and features of simple units, to include:
 - composite air-handling units (AHUs)
 - local exhaust ventilation systems
 - dust collection
 - packaged air-conditioning systems
 - control requirement and arrangements for ventilation and warm air-handling installations.

Heating

The selection of a heat emitter, including the assessment of output requirements in meeting the design parameters.

- Radiators, to include panel, sectional, low surface temperature, compact.
- Towel rails.
- Underfloor heating
 - size of heat emitters required for comfortable temperature, taking into account the floor area and volume of the space being heated
 - heat losses associated with the area and volume being heated
 - size versus available space
 - aesthetics of emitter
 - heat output and efficiency
 - positioning and access for servicing.
- Boilers – the selection of an appropriate boiler to meet the design parameters of:
 - maintaining effective flow rates
 - efficiency for Part L of the Building Regulations
 - reduction in CO₂ emissions output required
 - operating costs
 - type of available fuels
 - combustion and ventilation requirements
 - capacity for future expansion
 - positioning and access for servicing
 - combination condensing systems
 - system boilers
 - traditional/conventional boiler – vented
 - biomass fuel boilers.

- Pipework circuits – design of circuits that are efficient in terms of the delivery of hot water to the discharge point or tap:
 - pipe-sizing calculations
 - flow rates required
 - friction losses
 - maintaining a balanced system
 - use of secondary returns
 - means of isolation for maintenance purposes
 - requirements for zoning of systems.
- The characteristics of the materials and components that will be used to carry hot water efficiently:
 - materials selection
 - plastic
 - copper.
- Type of jointing method:
 - soldered
 - push fit
 - crimped
 - compression.
- Pumps – the selection of a pump to meet the design parameters of:
 - sizing of pumps for volumes to be moved
 - pump margin and duty
 - selection in balancing design against availability
 - pump efficiency
 - reliability
 - lifespan
 - pump maintenance
 - positioning and access for servicing
 - use of valves to allow easy replacement.
- Expansion vessels – the selection of appropriate expansion vessels to meet the system's requirements:
 - size and capacity in maintaining flow rates for heat distribution
 - anticipated thermal expansion
 - location in the installation
 - means of pressure adjustment.
- Access and maintenance components, accounting within the design for access to valves, radiators, boilers, pipework for maintenance and adaptation, to include consideration of thermal expansion:
 - air bleeding of system either manually or automatically
 - position of boiler for ventilation and combustion requirements
 - position of boiler flue
 - combustion air-flow requirements
 - access panels to valves.

Electrical installations

- The principles of the provision of simple, single-phase electrical systems:
 - a typical circuit to include the following components:
 - mains isolation switches, to include main service fuse, meter, main switch
 - consumer control unit, to include residual current devices (RCD), miniature circuit breakers
 - (MCB) or fuses
 - earth connectors
 - socket outlets
 - electrical accessories.
- Ring circuits for a maximum permissible floor area:
 - circuits, to include:
 - line conductor and neutral conductor
 - CPC looped from socket to socket
 - protected by 32 amperes (A) fuse or miniature circuit breaker
 - socket outlets, to include individual as well as spur outlets:
 - individual socket outlets to accept fused appliances up to 13 A
 - unlimited number of socket outlets
 - spur outlets not to exceed number of primary outlets
 - maximum of two outlets per spur.
- Radial circuits – radial circuits for lighting and individual high-power appliances:
 - lighting, to include loop-in method using earthed twin cable
 - individual high-power appliances, to include electric cookers, showers, water heaters, protected up to 45 A, depending on power taken by appliance.

Components and applications

- Components – their use and behaviour in electrical and electronic circuits used in building services engineering:
 - electrical conductors
 - electrical insulators
 - cells
 - generators
 - resistors:
 - colour code – capacitors and capacitance, inductors and inductance
 - thermocouples
 - use of AC and DC.
- Transformers.
- Operating principles of single-phase transformer.
- Transformer construction.
- Transformer ratings.
- Circuit equivalent of a transformer.
- Transformer regulation, including:
 - iron losses, copper losses and eddy-current losses.
- Transformer efficiency.
- No-load and on-load phasor diagrams.

- Types of transformer:
 - small power
 - large power
 - auto
 - three-phase
 - current and voltage transformers.
- Transformer cooling methods.
- Calculations to apply transformer, to specify transformers and determine efficiency.
- Practical applications of transformers:
 - step-up voltage and current
 - step-down voltage and current
 - to isolate
 - to measure voltage and current.

Earthing and bonding

- The statutory measures that must be met in the design of electrical installations and their impact on electrical safety:
 - earthing principles:
 - protection against electric shock
 - protective conductors
 - earth and ground rod.
 - bonding requirements and methods:
 - main
 - supplementary bonding
 - equipotential bonding.
- Final circuits and circuit protection:
 - the safety devices that must be incorporated in the consumer unit and the design of electrical installations, and the benefits they provide:
 - breaker and circuit breakers (CB)
 - miniature circuit breaker (MCB)
 - residual current device (RCD)
 - residual current circuit breaker with overcurrent protection (RCBO).
- Wiring methods and techniques – the types of cable, wiring and electrical system that need to be considered and specified in an electrical installation and how this is achieved:
 - cable type:
 - meter tails
 - twin (2, 3 and 4) core and earth
 - live (L)
 - neutral (N)
 - earth (E)
 - steel-wire armoured (SWA)
 - flexible cords
 - powerlines

- the characteristics of the material and components that will be used to carry and distribute electricity safely:
 - materials selection
 - earthing and bonding
 - size of cable
 - 1 mm² PVC insulated twin and earth
 - 1.5 mm² PVC insulated twin and earth
 - 2.5 mm² PVC insulated twin and earth
 - 6 mm² PVC insulated twin and earth
 - 10 mm² PVC insulated twin and earth
 - 1.5 mm² 3-core and earth
 - 1.5 mm² earth
 - 25 mm² meter tails
- power outlets:
 - fused spur
 - switched fused spur
 - junction boxes
 - cooker points
 - external sockets
 - built-in USB chargers
 - shaving points
- switches:
 - pull chord
 - single pole
 - switched stairway lighting
 - dimmers
- lighting:
 - IP ratings
 - fire protection for down lighters
 - light-emitting diode (LED) under cabinet and kickboard lighting
 - security
 - garden lighting.
- Opportunities for smart (i.e. internet enabled) and wireless control interfaces/systems to be appropriate for greater convenience and energy efficiency for the consumer.

Design of a building services engineering system that meets the client brief

Wiring – design of an electrical installation for a property, with due consideration that demand and power requirements are safe.

Power requirements – key elements to consider in circuit design for construction projects.

- Location of distribution board and equipment.
- Suitable circuit arrangements.
- Cables and wiring systems.
- Current carrying capacity.
- Number and location of socket outlets and other power loads.
- Cable routing.

- Wiring methods and techniques:
 - the types of cable, wiring and electrical system that need to be considered and specified in an electrical installation and how this is achieved
 - cable type:
 - meter tails
 - twin (2, 3 and 4) core and earth
 - live (L)
 - neutral (N)
 - earth (E)
 - steel-wire armoured (SWA)
 - flexible cords
 - powerlines
 - wiring systems:
 - final radial and loop
 - ring final circuit (RFC)
 - spur
 - floor area limits for each circuit
 - 12 V down lights o transformers
 - smoke and fire alarms
 - intruder
 - data and communications
 - bathroom extraction isolation
 - central heating systems, to include boiler control panels, thermostats, underfloor heating
 - cable protection:
 - PVC and sheathed
 - trunking metal and plastic
 - voltage drop
 - cable capacity
 - current capacity and cable sizing:
 - ring main
 - showers
 - immersion heaters
 - cookers
 - night-storage heaters electric bathroom towel heaters
 - lighting.
- Automatic disconnection of supply (BS7671).
- The selection of luminaires to meet user requirements and standards, including the assessment of output levels to meet design requirements and to fulfil legal parameters, to include:
 - lamps and luminaires
 - cables and wiring systems
 - switching arrangements:
 - one way
 - two way
 - intermediate

- lighting zones:
 - ingress protection (IP rating)
 - cable routing
 - illumination levels
 - glare rating inverse square law of illumination
 - cosine law of illumination
 - lumen calculation for the number of luminaires for artificial light installations
 - spacing ratios
 - glare assessment and prevention.
- Design meets performance requirements.
- Proposed design is within available budget.

K5.2 Types of control system, their purposes, components, similarities and, differences

Digital signal processors (DSP) takes real-world signals, such as voice, audio, video, temperature, pressure or position, that have been digitised. The use of digital signal processors (DSP) in the control of building services systems.

Understand the principles associated with building services control systems

- The working principles of control systems to provide effective control of the internal environment of the building, providing appropriate comfort levels for the end user.

Understand control loops

- How control loops are used in control systems, the benefits and drawbacks of each type, including how inputs, decisions and outputs interrelate:
 - open loop
 - closed loop
 - single loop
 - multi loop.

Modes of control

- Main modes of control and their uses, including the advantages and drawbacks for a range of situations:
 - two position
 - proportional
 - integral
 - derivative
 - proportional-integral (PI)
 - proportional-integral-derivative (PID).

Purpose of control systems

- The use and benefits provided by building services control systems for building users and other stakeholders:
 - how building services are controlled and impact on the stakeholder's comfort and use of the building
 - consequences of poor control
 - effects for the building owner and environment
 - legislative requirements.
- Apply the principles of building services control systems and the function and operational characteristics of control systems.
- The purpose of controls systems, their operational characteristics and the effects of poor control systems on the environment.

K5.3 Monitoring systems

- Types of system:
 - digital
 - analogue.
- How they collect and transmit data.

K6 Understand sources of information used in the analysis, design and verification of building services engineering, their content and purposes, and the digital applications to record and present information.

K6.1 The different sources of information – visual forms – to present information and data:

- drawings – BS1192
- charts
- graphs
- diagrams
- information and data sources:
 - manufacturers' – brochures, data sheets, specifications, operating manuals and guides
 - client records – maintenance reports, logs
 - third-party sources – utility companies, planning authority
 - specifications – NBS
 - legislation – Building Regulations, health, safety and welfare, gas and electrical regulations
 - survey data
 - digital applications
 - data resulting from analysis
 - data resulting from design
 - data resulting from commissioning and operation
 - conventions
 - symbols.

Performance Outcome 2: Design building services

There are two key abilities that are needed when designing building services: the ability to communicate with a client and the ability to design different building services.

The building services to be designed include:

- ventilation
- air conditioning/cooling
- plumbing
- drainage
- hot water supply
- cold water supply
- heating
- electrical supply
- lighting
- mechanical services.

1. Communication with the client

Underpinning knowledge

K3 Scientific concepts and principles and their application to building services systems*

K7 Construction and the built environment

K10 Design

*Please refer to the knowledge content in Performance Outcome 1. This knowledge is also underpinning knowledge for Performance Outcome 2.

Skill content

Explore requirements of the task, using open questioning and listening. (S2.1)

- Identify which questions should be asked of a client to assist with the understanding of a task and, depending on the response, what follow-up questions should be asked. (This could be demonstrated through students listening to a recording and providing written questions.) **(E1, E2)**
- Using questioning to seek information.
- Building systems:
 - ventilation
 - air conditioning/cooling
 - plumbing
 - drainage
 - hot water supply
 - cold water supply
 - heating
 - electrical supply
 - lighting
 - mechanical services

- Use communication software to communicate with others: **(D1, E3)**
 - email
 - instant messaging
 - social media
 - video conferencing.

Use appropriate information and data. (S2.2)

- Be able to carry out the design of a building services engineering system that meets the client brief.
- Be able to convey technical information to colleagues, with rationale for decisions made for design: **(E1)**
 - for chosen building services equipment
 - using sketches and supporting notes.
- Ensure proposed design meets performance requirements.
- Carry out costing.
- Ensure proposed design is within available budget.

Underpinning knowledge

K7 Construction and the built environment industry

K7.1 Planning permission and building regulations relating to all notifiable works

Planning application processes – law and procedures used to apply for and obtain planning permission, and processes for appeal if permission is refused or conditions have been attached; the systems used when planning law is not observed.

- When permission would be required.
- When permission would not be required.
- How legislation relates to planning permissions and building regulations for notifiable works:
 - Town and Country Planning Act 1990
 - Town and Country Planning (Use Classes) Order 1987
 - case law and legal precedent.
- Permitted development:
 - types
 - limitations.
- Stages in the planning application process:
 - application forms
 - data and information required – Environmental Impact Assessment (EIA), including purpose, legislation, stages and Schedule 2 developments, land use and traffic surveys
 - fees to be paid.

The requirements of building regulations: the specifics of the Building Act 1984 and building regulations, and how to find and use the relevant information to support building services design solutions.

- Application of the Building Act 1984.
- The requirements of the Building Act 1984:
 - definition of building work and the extent of the building regulations application
 - material alterations
 - exemptions to the regulations
 - dispensation or relaxation of the regulations.

Approved documents.

- A basic knowledge of the approved documents, how to use them and how to meet the requirements:
 - fire safety, covered in Approved Document B
 - ventilation, covered in Approved Document F
 - sanitation, hot water safety and water efficiency, covered in Approved Document G
 - drainage and waste disposal, covered in Approved Document H
 - combustion appliances and fuel storage systems, covered in Approved Document J
 - conservation of fuel and power, covered in Approved Document L
 - electrical safety, covered in Approved Document P.

K10 Design

K10.1 How designs are prepared, including design briefs, work stages, schedules, specifications, recommendations and programmes

The construction design process.

- Stages and tasks involved in the design process.
- The application of Stages 1–4 of the Royal Institute of British Architects (RIBA) Plan of Work 2013 to the tasks associated with the design of low- and medium-rise domestic, commercial and industrial buildings:
 - preparation and brief
 - concept design
 - developed design
 - technical design.

Factors that influence the design process.

- Requirements and constraints, and their impact on the initial project brief and design process for combinations of rural, urban, greenfield and brownfield settings:
 - client requirements for the project outcomes
 - building use, including domestic, industrial, commercial, retail, health, cultural and recreation; how the building operates within its defined use
 - the project's spatial requirements – building size, layout, circulation space, number of floors, number and use of rooms
 - flexibility and remodelling potential
 - future extension potential to meet residential needs and business expansion
 - external and internal aesthetics, types and use of materials
 - sustainability, energy efficiency, alternative types of energy source
 - age demographic of building user(s); needs of different building users.

Site information and constraints:

- site features – location, size, configuration, orientation, access, topography
- building services availability
- existing buildings and structures
- existing underground services.

Planning constraints:

- planning consent/approval
- avoidance of air, water and noise pollution
- the findings of Environmental Impact Assessments (EIAs) and their use in developing designs for a project.

Project budget and economic constraints:

- cost planning
- available funds
- life cycle costs.

K10.2 The level of detail needed in designs for different situations, and the importance of detail in communicating the design intent

Initial project brief:

- The initial project brief's purpose and its application.
- Content of an initial project brief:
 - spatial requirements
 - desired project outcomes
 - site information
 - budget requirements
 - preliminary programme.
- Use of an initial project brief to generate and develop design ideas and specifications.
- Completion of an initial project brief.
- Use of appropriate tone and technical language for the target audience to communicate the design intent.

K10.3 The implications of statutory obligations to designs

The definition of statutory obligations and how they apply to:

- planning and building regulations
- health and safety
- environment and pollution
- noise.

K10.4 The use and importance of specifications

The purpose and application of specifications to building services engineering design, construction and operation.

- Prescriptive and performance specifications, and the source of specifications for:
 - materials
 - components
 - design process
 - workmanship.
- Importance of specifications – compliance, detail of design.

K10.5 The relevance of measurement in the design process

How measurements are made, and their importance to building services engineering design:

- selection and use of measuring equipment
- accuracy of measuring equipment
- human error
- effect on the design process and specification of plant and equipment
- effect on the placing and fixing of plant and equipment.

Types of measurement:

- area (net and gross) volume, height and length.

2. Design of building services

Underpinning knowledge

K1 Health and safety – only 1.3 and 1.4

K2 Sustainability – only K2.4 and K2.5*

K3 Scientific concepts and principles, and their application to building services systems*

K4 Building structures*

K5 Principles of building services engineering systems*

K6 Sources of information, their content and purpose*

K7 Construction and the built environment industry

K8 Building technology – covered by K3.8, K5.2 and K5.3*

K9 Digital technology

K10 Design

*Please refer to the knowledge content in Performance Outcome 1. This knowledge is also underpinning knowledge for Performance Outcome 2.

Skills

The skills will draw on underpinning knowledge appropriate to the context of the scenario. Please refer to the *Occupational Specialism Building Services Design – Specimen Assessment Material (SAM)* for an example of how underpinning knowledge can be drawn on to meet skills for Performance Outcome 2.

S2.2 Use appropriate data and information.

S2.3 Conduct precedent research, including best practice, benchmarks and design guides.

S2.4 Quality assure provided data.

S2.5 Plan logistics including life cycle, costing, maintenance and installation.

S2.6 Apply appropriate mathematical techniques in a construction context.

S2.7 Model design, using digital software and other tools.

S2.8 Present appropriate design information and data, using different methods and formats.

S2.9 Enter data into digital engineering software.

S2.10 Provide creative solutions to challenges arising from requirements.

S2.11 Adapt design proposals in response to design constraints and stakeholder feedback in terms of time, cost and material factors.

Skill content

S2.2 Use appropriate data and information.

- Be able to carry out the design of a building services engineering system that meets the client brief.
- Be able to convey technical information to colleagues with rationale for decisions made for design: **(E1)**
 - for chosen building services equipment
 - using sketches and supporting notes.
- Ensure design meets performance requirements.
- Ensure proposed design is within available budget.

S2.3 Conduct precedent research, including best practice, benchmarks and design guides.

Understand the range of information that needs to be collected and considered in the design of a building services engineering project:

- information on existing plant and equipment
- survey information
- design proposals for new building works
- appropriate design guides, standards and codes of practice for the services to be designed
- information on recent, similar designs to enable benchmarking.

S2.4 Quality assure provided data.

Review provided data against other sources of data to confirm accuracy and reliability:

- observations
- survey information
- test data.

S2.5 Plan logistics, including life cycle, costing, maintenance and installation.

Understand how to prepare a plan for the life cycle of a building, including the life cycle cost, from the installation of the plant to demolition:

- installation of plant and equipment
- commissioning
- operating
- running costs
- routine maintenance
- replacement.

Development of schedules for clients and colleagues, using different sources of information and data, and synthesising the information to support decision-making: **(E2/E5)**

- servicing
- maintenance
- replacements.

S2.6 Apply appropriate mathematical techniques in a construction context.

Understand appropriate mensuration techniques in design calculations, take-off and costing calculations for building services plant and equipment, to calculate regular areas, volumes and quantities of materials, using the correct units.

S2.7 Model design, using digital software and other tools.

Understand and use software to produce building service layout drawings and communicate/confirm design decisions: **(D2)**

- computer-aided design (CAD) – software used to produce highly detailed technical drawings (E1)
- BIM in modelling designs, to show conflict of building elements in design
- other appropriate computer software.

S2.8 Present appropriate design information and data, using different methods and formats.

Understand how to present design information for building services engineering systems for a range of uses, including:

- project planning
- production of quantities
- selecting plant, equipment and materials.

Understand the different ways of presenting information:

- drawings – layout details or wiring diagrams, with correct annotation and labelling
- schedules of plant, equipment and materials, with appropriate details of each
- commissioning sheets, with the design parameters to be confirmed through testing or observation
- computer software to present design information. **(D1)**

S2.9 Enter data into digital engineering software.

Know how to enter the correct data to:

- design software, including spreadsheets, to enable the design of building services plant, equipment or materials (D1)
- plant and equipment software driven controllers.

S2.10 Provide creative solutions to challenges arising from requirements.

Understand how to be able to deal with building services engineering system situations, where a straightforward solution is not immediately obvious, but through independent thought a solution to the problem is found. This may include, but is not limited to:

- equipment and plant selection
- materials selection
- control system selection.

Be able to synthesise information to support design decision-making: **(E5)**

- from the client
- historical data/surveys
- pre-surveys.

Be able to summarise ideas/information about designs and present them to others. **(E4/E2)**

Be able to create text for different purposes and audiences, including clients and colleagues. **(E3)**

S2.11 Adapt design proposals in response to design constraints and stakeholder feedback in terms of time, cost and material factors.

Understand that alternative solutions may be available to meet a building services engineering problem.

The reasons for a solution to be adapted may include, but are not limited to:

- client feedback – cost, aesthetics, operating requirements
- building constraints – available space for plant rooms, loading capacity, layout, position of structural members
- planning constraints – external equipment and plan, noise.

Underpinning knowledge

K1 Health and safety

K1.3 and K1.4 CDM responsibilities and legal health and safety implications of designs

Understand why relevant administration and management tasks must be carried out to ensure that a construction site is a safe place of work:

- Adhere to The Construction (Design and Management) Regulations 2015 – improve health and safety in the industry:
 - the duties of the designer, the identification of hazards and risks at design stage, and methods of assessment, e.g. Design Risk
 - sensibly plan the work so the risks involved are managed from start to finish
 - have the right people for the right job at the right time
 - cooperate and coordinate your work with others
 - have the right information about the risks and how they are being managed
 - communicate this information effectively to those who need to know
 - consult and engage with workers about the risks and how they are being managed.
 - Assessments
 - further development of risk assessments, including for changing design, site or weather conditions
 - risks through the whole life cycle of the development – design, procurement, construction, operation, decommissioning
- Ensure maintenance of plant/equipment is carried out.
- Consider building life cycle.
- Health and safety preparation:
 - client to appoint Principal Designer
 - notifications to HSE, completion of F10 documentation
 - health and safety construction phase plan – contents and safe systems of work (SSW)
 - preparation of site induction content, inclusions, method of delivery
 - preparation of the site waste management plan, its content and specific requirements
 - safety poster provision, gate and entrance signage and notices, formal gate notifications
 - construction phase health and safety
 - delivery of site inductions and retaining records of inductions
 - identifying hazards by various methods – direct observation, checklists, audits, toolbox talks, safety committees
 - writing risk assessments and evaluating control measures – risk ratings, acceptable levels
 - writing method statements, sequencing of statements, resources to be used
 - delivering toolbox talks – method, timing, what to cover in talk, who should be present
 - issuing care and maintenance of personal protective equipment (PPE) and first-aid facilities
 - preparing temporary fire and evacuation procedures
 - instructing on waste disposal, segregation, good housekeeping
 - managing subcontractors' safety information, site meetings.

- Health and safety file:
 - preparing file contents in accordance with the requirements of the Construction (Design and Management) Regulations 2015:
 - residual hazards that remain and how they have been dealt with – information concerning asbestos, contaminated land, buried services
 - key structural information – bracing, sources of substantial stored energy, including pre- or post-tensioned members
 - safe working loads for floors and roofs, particularly where these may prohibit placing scaffolding or heavy machinery
 - hazardous materials used, including manufacturers' data sheets – pesticides, special coatings that should not be burnt off
 - information regarding the removal or dismantling of installed plant and equipment – any special arrangements for lifting, special instructions for dismantling
 - health and safety information about equipment provided for cleaning or maintaining the structure
 - the nature, location and markings of significant services, including underground cables, gas supply equipment, firefighting services
 - information and as-built drawings of the structure, its plant and equipment – the means of safe access to and from service voids, fire doors and compartmentalisation
 - reviewing documentation
 - file distribution.
- Risk assessment for specific engineering processes, following guidance from the HSE, including:
 - identification of hazards
 - bad housekeeping
 - poor lighting
 - lack of grip/uneven surfaces/heights
 - lifting and handling operations
 - hand tools, machines
 - substances
 - heat/flammability
 - assessing risk by determining how hazards can cause injury – being struck, lifting and handling injury, falls, slips, trips, traps
 - using appropriate control measures and precautions to reduce risk – substitution, safe means of access and egress, safe systems of work (permits to work), periodic inspection, testing and maintenance, physical barriers (guarding), PPE, supervision and training, good housekeeping, cleaning regime
 - recording all findings
 - standard HSE (five steps)
 - reviewing the risk assessment after new equipment/work activities have been undertaken, at regular intervals.

K8.2 Understanding mechanical, electrical and plumbing components (refer additionally to K5)

Plumbing*

Types of appliance:

- washbasins
- WCs
- baths
- bidets

- shower valve arrangements
- sinks
- washing machines
- dishwashers
- fridges with water and ice dispensers
- water boilers.

K9 Digital technology

K9.1 Specialist software and digital tools

Specialist software for the design of building services installations: how the software can aid design, and the advantages and disadvantages.

- Software may cover a range of disciplines such as:
 - 3D calculation of thermal conductivity to aid the design of building services in buildings
 - heat-loss calculations
 - heating system design
 - electrical design
 - lighting design.

K9.2 Digital design tools

How design tools can be used to produce different building services layout drawings.

- Principles of building services engineering drawings:
 - attributes of orthographic projections, including:
 - geometry – shape of the component represented as different views, how the component is viewed from various angles, visibility of component features
 - dimensions – size of the component in defined units
 - tolerances – allowable variations for defined dimensions
 - material – what the component is to be made from
 - surface texture – surface quality required, roughness, flatness
 - scale – relative to actual dimensions
 - drawing conventions or other relevant international equivalents, including:
 - standards including BS 8888 and BS 60617 or other relevant international equivalents
 - title block/layout – drawing number(s), projection symbols, scale, units, general
 - tolerances, name of author, date, border, parts referencing
 - views – elevation, plan, end, section, hatching style, auxiliary
 - line types – centre, construction, outline, hidden, leader, dimension
 - common features, including screw threads, springs, splines, repeated items, holes, chamfers, radii
 - circuit diagram symbols and components, including cell/battery, switch, resistor, diode
 - capacitors, transistors, integrated circuits, light-emitting diodes (LED), motors, buzzers
 - lettering – titles, notes, annotations
 - abbreviations – A/F, CHAM, DIA, R, PCD, M.
 - coordinates – absolute, relative, polar
 - drawing template – border, title block with all necessary information
 - layers – names, line types, colours, visibility
 - commands – line, circle, arc, polygon, chamfer, fillet, grid, snap, copy, rotate, erase

- stretch, trim, scale, dimensioning, text, pan, zoom-in, zoom-out, insertion and editing
- commands to produce and erase circuit components and connections
- simple and complex areas, predefined hatch patterns, application to cross-sectioning, component libraries, saving in an appropriate format.

K9.3 Digital specification tools

- BS 1192: 2007 collaborative production of architectural engineering and construction information, standard and convention requirements and their application to the different types of construction drawing.
- The National Building Specification (NBS):
 - materials
 - standards
 - workmanship.

K9.4 Digital data

- The use of spreadsheets:
 - presentation of information in tables, charts and graphically
 - extracting information
 - the reordering, sorting and manipulation of data
 - calculations
 - storing data.
- Schedules:
 - extracting information from digital drawings
 - extracting information from spreadsheets
 - presenting information in the form of a list with associated details.

K9.5 Digital presentations, image handling and desktop publishing

- The use of digital software to present information:
 - CAD drawings
 - AutoCAD walkthrough
 - podcasts/screencasts
 - digital reports
 - desktop-published brochures.

Performance Outcome 3: Verify delivery of building services solutions

Knowledge specific to Performance Outcome 3

K2 Sustainability – only K2.4 and K2.5*

K3 Scientific concepts and principles and their application to building services systems*

K4 Building structures*

K5 Principles of building services engineering systems*

K6 Sources of information, their content and purpose*

K8 Building technology**

K11 Valuations

K12 Measurements

*Please refer to the knowledge content in Performance Outcome 1.

**Please refer to the knowledge content in Performance Outcome 2. This knowledge is also underpinning knowledge for Performance Outcome 3.

Skills for Performance Outcome 3

The skills will draw on underpinning knowledge appropriate to the context of the scenario. Please refer to the *Occupational Specialism Building Services Design – Specimen Assessment Material (SAM)* for an example of how underpinning knowledge can be drawn on to meet skills for Performance Outcome 3.

S3.1 Collate information and data.

S3.2 Verify suitability of information and data from appropriate sources specific to the scope of works.

S3.3 Interpret information and data, including from visual and other sources.

S3.4 Use software with accuracy to verify specific items, utilising appropriate tools.

S3.5 Complete costings analysis through, for example, spreadsheet software.

S3.6 Present information, using oral and written communication.

Post-installation activities

Skill content

S3.1 Collate information and data

Understand the appropriate information for build drawings:

- design data
- material specifications
- plant and equipment specifications
- maintenance and operating manuals
- commissioning test data
- certificates
- approval
- health and safety file
- maintenance schedules.

S3.2 Verify suitability of information and data from appropriate sources specific to the scope of works.

Verify that information and data is valid for its intended purpose:

- site measurements – measurement of parameters to ensure they have been met
- site records – correct materials have been used
- delivery tickets – what materials have been delivered to site
- test results
- tests to check if systems are operating as specified.

Synthesise information to develop documentation for the servicing, maintenance and replacement of building service systems. **(E1, E5)**

S3.3 Interpret information and data, including from visual and other sources.

Understand how the information from commissioning tests can be interpreted to confirm that the plant operates within design parameters. Data collected will include, but will not be limited to:

- commissioning tests
- pre-commissioning tests
- operating information – visual and data
- witness reports on system behaviour.

Synthesise information to develop documentation for the servicing, maintenance and replacement of building service systems. **(E1,E5)**

Create texts of synthesised information to create: **(E3)**

- reports
- spreadsheets
- CAD
- sketches.

S3.4 Use software with accuracy to verify specific items, utilising appropriate tools.

Understand how to carry out calculations to the required degree of accuracy, using appropriate software, to verify that building services solutions have been installed and that they operate as designed and specified. Software may include but is not limited to:

- spreadsheets **(D1, D4)**
- specialist design packages **(D2)**
- CAD packages **(D2)**
- BIM.

S3.5 Complete costings analysis.

Understand, using appropriate software, how to analyse the variances between individual items and parts of a bill of quantities from the original tendered bill of quantities, and the quantiles agreed in the final account of a project. **(D4)**

S3.6 Present information, using oral and written communication. (E1, E2)

Use digital software to present information:

- CAD drawings **(D2)**
- AutoCAD walkthrough **(D3)**
- podcasts/screencasts **(D3)**
- digital reports **(D1)**
- desktop-published brochures. **(D1)**

Underpinning knowledge

(Content in italics refers to content that has already been delivered in the core but which is also required underpinning knowledge for the occupational specialism skills.)

K11.1 Industry valuation standards, guidance and practice, and how they are used to verify delivery of the built environment

Rationalise choices made when generating a developed proposition to improve an engineering product, including:

- objective referencing against product design specification/criteria
- objective referencing against weighted matrix
- indirect benefits and opportunities
- balancing benefits and opportunities with constraints (cost-benefit analysis, environmental benefits, health and safety risks, product life cycle considerations)
- design for manufacturing
- further modifications (technology-led adaptations).

K11.2 Valuation benchmarking and how it is used to verify delivery of the built environment

- Technical audits to confirm design and outputs.
- Comparison with similar projects.

K12.1 Types of measurement for the combined data

Understand how to measure building services work for the purpose of producing valuations for accounts. This will include:

- measured work – item, nr, m, m², m³
- provisional and prime cost items
- preliminaries
- lump sums
- dayworks.

K8.3 Suitability and operation of performance measurement equipment

The different types of performance measurement equipment and how they work:

- air quality: indoor air quality meter – water vapour, particulates, allergens, dust, toxic vapours and gases
- noise levels: decibel meter – levels of sound
- light levels: lux meter – luminance intensity.

K8.4 Surveying techniques

Understand the techniques used to carry out measurements and assess pipework and electrical circuits within building services engineering.

- Instruments used to check flow rates and water pressure:
 - pressure gauges for static and kinetic pressure
 - inline meters or volume per second rates for flowrates
 - manometers for gas pressure – analogue and digital.
- Instruments used for checking, verifying and problem-solving within electrical circuits, and how and why they are used.
 - multimeter or separate meters – ohm meter, ammeter, voltmeter
 - PAT testing equipment
 - continuity testing

- non-contact voltage tester
- digital clamp meter
- multifunction tester.

K12.2 Techniques for value engineering

- Business analysis methods:
 - feasibility study methodology and approaches
 - other feasibility and viability methods:
 - PESTEL (political, economic, social, technological, environmental, legal) analysis
 - SWOT (strengths, weaknesses, opportunities, threats) analysis
 - 5 Cs (customer, company, competition, collaborators, context) analysis
 - Porter's Five Forces
 - cost-benefit analysis.
- Residual method of valuation:
 - feasibility factors:
 - changes in floor area, volume, elements price indices and use
 - availability of land, labour and finance
 - client requirements
 - planning and regeneration policy changes
 - legal and environmental requirements
 - specification standards
 - local property market and rental yield
 - client's approach/attitude to sustainability and the impact on the environment.
- Modelling and testing of factors impacting on projects:
 - modelling and testing of current costs, opportunities and constraints
 - modelling and testing of alternative scenarios
 - forecasting and reporting techniques:
 - cost forecasting, including cash flow, profit, return, cost and value
 - liquidity, including borrowing, working capital and profitability
 - use of software packages.

K12.3 Rules of measurement and contractual implications

Standard methods of measurement – the use of the Standard Methods of Measurement (SMM) rules in the production of quantities.

- Measurement rules:
 - the need for rules
 - origins of measurement rules
 - measurement initiative steering group
 - status of the Royal Institution of Chartered Surveyors (RICS) New Rules of Measurement (NRM)
 - status of the Institution of Civil Engineers (ICE) Civil Engineering Standard Method of Measurement (CESMM)
 - typical considerations:
 - units of measurement
 - deduction of voids
 - deemed to be included
 - item description
 - hierarchy of description

- key content
 - preliminaries and measured work
 - guidance on the preparation of bills of quantities.
- The New Rules of Measurement (NRM):
 - NRM 2 – detailed measurement for building works:
 - application to taking off quantities for projects
 - uses of NRM 2
 - NRM 3 – order of cost estimating and cost planning for building maintenance works:
 - application to maintaining projects
 - uses of NRM 3.
- CESMM:
 - content and its application to civil engineering projects
 - differences against the NRM volumes.

Scheme of Assessment – Building Services Design

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* consists of four Occupational Specialist Components:

1. Surveying and Design for Construction and the Built Environment
2. Civil Engineering
- 3. Building Services Design**
4. Hazardous Materials Analysis and Surveying

Students will be able to take one of the Occupational Specialist Components as part of their *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

There is a single synoptic assessment for the Occupational Specialist Component, which is an extended 'design, development and implementation' project. The synoptic element of the project is important in order to ensure that students are able to demonstrate threshold competence: this is the principal reason why the Occupational Specialism is assessed via a single extended project assessment to ensure that students are able to evidence all the skills required by the Performance Outcomes.

The mapping, timings and scheduling and preparation for assessment shown below are for the current specimen assessment material, the assessment will have the same overarching number of tasks and overall focus but the order of tasks and the detail within the task may change each series.

Occupational Specialism assessment: Building Services Design
Externally assessed project: 20 hours 40 minutes 100% of the Occupational Specialist Component assessment 180 marks Graded P, M and D
Content overview Students are required to: <ul style="list-style-type: none">• analyse building services solutions• design building services solutions• verify delivery of building services solutions. The building services that will be covered for this assessment consist of the following: <ul style="list-style-type: none">• ventilation• air conditioning/cooling• drainage• hot water supply• cold water supply• heating• electrical supply• lighting• mechanical services.

Assessment overview

This project will be set by Pearson and externally marked by Pearson.

Students will respond to a client brief to analyse information, design building services solutions and verify delivery of the solutions.

The project will show students implementing skills in tasks such as:

Task 1: Students will analyse project information and make notes on information required for design calculations, stating where information can be sourced, quality assuring data and stating why information is required. Students will produce project management documentation using an appropriate IT package. Students will respond to a communication from the client, using a professional email requesting more information.

Task 2a: Students complete design calculations related to the required information for the building service at hand.

Task 2b: Students prepare design notes indicating and justifying the selection of components and justifying the overall design solution for the building service at hand.

Task 2c: Students use CAD to add the proposed elements of the designed solution for the relevant building service to the plans for the building.

Task 3: Students complete design calculations related to the required information for the building service at hand. Students design the solution for the relevant building service including producing annotated sketches indicating location of key components. Students prepare design notes detailing the rationale for the design of the relevant building service solution.

Task 4: Students design the solution for the relevant building service, including providing supporting calculations to justify the design as well as indicating components chosen for the proposed solution. Students consider how a variation to the requirements in relation to this service could be implemented and explain how this would impact on the design solution and components.

Task 5: Students produce a servicing, maintenance and replacement schedule over a period for one of the building services giving justifications for each item. Students review the commissioning documentation for one of the building services to identify completeness of the paperwork and installation along with remedial actions.

Task 6a: Students use a spreadsheet to complete an analysis comparing the original tender price of one of the building services with the final account figures. Students provide commentary on variations, the reasons for changes in cost and any recommendations.

Task 6b: Students produce a presentation summarising the findings of the price comparison analysis.

Timings and scheduling

Task	Assessment session	Assessment scheduling	Time
Task 1	1	Taken in a single session at a time specified by Pearson.	3h 0m
Task 2a	2	Taken on a day specified by Pearson, with all students beginning the task at the same time.	2h 0m
Task 2b	3	Taken on a day specified by Pearson, with all students beginning the task at the same time.	2h 0m
Task 2c	4	Completed in an individual student slot scheduled by the Provider within a one-week window.	1h 30m
Task 3	5	Taken in a single session at a time specified by Pearson.	3h 0m
Task 4	6	Completed in single slot scheduled by the Provider within a one-week window.	3h 0m
Task 5	7	Taken in a single session at a time specified by Pearson.	3h 0m
Task 6a	8	Taken in a single session at a time specified by Pearson.	3h 0m
Task 6b	9	Recording of a presentation, completed in an individual student slot scheduled by the Provider within a one-week window.	0h 10m (slot)

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* Occupational Specialist Component project consists of a number of activities grouped into a number of substantive tasks.

Each task will be completed during a window set by Pearson, during which you will schedule supervised assessment sessions. In some cases, tasks will also involve opportunities for unsupervised assessment, where the requirements of the skills being assessed make this necessary.

Performance Outcomes

In this assessment, students will:

Building services design		
Performance Outcome	Descriptor	Weightings
1	Analyse building services solutions	25%
2	Design building services solutions	55%
3	Verify delivery of building services solutions	20%

Preparation for assessment

Students will submit evidence for tasks in either hard copy or electronic/digital format. Where an electronic/digital submission is made, students need access to computers and the appropriate software. A summary of the submission requirements for each task is given below.

Task	Sub-task	Evidence type
1	a	Digital submission.
1	b	
2	a	Hard copy submission.
2	b	Hard copy submission.
2	c	Hard copy submission – CAD software.
3	a	Hard copy submission.
3	b	
3	c	
4	a	Hard copy submission.
4	b	
5	a	Hard copy submission.
5	b	
6	a	Digital submission – spreadsheet, word processing software.
6	b	Digital submission – presentation software and recording.

A summary of preparation work that providers need to carry out before assessments take place is given below.

Task	Preparation work required
Task 6b	<p>Students will need access to audio equipment/screen casting equipment and will need to be able to record their presentation.</p> <p>They will need access to an appropriately quiet environment in which to complete their presentation recording.</p>

8. Occupational Specialist Component: Hazardous Materials Analysis and Surveying

Content Summary

The content is separated into four performance outcomes, along with the skills needed to achieve threshold competence and the knowledge to underpin skill application across the following areas.

Performance Outcome	Key content areas	Skills
1. Inspect the built environment	K1 Health and safety K1.1 Public liability laws to consider when inspecting the built environment K1.2 Implications of poor health and safety performance (ethical, legal, financial) K1.3 Risk management K1.4 Safety-conscious behaviours required when inspecting built environments K2 Commercial/business K2.1 Confidentiality K3 Hazardous materials K3.1 How the use and regulation of hazardous materials (including asbestos) have changed over time K3.2 The intended construction purpose of hazardous materials (including asbestos) and where they are likely to have been used in buildings	S1.1 Identify information required to complete the task. S1.2 Sequence and prioritise research tasks. S1.3 Collect information from primary and secondary sources as appropriate, including samples and historic records. S1.4 Extract relevant information from appropriate sources to identify potential for the presence of hazardous materials. S1.5 Process data, including collation and entering into digital software, using appropriate techniques. S1.6 Quality assure collected data. S1.7 Complete required documentation, including method statements and reports, using digital software. S1.8 Assess health and safety risks associated with the environment and task. S1.9 Operate safely in a site environment.

Performance Outcome	Key content areas	Skills
	<p>K3.3 Techniques used to locate and identify hazardous materials, including HSE and UKAS requirements</p> <p>K3.4 Appropriate response to each type of hazardous material, including guidance and mandatory requirements</p> <p>K4 Tools, equipment and materials</p> <p>K4.1 Types of equipment</p> <p>K4.2 Operation of specialist plant, processes and machinery, including safe methods of working</p> <p>K5 Law and regulations</p> <p>K5.1 Permissions required to undertake survey work</p>	<p>S1.10 Use tools and equipment with accuracy.</p> <p>S1.11 Operate safely, applying good housekeeping.</p> <p>S1.12 Apply safe processes to waste disposal.</p> <p>S1.13 Use appropriate techniques to check accuracy of collected data.</p>
2. Identify hazardous materials	<p>K1 Health and safety</p> <p>K1.2 Implications of poor health and safety performance (ethical, legal, financial) while undertaking processes</p> <p>K1.3 Risk management</p> <p>K1.4 Safety-conscious behaviours, including client, duty of care and information management</p> <p>K3 Hazardous materials</p> <p>K3.5 Techniques used to respond to hazardous materials</p>	<p>S2.1 Extract relevant information from appropriate sources.</p> <p>S2.2 Evaluate the suitability of information and data for completing tasks.</p> <p>S2.3 Quality assure information and data from secondary sources.</p> <p>S2.4 Interpret information and data, including from visual and other sources.</p> <p>S2.5 Complete required documentation and reports, using digital software.</p>

Performance Outcome	Key content areas	Skills
	<p>K4 Tools, equipment and materials</p> <p>K4.2 Operation of specialist plant and machinery</p> <p>K4.3 Maintenance of equipment</p> <p>K4.4 Calibration of equipment</p> <p>K4.5 Repair of equipment</p> <p>K6 Survey techniques</p> <p>K6.1 How to collect a variety of samples, including personal, background, reassurance and clearance sampling</p> <p>K6.2 Requirements for communicating information at appropriate times</p> <p>K6.3 How to collect appropriate samples to enable analysis</p>	<p>S2.6 Operate sampling and other equipment.</p> <p>S2.7 Inspect the suitability of materials, tools and equipment.</p> <p>S2.8 Use appropriate techniques to ensure the integrity of samples, including visual inspections of work areas and enclosures risk.</p>
3. Analyse hazardous materials	<p>K1 Health and safety</p> <p>K1.2 Implications of poor health and safety performance (ethical, legal, financial)</p> <p>K1.5 Risk management in the analysis processes</p> <p>K1.6 Safety-conscious behaviours during analysis</p> <p>K4 Tools, equipment and materials</p> <p>K4.1 Types of sampling and measuring of equipment</p> <p>K4.6 Maintenance of analysis equipment</p> <p>K4.7 Calibration of analysis equipment</p> <p>K4.8 Repair of analysis equipment</p>	<p>S3.1 Sequence and prioritise task requirements.</p> <p>S3.2 Analyse samples, using appropriate techniques.</p> <p>S3.3 Convey information, data and outcomes, using appropriate techniques.</p> <p>S3.4 Use chemical preparation, morphology and composition, phase contrast microscopy and fibre counting.</p> <p>S3.5 Apply appropriate mathematical techniques.</p> <p>S3.6 Operate equipment safely.</p> <p>S3.7 Apply safe processes to waste disposal.</p>

Performance Outcome	Key content areas	Skills
	<p>K4.9 Operation of different types of technical equipment</p> <p>K7 Samples analysis</p> <p>K7.1 Techniques using microscopy, including chemical preparation, morphology, composition and phase contact</p> <p>K7.2 Management and disposal of sample materials</p>	<p>S3.8 Manage the confidentiality and security of information and data.</p> <p>S3.9 Select information and data, and present using techniques appropriate to the audience.</p> <p>S3.10 Use appropriate techniques to check accuracy of analysis and predictive models.</p> <p>S3.11 Inspect the suitability of scientific tools and equipment.</p>
4. Monitor hazardous materials	<p>K1 Health and safety</p> <p>K1.2 Implications of poor health and safety performance (ethical, legal, financial)</p> <p>K4 Tools, equipment and materials</p> <p>K4.10 Types of equipment used in monitoring hazardous materials, their characteristics and purpose</p> <p>K4.11 Importance of and how to maintain monitoring equipment, including storage</p> <p>K4.12 Importance of calibration of equipment</p> <p>K4.13 Techniques used in the repair of equipment</p> <p>K4.14 Operation of specialist plant and machinery</p> <p>K8 Monitoring</p> <p>K8.1 Techniques for monitoring hazardous materials, including removal and disposal</p>	<p>S4.1 Verify suitability of information and data from appropriate sources specific to the scope of works.</p> <p>S4.2 Interpret information and data, including from visual and other sources, to identify issues.</p> <p>S4.3 Negotiate requirements with stakeholders.</p> <p>S4.4 Provide information, advice and guidance, using appropriate communication techniques.</p> <p>S4.5 Present technical information for different types of stakeholder.</p>

Performance Outcome	Key content areas	Skills
	<p>K8.2 Safe management of retained hazardous materials</p> <p>K8.3 Advice stakeholders require on monitoring responsibilities</p> <p>K9 Communication</p> <p>K9.1 Methods of conveying and presenting information to stakeholders</p> <p>K9.2 Privacy and confidentiality</p> <p>K9.3 Whistle-blowing and escalating information</p>	

Detailed content

The detailed content for each Performance Outcome represents the different activities and associated skills performed when analysing and surveying hazardous materials. Each skill has underpinning knowledge to support skill application.

Performance Outcome 1: Inspect the built environment

Preparing for the task

Skill content	Knowledge
S1.1 Identify information required to complete the task.	<p>The information needed to complete an inspection of the built environment in order to determine the presence of hazardous materials, including the purpose and use of:</p> <ul style="list-style-type: none">• information pertaining to the building (present and historic)• layout plans and specifications for the original building and also for extensions, adaptations and refurbishments• listed building and conservation area status• access requirements• utility services and isolation procedures• information obtained from the client on site –specific hazards• details of previous surveys/existing hazardous material registers. <p>Types of hazardous material found in the built environment:</p> <ul style="list-style-type: none">• asbestos:<ul style="list-style-type: none">○ crocidolite (blue asbestos)○ amosite (brown asbestos)○ chrysotile (white asbestos)○ actinolite○ anthophyllite○ tremolite• cement• lead• solvents:<ul style="list-style-type: none">○ toluene○ xylene○ white spirit○ acetone○ ethyl acetate• isocyanates – highly reactive• microorganisms that may cause legionella, anthrax, psittacosis, leptospirosis/Weil's disease, Aspergillus• carbon monoxide, methane – poisonous gases.

Skill content	Knowledge
	<p>The intended construction purpose of hazardous materials: (K3.2)</p> <ul style="list-style-type: none"> • Asbestos containing cement – the fibres provide strength without adding much weight. Its insulating and fire-resistant properties also made the mineral an ideal substance to add to cement. • Lead was incorporated into soft solder, an alloy of lead and tin, and used for soldering tinsplate and copper pipe joints. Lead-based paint inhibits the rusting and corrosion of iron and steel. <p>The key information and data required for a survey plan for completing an inspection of a built environment for hazardous materials.</p> <ul style="list-style-type: none"> • Techniques used to locate and identify hazardous materials, including Health and Safety Executive (HSE) and United Kingdom Accreditation Service (UKAS) requirements: (K3.3) <ul style="list-style-type: none"> ○ visual inspection – visual clues <ul style="list-style-type: none"> – trade names on materials – dimples on asbestos cement – mica crystals in supalux (material not containing asbestos) – exposed fibre bundles on raw edges – warning labels – material safety data sheets for chemicals – characteristic smells for chemicals (ammonia smells of stale urine etc.) – benchmark against known visuals of hazardous materials – photographs ○ sampling ○ laboratory analysis. • Actions to take when dealing with different types of hazardous material: (K3.4) <ul style="list-style-type: none"> ○ leave the area and report it ○ encapsulate the substance so the material does not escape ○ minimise the number of workers who could be exposed to the hazard by restricting access to the area and, if necessary, operating a permit to work scheme ○ train workers to operate in the area with the hazardous material ○ provide personal protective equipment ○ prepare and keep up to date a hazardous material register. • The importance of the survey plan, what information should be collected and included in the plan, and the requirement to involve the client in the process. • The necessity for visual inspections. • An appropriate response to each type of hazardous material, including guidance and mandatory requirements.

Skill content	Knowledge
<p>S1.3 Collect information from primary and secondary sources as appropriate, including samples and historic records.</p>	<p>Understand how to capture, process and manage data for a hazardous material inspection. This should cover in detail:</p> <ul style="list-style-type: none"> • the types of survey, including management • historical data • existing surveys • refurbishment and demolition surveys • the permissions required to undertake survey work, highlighting the key legislative requirements and provisions for compliance with: (K5.1) <ul style="list-style-type: none"> ○ Regulations 5–15, 17–19 and 22–23 of Control of Asbestos Regulations 2012 ○ Health and Safety at Work etc. Act 1974 ○ Control of Substances Hazardous to Health (COSHH) Regulations 2002, covering the employer’s duties, including provision of: <ul style="list-style-type: none"> – risk assessment of all substances used in the workplace, highlighting precautionary methods to be employed before and during use – control measures – control exposure to substances hazardous to health, to prevent ill health; using control equipment; managerial controls, including permits to work; encouraging appropriate worker behaviour – use, maintenance, examination and testing – reducing the risk of exposure to an acceptable level – monitoring and health surveillance of employees using substances hazardous to health at work – information, instruction and training of employees ○ Control of Lead at Work Regulations 2002 ○ Dangerous Substances and Explosive Atmospheres Regulations 2002 ○ Hazardous Waste (England and Wales) Regulations (Amendment) 2016. • Use digital software, such as spreadsheet software or word processing software, to capture risk assessments. (D1) • Convey and summarise technical information through risk assessments for stakeholders. (E1, E4) • The primary duties of care (K1.1) that arise under public liability laws when inspecting the building environment for hazardous materials, including the Occupiers’ Liability Act 1957 and 1984; a duty of care on occupiers that all lawful visitors and others are reasonably safe for the purposes for which they are on the occupier’s premises. • The reasons why asbestos was originally used as a material in buildings, covering its physical and chemical properties, different fibre properties and resistances, and insulating and fire-resistant properties.

Skill content	Knowledge
	<ul style="list-style-type: none"> • How the use and regulation of hazardous materials have changed over time: (K3.1) <ul style="list-style-type: none"> ○ Health and Safety at Work etc. Act 1974 ○ Control of Substances Hazardous to Health (COSHH) Regulations 2002 ○ lead: voluntary agreement in 1963 with the Paintmakers Association, adding labelling and warning notices to white lead paint; most white lead-based paint was banned apart from specialist uses in 1992 (The Environmental Protection (Controls on Injurious Substances) Regulations 1992); safer forms of red lead paint used since 1992; the Control of Lead at Work Regulations 2002 ○ asbestos: the emergence of asbestosis in the 1900s and an appreciation of the evolution of asbestos legislation, covering: <ul style="list-style-type: none"> – the Factory and Workshop Act 1901 – Merewether and Price Report 1930 – Asbestos Industry Regulations 1931 – Factories Act 1961 – first successful personal injury claim 1967 – Asbestos Regulations 1969 – Voluntary Asbestos Import Ban 1970 – Health and Safety at Work etc. Act 1974 – Voluntary Asbestos Import Ban 1980 – Asbestos Licensing Regulations 1983 and later amendments – Asbestos Prohibition Regulations 1985 and later amendments – Control of Asbestos at Work Regulations 1987 and later amendments – Control of Asbestos in the Air Regulations 1990 – Asbestos Prohibition Regulations 1992 – Control of Asbestos at Work Regulations 2002 – Control of Asbestos Regulations 2006.

Analysing data to develop an inspection regime, to determine hazardous materials within the built environment

Skill content	Knowledge
<p>S1.4 Extract relevant information from appropriate sources to identify potential for the presence of hazardous materials.</p>	<p>The different types of hazardous material in the built environment:</p> <ul style="list-style-type: none"> • where hazardous materials are likely to have been used in the built environment: (K3.2) <ul style="list-style-type: none"> ○ spray coatings ○ cements ○ loose-fill insulation ○ lagging ○ ceiling and floor tiles ○ insulation board ○ rope seals ○ gaskets ○ textiles ○ soffit boards ○ textured decorative coatings ○ roofing felt, gutters and downpipes ○ paper and paper products ○ paints ○ asbestos bitumen products ○ mastics ○ sealants ○ putties and adhesives ○ reinforced plastics ○ domestic appliances ○ plant and machinery ○ asbestos contamination in other products. • exposure routes into the body for hazardous materials: <ul style="list-style-type: none"> ○ inhalation ○ skin and eyes ○ mouth/ingestion. <p>The effects on the body of hazardous materials, including the difference between acute and chronic conditions and the risk of developing disease:</p> <ul style="list-style-type: none"> • levels and duration of exposure that cause harm: <ul style="list-style-type: none"> ○ asbestos ○ cement ○ lead ○ solvents ○ microorganisms that may cause legionella, anthrax, psittacosis, leptospirosis/Weil's disease, Aspergillus ○ carbon monoxide, methane

Skill content	Knowledge
	<ul style="list-style-type: none"> • acute effect of hazardous materials: <ul style="list-style-type: none"> ○ dizziness ○ headaches ○ nausea ○ burns ○ coughing and wheezing • chronic effect of hazardous materials: <ul style="list-style-type: none"> ○ mesothelioma ○ asbestosis ○ pleural thickening ○ leukaemia ○ lung disease ○ lung fibrosis ○ occupational asthma ○ kidney damage.
<p>S1.5 Process data, including collation and entering into digital software, using appropriate techniques.</p>	<p>Use of digital software to support and confirm the agreed survey procedure, covering the principles and use of:</p> <ul style="list-style-type: none"> • CAD to schedule the location of hazardous materials and plan sampling locations • BIM facilities management packages to virtually twin the building and record location of known materials • spreadsheets to prepare site inspection record sheet templates. <p>Collecting survey data during the survey. The survey procedure will include information such as:</p> <ul style="list-style-type: none"> • a plan of the agreed number of samples and sampling methods • site photographs • a procedure for making good any intrusive sampling • details of the survey working times on site • any necessary signage • building/site access arrangements for site and workers • the confidentiality requirements of client data, including adhering to data protection legislation. (K2.1)

Skill content	Knowledge
<p>S1.6 Quality assure collected data</p>	<p>The importance of data collection to support the hazardous material on-site survey:</p> <ul style="list-style-type: none"> • to enable previous building use to be considered when evaluating likely hazardous materials • to facilitate the preparation of risk assessments • to facilitate the preparation of the hazardous material survey. <p>The selection of data from primary and secondary sources in accordance with quality assurance protocols and standards, specifically:</p> <ul style="list-style-type: none"> • the governing principles for compliance with ISO 9001 quality management systems • the principles of quality assurance and control.
<p>S1.7 Complete required documentation, including method statements and reports, using digital software.</p>	<p>Digitally prepared reports used for inspection of hazardous materials: (D1)</p> <ul style="list-style-type: none"> • preparation of survey plans and how parameters that need to be assessed during the survey are recorded, including information relating to: (E1, E2) <ul style="list-style-type: none"> ○ location of the material ○ type of product ○ accessibility implications ○ material condition ○ the presence, or not, of a surface treatment • method statements: convey 'step by step' in a logical sequence how the survey works will be carried out; (E1) present method statement using standard practice (E2) • synthesising information from sources to conduct risk assessments and plan method statements (E4, E5) • hazardous material registers • sample inspection record.
<p>S1.13 Use appropriate techniques to check accuracy of collected data.</p>	<p>The importance of using predictive models, using data and probability to check/forecast accuracy of data collected from samples:</p> <ul style="list-style-type: none"> • structure activity relationships (SAR) • nearest analogue analysis • chemical class analogy • mechanisms of toxicity • mass balance models and measured data.

Planning an inspection of the built environment

Skill content	Knowledge
<p>S1.2 Sequence and prioritise research tasks.</p>	<p>Identify and understand hazardous material survey techniques that could be adopted in an on-site inspection of the built environment, including the following:</p> <ul style="list-style-type: none"> • survey procedures: <ul style="list-style-type: none"> ○ plan agreed number of samples and sampling methods ○ taking in situ photographs of potentially hazardous material ○ procedure for making good after any intrusive sampling ○ survey times of work ○ signage to be used ○ key access route • tools, equipment and materials • types of equipment: <ul style="list-style-type: none"> ○ sampling ○ measuring • operation of specialist plant, processes and machinery, including safe methods of working • law and regulations.
<p>S1.8 Assess health and safety risks associated with the environment and task.</p>	<p>Understand the risks and hazards associated with on-site inspection of hazardous materials for the built environment, including the need to develop suitable control methods, covering the following:</p> <ul style="list-style-type: none"> • risk assessments and the requirement, where appropriate, for a written asbestos management plan • using risk assessment templates to summarise and convey technical information to stakeholders (E1, E4) • using digital software such as spreadsheets or word processing software to capture risk assessments electronically (D1) • risk management in occupied space: (K1.3) <ul style="list-style-type: none"> ○ non-asbestos hazards – working at height (in ceiling voids or on a fragile roof), working on operable machinery or plant, working in confined spaces, chemical hazards, electrical hazards, biological hazards, noise hazards and lone working ○ asbestos issues – preventing disturbance and spread of asbestos-containing materials, safe working procedures for sampling, PPE, decontamination and disposal arrangements, risk management in the analysis processes

Skill content	Knowledge
	<ul style="list-style-type: none"> • licensable and non-licensable survey work • risk review processes to adapt survey procedure to reduce the level of risk • categories of risk control measures: <ul style="list-style-type: none"> ○ elimination – removal of risk in its entirety ○ substitution – reduction of risk by making a change to a material, substance or procedure ○ engineering control measures – collective measures for personnel or individual measures ○ administration controls – permit to work schemes and safe working procedures ○ personal protective clothing • people at risk: <ul style="list-style-type: none"> ○ building users/occupiers ○ visitors ○ public ○ maintenance and construction workers • the implications of poor health and safety performance (ethical, legal, financial) while undertaking the process, covering: (K1.2) <ul style="list-style-type: none"> ○ the 'health and safety iceberg' ○ increased risk of ill health, injury and death ○ loss of reputation ○ legal repercussions ○ decrease in productivity, increase in turnover.

Undertaking a preliminary site inspection to confirm an inspection regime to determine hazardous materials within the built environment

Skill content	Knowledge
<p>S1.9 Operate safely in a site environment.</p>	<p>Understand the techniques to undertake an on-site inspection of the built environment for hazardous materials, including the following:</p> <ul style="list-style-type: none"> • appropriate responses to hazardous materials, covering best practice guidance and mandatory requirements • approach to safety-conscious behaviours and culture, covering: (K1.4) <ul style="list-style-type: none"> ○ the definition of 'safe' and 'unsafe' behaviour ○ observation of behaviour in the workplace by managers and/or peers, with/without targets ○ providing feedback to reinforce safe behaviour and to 're-educate' unsafe behaviour, covering on-the-spot specific feedback and discussion and impersonalised general data ○ requirements for medical examinations and health surveillance ○ welfare provision, such as 'dirty' and 'clean' hygiene facilities ○ safe sample and material controls during sample analysis ○ use of correct PPE.
<p>S1.10 Use tools and equipment with accuracy.</p>	<p>Use surveying tools and equipment with accuracy, understanding how errors in measurement may occur and how they could be reduced:</p> <ul style="list-style-type: none"> • identification of the correct tools and equipment to be used for sampling and measuring: (K4.1) <ul style="list-style-type: none"> ○ survey equipment – site plan, logbook, stepladder, camera, torch, access keys to room and covers, screwdrivers ○ PPE – disposable overalls (hooded), overshoes and gloves, respirator with P3 dust filter, respirator with P3 dust filter, masks ○ bulk sampling equipment – pliers, screwdrivers, core samplers or cork borers, aluminium foil or cloth tape, utility knives, hand spray with diluted PVA or surfactant, sample bags (polythene self-seal bags), sample point labels, type H vacuum, approved asbestos waste bags, warning signs, wet wipes and tissues, polythene sheets, air quality measuring equipment, enclosures.

Skill content	Knowledge
	<p>Understand how to collect a variety of samples, including:</p> <ul style="list-style-type: none"> • systematic survey inspection procedures and timing: <ul style="list-style-type: none"> ○ internal work upwards from the basement to the roof, working around each area clockwise from the door of entry ○ visually inspecting and reviewing components in the following order: <ul style="list-style-type: none"> – ceiling – walls – floors – fixtures and fittings – equipment – services • size, location and frequency of samples for different hazardous materials • sampling techniques: <ul style="list-style-type: none"> ○ enclosures ○ selection of sampling point for different hazardous materials ○ use of water/surfactant sprays ○ shadow vacuuming ○ sampling with different equipment, including core sampler, sharp knife, chisel, pliers, screwdriver ○ retrieval of sample ○ sealing of exposed surface, including tapes and fillers ○ cleaning up debris ○ use of polythene floor covering • selection and use of PPE and RPE, and techniques for decontamination • sample treatment: <ul style="list-style-type: none"> ○ individually sealed ○ double bagging ○ unique identifier labelling • use of warning signage • types of safety sampling: <ul style="list-style-type: none"> ○ personal – sample taken from a person’s clothing or personal belongings, or blood/fluid sample ○ background – sample of potential contaminant in a work area ○ reassurance – samples that are conducted for confirmation that an area is clear after hazardous material has already been removed.

Skill content	Knowledge
<p>S1.11 Operate safely, applying good housekeeping.</p>	<p>Operate specialist plant, process and machinery in compliance with safe methods of working, covering the following: (K4.2)</p> <ul style="list-style-type: none"> • assessing health and safety risks • operating safely in a site environment • using tools and equipment with accuracy • following safe systems of work and permit to work schemes • using appropriate PPE and complying with the health and safety regulations in differing built environments • understanding site safety procedures for emergencies, including decontamination. <p>Communicate with others, using technical language, to operate equipment safely. (E1, E3, D3)</p>
<p>S1.12 Apply safe processes to waste disposal.</p>	<p>Follow procedures to transport hazardous waste to a licensed disposal site, in accordance with the requirements of the Hazardous Waste (England and Wales) Regulations 2005, including 2016 amendments:</p> <ul style="list-style-type: none"> • waste to be sent with a registered carrier to an authorised site • waste to be classified and separated • completion of a consignment note • waste records to be kept for one year.

Performance Outcome 2: Identify hazardous materials

Preparation for on-site sampling

Skill content	Knowledge
<p>S2.1 Extract relevant information from appropriate sources.</p>	<p>Examine building plans, desk studies and preliminary site inspection information, including all features and services, including voids, cavities, risers, ducting and under crofts, to determine the likelihood of the presence of hazardous materials, reviewing the following:</p> <ul style="list-style-type: none"> • preliminary site inspection information: <ul style="list-style-type: none"> ○ information pertaining to building (present and historic) ○ layout plans and specifications for the original building and also for extensions, adaptations and refurbishments ○ listed building and conservation area status ○ access requirements ○ utility services and isolation procedures ○ information obtained from the client on site – specific hazards ○ details of previous surveys/existing hazardous material registers • the likely location of hazardous materials, covering: <ul style="list-style-type: none"> ○ spray coatings ○ cements ○ loose-fill insulation ○ lagging ○ ceiling and floor tiles ○ insulation board ○ rope seals ○ gaskets ○ textiles ○ soffit boards ○ textured decorative coatings ○ roofing felt ○ gutters and downpipes ○ paper and paper products ○ paints ○ asbestos ○ bitumen products ○ mastics ○ sealants ○ putties and adhesives ○ reinforced plastics ○ domestic appliances ○ plant and machinery ○ contamination in other products

Skill content	Knowledge
	<ul style="list-style-type: none"> • types of hazardous material: <ul style="list-style-type: none"> ○ asbestos, including the different types – crocidolite (blue asbestos), amosite (brown asbestos), chrysotile (white asbestos) actinolite, anthophyllite, tremolite ○ cement ○ lead ○ solvents ○ isocyanates ○ microorganisms – Legionella, anthrax, psittacosis, leptospirosis/Weil's disease, Aspergillus ○ carbon monoxide • the order of visual inspection: <ul style="list-style-type: none"> ○ ceiling ○ walls ○ floors ○ fixtures and fittings ○ equipment ○ services.
S2.2 Evaluate the suitability of information and data for completing tasks.	<p>Evaluate building plans, desk studies and preliminary site inspection information to determine the quality and quantity of information required, to enable valid on-site sampling of hazardous materials to be made, justifying any additional information requirements. Sources of information include the following:</p> <ul style="list-style-type: none"> • information pertaining to building (present and historic) • layout plans and specifications for the original building and for extensions, adaptations and refurbishments • listed building and conservation area status • access requirements • utility services and isolation procedures • information obtained from the client on site-specific hazards • details of previous surveys • existing hazardous material registers.

Skill content	Knowledge
S2.4 Interpret information and data, including from visual and other sources.	<p>Interpret building plans, desk studies, preliminary site inspection information and further authorised studies to plan a systematic survey inspection procedure. The systematic survey should proceed with internal work upwards from the basement to the roof, working around each area, clockwise from the door of entry, reviewing components in the following order: ceiling, walls, floors, fixtures and fittings, equipment and services. The systematic survey inspection should cover the following for different hazardous materials: (E5)</p> <ul style="list-style-type: none"> • size of sample • location of sample • frequency of sampling. <p>Create texts (E3) to convey and present ideas through detailed survey plans (E1, E2) using digital software. (D1)</p>
S2.3 Quality assure information and data from secondary sources.	<p>Develop a quality assurance procedure for on-site sampling of hazardous materials, including:</p> <ul style="list-style-type: none"> • reinspection of a proportion of the survey while survey work is still ongoing • audits of completed surveys • third-party check • competency check of survey inspection team.

Undertaking on-site sampling to determine hazardous materials present within the built environment

Skill content	Knowledge
<p>S2.7 Inspect the suitability of materials, tools and equipment.</p>	<p>Inspect the suitability of materials, tools and equipment to complete an on-site hazardous material survey covering the following:</p> <ul style="list-style-type: none"> • checking for damage • inspection of the suitability of survey equipment: <ul style="list-style-type: none"> ○ site plan ○ logbook ○ stepladder – standard check with Work at Height Regulations 2005 ○ camera ○ torch ○ access keys to room and covers, screwdrivers • inspection of the suitability of sampling equipment: <ul style="list-style-type: none"> ○ pliers ○ screwdrivers ○ core samplers or cork borers ○ aluminium foil or cloth tape ○ utility knife ○ hand spray with diluted PVA or surfactant ○ sample bags (polythene self-seal bags) ○ sample point labels ○ type H vacuum ○ approved asbestos waste bags ○ warning signs ○ wet wipes and tissues ○ polythene sheets • inspection of the suitability of personal protective equipment, including RPE, disposable overalls (hooded), overshoes and gloves • a visual condition check prior to use.
<p>S2.6 Operate sampling and other equipment.</p>	<p>Collect a variety of samples, including personal, background, reassurance and clearance samples, (K6.1) covering the following:</p> <ul style="list-style-type: none"> • safety-conscious behaviours, including client, duty of care and information management, (K1.2) in accordance with health and safety regulations and best practice

Skill content	Knowledge
	<ul style="list-style-type: none"> • risk management in occupied spaces: (K1.3) <ul style="list-style-type: none"> ○ non-asbestos hazards – working at height (in ceiling voids or on a fragile roof), working on operable machinery or plant, working in confined spaces, chemical hazards, electrical hazards, biological hazards, noise hazards and lone working ○ asbestos issues – preventing disturbance and spread of asbestos-containing materials, safe working procedures for sampling, PPE, decontamination and disposal arrangements, risk management in analysis processes • implications of poor health and safety performance (ethical, legal, financial) while undertaking processes: (K1.2) <ul style="list-style-type: none"> ○ the ‘health and safety iceberg’ ○ increased risk of ill health, injury and death ○ loss of reputation ○ legal repercussions ○ decrease in productivity, increase in turnover. <p>Understand techniques used to respond to hazardous materials, responding, reporting and communicating the following: (K3.5)</p> <ul style="list-style-type: none"> • the justification of sampling techniques for different hazardous materials: <ul style="list-style-type: none"> ○ air sampling (with gas detector, or collection device linked to air pump) ○ a bulk sample of the solid or liquid for analysis ○ wipe sampling or dipping with indicator paper • methods for undertaking sampling on site for different hazardous materials, including: <ul style="list-style-type: none"> ○ selection of sampling locations for different hazardous materials ○ use of enclosures, water/ surfactant sprays and shadow vacuuming to suppress airborne fibres for different hazardous materials ○ sampling with different equipment, including core sampler, sharp knife, chisel, pliers or screwdriver for different hazardous materials, following operational best practice and safety regulations ○ retrieval of samples, including the sealing of exposed surfaces, use of tapes and fillers, cleaning up of debris, and use of polythene floor covering for different hazardous materials ○ operation and techniques for using sampling and measuring equipment, including safe methods of working: (K4.2) <ul style="list-style-type: none"> – equipment instruction manuals – best practice for operation of sampling and measuring equipment

Skill content	Knowledge
	<ul style="list-style-type: none"> ○ calibration, maintenance and repair of sampling and measuring equipment: (K4.3, K4.4, K4.5) <ul style="list-style-type: none"> – follow sampling and measuring equipment manuals and guidance for calibration; maintenance schedules, troubleshooting, repair requirements – visual inspection of tools and equipment – guidance and recommendations of when tools and equipment should be discarded and replaced – for air quality measuring equipment, the following: <ul style="list-style-type: none"> ▪ identifying alarms, notices and errors ▪ alarm level settings ▪ gas configuration and bump test ▪ sensor principles, calibration and adjustment ▪ instrument test and sensitivity adjustment ▪ change of battery and sensors. <p>Communicate with others, using technical language to operate equipment safely. (E1, E3, D3)</p>
<p>S2.8 Use appropriate techniques to ensure the integrity of samples, including visual inspections of work areas and enclosure risks.</p>	<p>Use different approaches to ensure the integrity of samples, including:</p> <ul style="list-style-type: none"> ● sample treatment, covering individually-sealed samples, second bagging and unique identifier labelling ● prevention of the disturbance and spread of hazardous materials during sampling by following processes ● safe working procedures for sampling: <ul style="list-style-type: none"> ○ Health and Safety Executive Document Reference HSG248: Asbestos – The Analyst’s Guide for Sampling, Analysis and Clearance Procedures ○ Health and Safety Executive: ○ HSG264 Asbestos – The Survey Guide ○ the systematic survey should proceed with internal work upwards from the basement to the roof, working around each area, clockwise from the door of entry, reviewing components in the following order: ceiling, walls, floors, fixtures and fittings, equipment and services for on-site sampling of hazardous materials. <p>Collect appropriate samples to enable analysis: (K6.3)</p> <ul style="list-style-type: none"> ● when taking samples of asbestos cement, a 5cm² sample is recommended in order to determine if the chrysotile asbestos isn’t contaminated by amosite or crocidolite ● selection of sampling locations for different hazardous materials ● use of enclosures, water/surfactant sprays and shadow vacuuming to suppress airborne fibres for different hazardous materials, in accordance with BS 8520 part 1 and 2: 2009

Skill content	Knowledge
	<ul style="list-style-type: none"> • sampling with different equipment, including core sampler, sharp knife, chisel, pliers or screwdriver for different hazardous materials, following operational best practice and safety regulations • the retrieval of samples, including the sealing of exposed surfaces, use of tapes and fillers, cleaning up of debris and use of polythene floor covering for different hazardous materials.

Assimilating site sampling information to prepare hazardous material sample documentation and records

Skill content	Knowledge
<p>S2.5 Complete required documentation and reports, using digital software.</p>	<p>Demonstrate the ability to complete and present technical hazardous material site inspection reports, using digital software techniques, to a non-technical audience:</p> <ul style="list-style-type: none"> • consideration of typical errors, presenting the results and recording the location of the hazardous materials site inspection • material risk assessment algorithm, scoring the main factors influencing the release of hazardous materials: <ul style="list-style-type: none"> ○ material assessment considers the type and condition of the material and the ease by which it can be released, by applying a numerical score to influencing factors such as product type, extent of damage, surface treatment and hazardous material type ○ priority assessment considers the likelihood of disturbing the material, by applying a numerical score to influencing factors such as maintenance activity (planned and unplanned), occupant activity, likelihood of disturbance based on extent and accessibility, human exposure potential based on the number of occupants in an area, frequency of use and average time of use • requirements for communicating information at appropriate times: (K6.2) <ul style="list-style-type: none"> ○ sample labels ○ site inspection reports ○ preparation of survey plans and how parameters that need to be assessed during the survey are recorded, including information relating to: <ul style="list-style-type: none"> – location of the material – type of product – accessibility implications – material condition – the presence, or not, of a surface treatment.

Performance Outcome 3: Analyse hazardous materials

Undertaking standard laboratory tests on hazardous materials safely

Skill content	Knowledge
S3.1 Sequence and prioritise task requirements.	<p>Evaluate the advantages and disadvantages of different types of technical equipment to justify the selection of a technique for the laboratory analysis of a hazardous material. Technical equipment will include:</p> <ul style="list-style-type: none">• polarised light and transmission light microscopy. <p>Consider advantages and disadvantages:</p> <ul style="list-style-type: none">• time implications• smallest fibre size that can be detected• application to composite materials. <p>Follow step-by-step process to conduct analysis of fibre samples:</p> <ol style="list-style-type: none">1. examination at x10–x40 in a stereo microscope for fibres and fibre bundles2. picking out of examples of the various fibre types seen and mounting in a refractive index liquid between a glass microscope slide and cover slip3. examination of the optical properties, using polarised light microscopy (PLM) and dispersion staining techniques at magnification of x100 or greater4. identification of the asbestos type present, based on the observed optical properties. <p>Follow process of setting up the stereo microscope: (K4.9)</p> <ul style="list-style-type: none">• Turn the revolving turret so that the lowest power objective lens (e.g. x4) is clicked into position.• Place the microscope slide on the stage and fasten it with the stage clips.• Look at the objective lens and the stage from the side and turn the focus knob so the stage moves upward. Move it up as far as it will go without letting the objective touch the cover slip.• Look through the eyepiece and move the focus knob until the image comes into focus.• Adjust the condenser and light intensity for the greatest amount of light.• Move the microscope slide around until the sample is in the centre of the field of view (what you see).• Use the focus knob to place the sample into focus and readjust the condenser and light intensity for the clearest image (with low power objectives, you might need to reduce the light intensity or shut the condenser).

Skill content	Knowledge
	<ul style="list-style-type: none"> • When you have a clear image of your sample with the lowest power objective, you can change to the next objective lenses. You might need to readjust the sample into focus and/or readjust the condenser and light intensity. If you cannot focus on your specimen, repeat the previous three steps with the higher power objective lens in place. Do not let the objective lens touch the slide! • When finished, lower the stage, click the low power lens into position and remove the slide.
S3.3 Convey information, data and outcomes, using appropriate techniques.	<p>Explain the physics governing polarised light and transmission electron microscopy.</p> <p>Convey technical information to others and present information to others through reports. (E1, E2)</p> <p>Use spreadsheet software to convey data to conduct calculations for lab work. (D1, D4)</p>
S3.4 Use chemical preparations, morphology and composition, phase contrast microscopy and fibre counting.	<p>Carry out preparatory procedures for identifying hazardous material in samples by polarised light and transmission light microscopy, including the following: (K7.1)</p> <ul style="list-style-type: none"> • process for chemical preparations: <ul style="list-style-type: none"> ○ preparing samples by crushing, acid washing or treatment ○ use of organic solvents to remove bitumen or plastic matrices ○ low-temperature ashing • process for morphology and composition: <ul style="list-style-type: none"> ○ use of reagents to identify asbestos fibres, including acetic acid, hydrochloric acid, sodium hydroxide and acetone ○ dispersion stain technique • use of test slides: <ul style="list-style-type: none"> ○ HSE/NPL Mark II test slide.
S3.2 Analyse samples, using appropriate techniques.	<p>Apply safe working practice for analysis of samples using microscopes:</p> <ul style="list-style-type: none"> • open sealed sample bags in fume cabinet and catalogue • carry out preliminary visual inspection of the complete bulk sample • isolate or release fibre from sample, using tweezers or pliers • view under stereo microscope to classify the fibre types present • determine the required refractive index (RI) liquid • mount representative fibres on microscope slides in appropriate refraction index (RI) liquids and rotate under filters

Skill content	Knowledge
	<ul style="list-style-type: none"> • identify different fibrous components, using phase-contrast light microscopy • dispose of the slide in a sealed bag, and place it in a glass disposal bin • apply safety-conscious behaviours during analysis – sample and material controls in accordance with health and safety regulation and best practice. (K1.6) <p>Identify and describe fibres by polarised light and transmission electron microscopy, covering the following:</p> <ul style="list-style-type: none"> • implications of poor health and safety performance (ethical, legal, financial): (K1.2) <ul style="list-style-type: none"> ○ the ‘health and safety iceberg’ ○ increased risk of ill health, injury and death ○ loss of reputation ○ legal repercussions ○ decrease in productivity, increase in turnover • risk management in the analysis processes: (K1.5) <ul style="list-style-type: none"> ○ non-asbestos hazards – working at height (in ceiling voids or on a fragile roof), working on operable machinery or plant, working in confined spaces, chemical hazards, electrical hazards, biological hazards, noise hazards and lone working ○ asbestos issues – preventing disturbance and spread of asbestos-containing materials, safe working procedures for sampling, PPE, decontamination and disposal arrangements, risk management in analysis processes • identification of vitreous, crystalline and amorphous materials by polarised light, considering: <ul style="list-style-type: none"> ○ colour ○ elasticity and morphology of different fibre types ○ hydrophobic and hydrophilic properties ○ pleochroism ○ birefringence ○ signs of elongation and extinction • expected observations and results with different hazardous material types • errors in fibre identification • fibres that display similar properties to other materials under the microscope – cobwebs, leather, skin cells • known difficulties with identifying certain materials

Skill content	Knowledge
	<ul style="list-style-type: none"> • process for fibre counting: <ul style="list-style-type: none"> ○ Walton-Beckett graticule eyepiece ○ set-up and calibration of graticule ○ selection of graticule area for counting ○ selection of fields ○ rules for counting fibre – a field should be rejected if a filter grid line obstructs all or part of the view • potential sources of error when analysing samples within a laboratory: <ul style="list-style-type: none"> ○ sample size ○ non-homogenous and trace content samples ○ analyst fatigue ○ eye strain ○ detection limits ○ cross-contamination during handling of samples and analysis ○ bright sunlight obscuring slides. <p>Communicate and convey technical information to others on how to operate equipment safely. (E1, E3)</p>
S3.11 Inspect the suitability of scientific tools and equipment.	<p>Explain the inspection, maintenance, calibration and repair of laboratory equipment used for the identification of hazardous materials, including the reasons for use and the industry operational standards, covering: (K4.6, K4.7, K4.8, E1, E3)</p> <ul style="list-style-type: none"> • microscopes and optics principles of inspection, maintenance, calibration and repair, covered in ISO 8039: 2014 and BS EN ISO 17025: 2017 • fume cabinet principles of inspection, maintenance, calibration and repair, covered in BS 7258-1: 1994 • hot plates • class H vacuum cleaner inspection, principles of inspection, maintenance and repair, covered in BS 8520-3: 2009 • sampling and measuring equipment principles of inspection, maintenance, calibration and repair in accordance with ISO 17025: 2005.
S3.6 Operate equipment safely.	<p>Explain the importance of procedures and systems for maintaining safety during hazardous material analysis using microscopes, (K1.6) including:</p> <ul style="list-style-type: none"> • use of fume cabinets • glove boxes • safe use of chemicals • selection of personal protective equipment.

Skill content	Knowledge
<p>S3.7 Apply safe processes to waste disposal.</p>	<p>Explain the procedure for the management and safe disposal of laboratory samples, including the following: (K7.2)</p> <ul style="list-style-type: none"> • legal requirements, including the principles set out in regulations, the materials to which they apply and approved methods of disposal: <ul style="list-style-type: none"> ○ the Waste (England and Wales) (Amendment) Regulations 2012 ○ the Hazardous Waste (England and Wales) Regulations 2005 ○ the Waste Electrical and Electronic Equipment Regulations 2013 with amendments • sample storage • UKAS requirements • health, safety and welfare • damage to the environment • cost implications.
<p>S3.5 Apply appropriate mathematical techniques.</p> <p>S3.10 Use appropriate techniques to check accuracy of analysis and predictive models.</p>	<p>Apply statistical and trigonometric techniques to interoperate sample information appropriately:</p> <ul style="list-style-type: none"> • calculation of fibre concentration. <p>Understand factors contributing to poor precision:</p> <ul style="list-style-type: none"> • statistical variation • systematic variation • subjective variation. <p>Understand techniques to check the accuracy of analysis and predictive models, including the following:</p> <ul style="list-style-type: none"> • reporting restrictions on analytical results outside the optimal range • background contamination levels • that microscopy methods are qualitative and not quantitative, and the importance of this distinction • Poisson distribution and coefficient of variation for fibre counting.

Preparation of laboratory test reports for hazardous materials

Skill content	Knowledge
S3.9 Select information and data, and present using techniques appropriate to the audience.	<p>Demonstrate the ability to complete and present, with the use of digital software, technical hazardous material laboratory reports to a non-technical audience. The reports should:</p> <ul style="list-style-type: none"> • consider typical errors and how to present the results, and record the location of hazardous materials • include a material assessment algorithm, scoring the main factors influencing the release of hazardous materials.
S3.8 Manage the confidentiality and security of information and data.	<p>Evaluate the importance of, and explain procedures for, the protection of confidential information, including:</p> <ul style="list-style-type: none"> • commercial business requirements • controlled access • use of confidential waste bins and lockable storage cabinets • privacy and confidentiality of client data and costing information. • whistleblowing policy and method of escalating information. (K9.3)

Performance Outcome 4: Monitor hazardous materials

Techniques to manage retained hazardous materials within the built environment

Skill content	Knowledge
<p>S4.2 Interpret information and data, including from visual and other sources, to identify issues.</p> <p>S4.1 Verify suitability of information and data from appropriate sources specific to the scope of works.</p> <p>S4.4 Provide information, advice and guidance, using appropriate communication techniques.</p>	<p>Evaluate and interpret laboratory sample test results and site inspection reports to justify a strategy for managing hazardous materials, including the selection of appropriate monitoring equipment:</p> <ul style="list-style-type: none"> • asbestos-containing material or not • risk rating: <ul style="list-style-type: none"> ○ potential for future damage and contamination • recommendations: <ul style="list-style-type: none"> ○ leave in situ and manage ○ repair damage and manage ○ remove. <p>Verification of reports:</p> <ul style="list-style-type: none"> • lab has UKAS accreditation for bulk sampling and fibre counting • RICE (Random Interlaboratory Counting Exchange) Scheme assessment. <p>Explain how hazardous materials will be managed safely in the built environment, including techniques and equipment for monitoring, decontamination, removal and disposal: (K8.2)</p> <ul style="list-style-type: none"> • specialist monitoring equipment, its characteristics and how it is operated, including gas monitoring equipment with colorimetric gas detection tubes, air quality monitoring, asbestos fibre air monitoring (K4.10) • operation of specialist plant and machinery: <ul style="list-style-type: none"> ○ operational manuals and guidance for individuals, plant and machinery (K4.14) • the techniques used for repairing equipment: (K4.13) <ul style="list-style-type: none"> ○ identifying alarms, notices and errors ○ alarm level settings ○ gas configuration and bump test ○ sensor principles, calibration and adjustment ○ instrument test and sensitivity adjustment ○ change of battery and sensors. • the importance of maintaining, calibrating and storing monitoring equipment: (K4.11, K4.12) <ul style="list-style-type: none"> ○ follow instruction manual guidance for maintenance, calibration and storage of equipment ○ failure to follow guidance could lead to: <ul style="list-style-type: none"> – decline of performance of monitoring equipment – break down of equipment – inaccurate results – safety being affected.

Skill content	Knowledge
	<ul style="list-style-type: none"> • decontamination methods – physical and chemical means of decontamination: (K8.1) <ul style="list-style-type: none"> ○ heat ○ liquid disinfection ○ vapours and gases ○ radiation • appropriate communication techniques – reports/BIM • advising stakeholders on requirements for monitoring responsibilities. <p>Present ideas by conveying them through management plans to summarise next steps. (E1, E2, E4)</p>
<p>S4.3 Negotiate requirements with stakeholders.</p>	<p>Negotiate and agree the strategy for managing hazardous materials with key stakeholders, including: (K8.3)</p> <ul style="list-style-type: none"> • methods for conveying and presenting information to stakeholders, including: (K9.1) <ul style="list-style-type: none"> ○ technical reports (E1, E2) ○ asbestos registers and how the information in the asbestos register will be used ○ how survey data will be stored, assessed and updated • stakeholders: <ul style="list-style-type: none"> ○ client ○ building occupiers/users <ul style="list-style-type: none"> – contractors – visitors – staff ○ local authority ○ Health and Safety Executive. <p>Communicate with clients through digital means such as email. (D1, D3)</p> <p>Communicate with clients using technical language and professional approach in communications. (E1, E2, E3)</p>

Skill content	Knowledge
<p>S4.5 Present technical information for different types of stakeholder.</p>	<p>Justify and prepare suitable documentation to record the management of hazardous material within the built environment, including:</p> <ul style="list-style-type: none"> • hazardous material registers • hazardous material management plan • waste disposal procedures • use of document control register to ensure information is distributed correctly to stakeholders while maintaining appropriate privacy and confidentiality. <p>(K9.2)</p> <p>Understand key parts of a management plan, including:</p> <p>(K9.1)</p> <ul style="list-style-type: none"> • communication with contractors and visitors: <ul style="list-style-type: none"> ○ requirements for personnel entering the building, including contractors and visitors ○ training of personnel • signage and labelling of hazardous materials: <ul style="list-style-type: none"> ○ access restrictions to the building ○ building maintenance policy ○ permit to work schemes ○ safe systems of work ○ restrictive and prioritised access • emergency response procedures • hazardous material registers: <ul style="list-style-type: none"> ○ written plan of control actions, covering protection enclosure, sealing, encapsulation and repair ○ strategies for monitoring the condition of building elements containing hazardous materials in situ • legislation and best practice for maintenance, control and disposal • implications of poor health and safety management (ethical, legal, financial): (K1.2) <ul style="list-style-type: none"> ○ the 'health and safety iceberg' ○ increased risk of ill health, injury and death ○ loss of reputation ○ legal repercussions ○ decrease in productivity ○ increase in turnover.

Scheme of Assessment – Hazardous Materials Analysis and Surveying

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* consists of four Occupational Specialist Components:

1. Surveying and Design for Construction and the Built Environment
2. Civil Engineering
3. Building Services Design

4. Hazardous Materials Analysis and Surveying

Students will be able to take **one** of the Occupational Specialist Components as part of their *T Level Technical Qualification in Design, Surveying and Planning for Construction*.

There is a single synoptic assessment for the Occupational Specialist Component, which is an extended 'design, development and implementation' project. The synoptic element of the project is important in order to ensure that students are able to demonstrate threshold competence: this is the principal reason why the occupational specialism is assessed via a single extended project assessment to ensure that students are able to evidence all the skills required by the Performance Outcomes.

The mapping, timings and scheduling and preparation for assessment shown below are for the current specimen assessment material, the assessment will have the same overarching number of tasks and overall focus but the order of tasks and the detail within the task may change each series.

Occupational Specialism assessment: Hazardous Materials Analysis and Surveying
Externally assessed project: 15.5 hours 100% of the Occupational Specialist Component assessment 180 marks Graded P, M and D
Content overview Students are required to: <ul style="list-style-type: none">• inspect the built environment• identify hazardous materials• analyse hazardous materials• monitor hazardous materials.
Assessment overview This project will be set by Pearson and externally marked by Pearson. Students will respond to a client brief to inspect a site, identify hazardous materials, analyse these materials, and show how the hazardous materials will be monitored. All practical tasks will be simulated. The project will show students implementing skills in tasks such as: Task 1: Students will complete an initial, desk based, risk assessment of the site to consider potential hazardous materials. Students will complete a report detailing how a preliminary walk through inspection of the identified site should be carried out, including production of an inspection record appropriate to the site.

Task 2a: Students will prepare a Risk assessment based on a video walk through of the site for the inspection of and sampling at the site.

Task 2b: A Student will prepare a method statement to complete an inspection of a site shown in a video.

Task 3a: Students will produce a detailed plan of how to survey the indicated location for a suspected hazardous material.

Task 3b: Students will conduct a simulated sample collection practical in the simulated environment.

Task 4a: Students will conduct simulated laboratory analysis of the hazardous material

Task 4b: Students will complete a laboratory report analysing microscope images and recorded data relating to a hazardous material. The report will include recommendations to the client.

Task 5: Students will produce a material register and management plan. Students will communicate with stakeholders about monitoring plans.

The project will consist of a portfolio of evidence that includes observation reports to evidence practical skills, in order to meet threshold competence where appropriate. This will be accompanied by video evidence.

Timings and scheduling

Task	Assessment session	Assessment scheduling	Time
Task 1	1	Taken on a day specified by Pearson, with all students beginning the task at the same time. Centres may arrange a supervised rest break as appropriate.	3h 0m
Task 2a	2	Taken in a single session at a time specified by Pearson.	2h 0 m
Task 2b	3	Taken in a single session at a time specified by Pearson.	3h 0 m
Task 3a	4	Taken in a single session at a time specified by Pearson.	1h 15m
Task 3b	5	Observation and recording of a practical activity, completed in an individual slot scheduled by the Provider within a one-week window.	0h 15m (slot)
Task 4a	6	Observation and recording of a practical activity, completed in an individual slot scheduled by the Provider within a one-week window.	1h 0m (slot)
Task 4b	7	Taken in a single session at a time specified by Pearson.	2h 0m
Task 5	8	Taken in a single session at a time specified by Pearson.	3h 0m

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* Occupational Specialist Component project consists of a number of activities grouped into a number of substantive tasks.

Each task will be completed during a window set by Pearson, during which you will schedule supervised assessment sessions. In some cases, tasks will also involve opportunities for unsupervised assessment, where the requirements of the skills being assessed make this necessary.

Performance Outcomes

In this assessment, students will:

Hazardous Materials Analysis and Surveying		
Performance Outcome	Descriptor	Weightings
1	Inspect the built environment	40%
2	Identify hazardous materials	23%
3	Analyse hazardous materials	17%
4	Monitor hazardous materials	20%

Preparation for assessment

Students will submit their evidence for tasks as hard copy or as an electronic/digital submission. For an electronic/digital submission, students need access to computers and the appropriate software. A summary of the submission requirements for each task is given below.

Task	Sub-task	Evidence type
1	a	Digital submission – word processing software.
1	b	
2	a	Digital submission – word processing software.
2	b	Digital submission – word processing software.
3	a	Digital submission – word processing software, video and observation submission.
3	b	
4	a	Digital submission – video submission.
4	b	Digital submission – word processing software and spreadsheet software.
5	a	Digital submission – word processing software.
5	b	

A summary of the preparation work that providers need to carry out before assessments take place is given below.

Task	Preparation work needed
Task 2a	The tutor will need to ensure that they have the equipment available to play the video for the cohort of students.
Task 3a	Access to location/room required for Task 3b.
Task 3b	<p>In preparation for the task, the tutor will need to source a location/room and ensure that the sampling equipment, for example cork borer, particle counter, is available for the session. The required equipment and material will differ in every series.</p> <p>This task will need to be monitored by the tutor.</p> <p>Video equipment is needed for the assessment as the tutor is required to video it.</p>
Task 3	The tutor will need to source video-recording equipment before the assessment takes place and have it available for the assessment.
Task 4a	<p>In preparation for the task, the tutor will need to ensure that there is a suitable environment in which students can conduct laboratory work; the environment should be clean and well equipped.</p> <p>Students should have access to the following equipment:</p> <ul style="list-style-type: none"> • personal protective equipment • light microscope • material to be examined • microscope slides for preparation • oil immersion • lens tissue. <p>You will be informed, prior to the assessment, of the material you will need to source for the practical analysis.</p> <p>The teacher must not share the information with students.</p>

9. Resources for the delivery of this Technical Qualification

As part of your Provider approval, you will need to show that the necessary material resources and work spaces are available to deliver this Technical Qualification. Where specific resources are required to deliver the content, these are stated in the relevant component. The following resources would be required for this qualification:

Core:

- CAD software
- traditional drawing equipment
- measuring equipment for forces, time, temperature, sound, lengths and light levels
- rigs for demonstrating mechanical and structural science
- project management software

Building services design:

- access to current code of practice
- CAD software
- Building services testing equipment

Hazardous materials:

- video recording equipment
- surveying equipment
- dust/fume cabinet
- stereo microscope
- polarising light microscope

Surveying and design:

- total stations/surveying equipment
- CAD software
- measurement instruments, tripods and prisms.

Civil Engineering:

- access to current code of practice
- CAD software
- total stations/surveying equipment

10. Technical Qualification grading, T Level grading and results reporting

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* will be graded and awarded to comply with the requirements of Ofqual's General Conditions of Recognition.

Calculation of the Technical Qualification grade

The Technical Qualification components are awarded at the grade ranges shown in the table below.

Component	Available grade range
Core	A*–E and Unclassified
Occupational Specialist	Unclassified, Pass, Merit, Distinction

The Core Component uses an aggregation of points from each of the three Core Assessments to calculate the A* to E.

Students whose level of achievement for either component is below the minimum judged by Pearson to be of sufficient standard will receive an unclassified U result.

Awarding the Core Component

Grade boundaries will be set for each sub-component (Core Examination and Employer Set Project) in each series in which they are offered through a process known as awarding. Awarding is used to set grade boundaries and ensure that standards are maintained over time. This is important as we must ensure that students have the same opportunity to achieve, regardless of the assessment opportunity.

Uniform Mark Scale

Students' raw sub-component marks will be converted to a Uniform Mark Scale (UMS). The UMS is used to convert students' sub-component 'raw' marks into uniform marks. This is done in order to standardise marks from one series to another as assessments may vary in difficulty. For example, a student who achieves the lowest mark worthy of a C grade in the Employer Set Project one series will receive the same uniform mark as a student achieving that same grade and level of performance in another series, regardless of their raw marks.

The maximum number of uniform marks available for each sub-component, and the uniform marks relating to each grade boundary, are fixed. These are shown in the following table:

Grade	Core Exam	Core ESP	Core Overall
Maximum	240	120	360
A*	216 – 240	108 – 120	324 – 360
A	192 – 215	96 – 107	288 – 323
B	168 – 191	84 – 95	252 – 287
C	144 – 167	72 – 83	216 – 251
D	120 – 143	60 – 71	180 – 215
E	96 – 119	48 – 59	144 – 179
U	0 – 95	0 – 47	0 – 143

The Core Examination has two exam papers, the results of which are combined before conversion to UMS.

Calculation of the T Level grade

The T Level grade look-up table (see separate document) shows the minimum thresholds for calculating the T Level grade, subject to successful completion of all elements.

This document will be kept under review over the lifetime of the T Level and be available under the Quality Assurance and Assessment tab linked from this page <https://qualifications.pearson.com/en/qualifications/t-levels/t-levels-for-educators.html>.

Students who do not meet the minimum requirements for a T Level to be awarded will not be certificated. They may receive a Notification of Performance for individual components.

In order to be awarded the T Level, a student must complete both components and achieve a minimum of a grade E in the Core and a Pass in the Occupational Specialism. In addition, they must successfully complete the other elements of the T Level as required by the Institute for Apprenticeships and Technical Education (IfATE) and the T Level panel, such as 315 hours of industry placement.

Students whose level of achievement for either component is below the minimum judged by Pearson to be of sufficient standard will receive an unclassified U result.

Results reporting

The *T Level Technical Qualification in Design, Surveying and Planning for Construction* forms the substantive part of the Construction: Design, Surveying and Planning T Level programme. The T Level programme includes other elements that are required to be successfully completed in order for students to be awarded the T Level from the Department for Education. The Department for Education will provide T Level certificates to students who successfully complete all elements of the T Level programme.

The Department for Education will issue T Level results on Level 3 results day in August.

Pearson are not required to issue Technical Qualification certificates to students; instead we will provide component results for assessments that students undertake.

Pearson will issue component results on the results day designated for each assessment window.

11. Entry, delivery and assessment information

Introduction

This section focuses on the key information to deliver the *T Level Technical Qualification in Design, Surveying and Planning for Construction*. is of particular value to programme leaders and examinations officers, who must ensure appropriate arrangements are made for assessments.

Registering students on T Levels

We expect students to make a decision about their T Level pathway within the first few weeks of their course, supported by good information, advice and guidance from their provider. For example, a student might know that they want to do a Construction T Level, but not be clear at the outset whether that should be Surveying and Design for Construction and Surveying and Design for Construction and the Built Environment, Civil Engineering, Building Services Design; or Hazardous Materials Analysis and Surveying. If a provider is offering two or three of the available pathways, there may be some co-delivery or other activity in the first few weeks which provides students with the opportunity to find out about different occupations, for example through employer visits. A student's chosen T Level pathway and Occupational Specialism should be recorded on the Individual Learner Record (ILR) or School Census in October of year 1.

To ensure there is sufficient time to cover the curriculum, decisions about Occupational Specialisms should be confirmed by the end of the first year, although this could be much earlier depending on a provider's curriculum model. For example, some providers start teaching the Occupational Specialism early on in first year and require students to make a decision about this at the start of their course, whereas other providers may only start teaching Occupational Specialisms in the second year. In order to ensure that providers receive the right level of funding, a student's Occupational Specialism must be confirmed in the final data return of year 1 (ILR R14/Autumn Census), although changes after this date are possible.

Providers will also need to ensure that they register their students on the Technical Qualification with the awarding organisation and enter them for assessments as relevant.

Transferring between T Levels and Occupational Specialisms

We expect some students to switch between T Levels. Providers should consider the degree of overlap between the two T Levels and the remaining time before any assessments in determining if a transfer is possible or whether a student will need to restart their T Level. Attainment from one T Level cannot count towards another, and all students will need to take and pass the relevant assessments in order to pass their T Level.

Some students may also want to switch to a different Occupational Specialism within the same T Level pathway, including in the second year. It is less likely that there will be any overlap between Occupational Specialisms, so any decision will depend on the provider's curriculum model and the stage a student has reached in their Occupational Specialism learning. Any changes to a student's T Level whether pathway or Occupational Specialism should be recorded on the ILR/Census as soon as possible and should also match the registration and assessment entries submitted to the relevant awarding organisation.

Programme delivery

You are free to deliver this Technical Qualification using any form of delivery that meets the needs of your students. We recommend making use of a wide variety of modes, including direct instruction in classrooms or work environments, investigative and practical work, group and peer work, private study and e-learning.

Availability of live assessment

The assessments for the *T Level Technical Qualification in Design, Surveying and Planning for Construction* will be scheduled annually as shown in the table below:

Annual Series for Design, Surveying and Planning for Construction					
Component	First assessment	Month(s)	Window/set date	Exam type	Paper/on-screen
Core 1	2021	May/June November	Set date and time	Written examination	Paper
Core 2	2021	May/June November	Set date and time	Written examination	Paper
Employer Set Project	2021	May/June November	Task specific: window/set date and time	Task	Paper
Occupational Specialist	2022	May/June	Task specific: window/set date and time	Task	Paper

In developing an overall plan for delivery and assessment for the qualification, you will need to consider the order in which you deliver the content and when the assessments will take place.

Students must be prepared for external assessment by the time they undertake it. In preparing students for assessment, you will want to take account of required learning time, the relationship with other external assessments and opportunities for retaking.

Language of assessment

Assessment of this qualification will be available in English. All student work must be in English.

Student assessment entry

You must enter students into an assessment window, either for the Core Component or the Occupational Specialist Component, as outlined in our Key dates Schedule.

For a resit, students can take the Core Examinations and/or the Employer Set Project in a separate window. Therefore, you will need to make an entry for the window you require the student to sit the assessment in.

For the Occupational Specialist Component, you will need to make an entry for the window the student wishes to sit the assessment in.

For the latest guidance on student assessment planning please refer to the Pearson website: <https://qualifications.pearson.com/en/qualifications/t-levels/t-levels-for-educators.html>.

Resit arrangements

As per the Ofqual Technical Qualification Handbook, there is no specific resit window permitted. However, students will be able to resit in any assessment window following their first sitting.

Students may resit:

- to improve grades
- the Core Examinations
- the Employer Set Project
- the assessments for an occupational specialism, or
- any combination of these.

Where a student fails one of the Core Examinations, they must resit both assessments and must do so in the same assessment window.

However, where a student has to resit both the Core Examinations and the Employer Set Project, they do not need to retake both sets of assessments in the same assessment window. For clarity, where a student resits the Core Examinations, he or she is not required to retake the Employer Set Project, and vice versa.

In order to access a resit opportunity, you will need to make an entry for the window you require the student to resit the assessment in; see *Student assessment entry* above.

Resits can take place up until two academic years after the end of the final academic year for the cohort within which the relevant student is included.

Access to qualifications and assessments for students with disabilities or specific needs

Assessments need to be administered carefully to ensure that all students are treated fairly, and that results are issued on time to allow students to progress to their chosen progression opportunities.

Equality and fairness are central to our work. Our equality policy requires that all students should have equal opportunity to access our qualifications and assessments, and that our qualifications are awarded in a way that is fair to every student. We are committed to making sure that:

- students with a protected characteristic (as defined by the Equality Act 2010) are not, when they are undertaking one of our qualifications, disadvantaged in comparison to students who do not share that characteristic
- all students achieve the recognition they deserve for undertaking a qualification, and that this achievement can be compared fairly to the achievement of their peers.

For students with disabilities and specific needs, the assessment of their potential to achieve the qualification must identify, where appropriate, the support that will be made available to them during delivery and assessment of the qualification. Please see information below on reasonable adjustments and special consideration.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational Qualifications*.

Special requirements

Some students may have special needs during their Technical Qualification assessments. In such cases, Providers can apply for special requirements on their behalf.

We have a dedicated webpage for [Special Requirements](#). This includes:

- reasonable adjustments
- access arrangements
- special consideration
- modified formats.

Reasonable adjustments to assessment

The Equality Act 2010 requires an awarding organisation to make reasonable adjustments where a student with a disability would be at a substantial disadvantage in undertaking an assessment.

To ensure students have fair access to demonstrate the requirements of the assessments, a reasonable adjustment is one that is made before a student takes an assessment. In most cases, this can be achieved through a defined time extension or by adjusting the format of evidence. We can advise you if you are uncertain as to whether an adjustment is fair and reasonable. You need to plan for time to make adjustments if necessary.

We have a dedicated webpage for [reasonable adjustment](#) where Providers can learn more about the process and apply on behalf of a student.

Reasonable adjustments can help reduce the effects of a disability or difficulty that puts the student at a substantial disadvantage in an assessment, in order to enable them to demonstrate their knowledge, understanding, skills and behaviours to the level of attainment required.

Providers can access the *Application of Reasonable Adjustment for Technical Qualifications* via our dedicated webpage. The Provider's application must be made in line with the policy and a copy of their application must be retained.

For this qualification we do not see anything that might prevent reasonable adjustment providing the student is still able to demonstrate the achievement of the skills being assessed. This is due to the fact that students must achieve threshold competence. As a result there could be some Assessment Objectives and/or Performance Outcomes that must be met as they are mandatory in order to demonstrate threshold competence and meet the requirements for the sector.

Access arrangements

We also have a dedicated webpage for [access arrangements](#), where Providers can learn more about arrangements available for students with special needs. Access arrangements aim to meet the particular needs of an individual student without affecting the integrity of the assessment.

Access arrangements allow students to show what they know and do without changing the integrity or the demands of the assessment, for example by using a reader or scribe. Access arrangements are approved before an examination or assessment and they allow students with special educational needs, disabilities or temporary injuries to access the assessment.

Special needs could include students:

- with known and long-standing learning difficulties
- with physical disabilities (permanent or temporary)
- with sensory impairment
- whose first language is not English
- who have difficulties at or near the time of assessment that may affect their performance in the assessment.

For more information about access arrangements, we suggest Providers refer to the JCQ booklet *Access Arrangements, Reasonable Adjustments*.

Special consideration

A student's assessment performance can sometimes be affected by circumstances out of their control. Special consideration is a post-examination adjustment that compensates students who were suffering from a temporary illness or condition, or who were otherwise disadvantaged at the time of the Technical Qualification assessment.

Exams officers may apply for special consideration on a student's behalf. We have a dedicated webpage for [special consideration](#). This includes an FAQ fact sheet giving Providers answers to any questions or concerns they may have.

Special consideration will adhere to the following:

- There are general guidelines for special consideration in the JCQ booklet *A guide to the special consideration process*. It covers the process that is applied consistently by all Awarding Organisations. AOs will not enter into discussion with students or their parents as to how much special consideration should be applied.
- Special consideration cannot be applied in a cumulative fashion, i.e. on the basis of a domestic crisis at the time of the exam and the student suffering from a viral illness.
- Private students should liaise with the Provider where entries have been made, so that they can apply for special consideration on the private student's behalf.

Dealing with malpractice in assessment

We adhere to the JCQ document *Suspected Malpractice in Examinations and Assessments* in our approach to investigating potential malpractice or breaches of security. These procedures are in line with the Ofqual Conditions of Recognition. All allegations of potential malpractice are investigated, and sanctions imposed where malpractice is proven.

We have two dedicated webpages concerning malpractice:

- The first gives Providers guidance on how to let us know about anything suspicious or incidents of malpractice, in accordance with JCQ regulations.
- The second gives students information about what malpractice is and how to report it.

What does malpractice mean?

Malpractice means acts that undermine the integrity and validity of assessment, the certification of qualifications, and/or that may damage the authority of those responsible for delivering the assessment and certification.

Pearson does not tolerate actions (or attempted actions) of malpractice by students, Provider staff or Providers in connection with Pearson qualifications. Pearson may impose penalties and/or sanctions on students, Provider staff or Providers where incidents (or attempted incidents) of malpractice have been proven.

Malpractice may arise or be suspected in relation to any unit or type of assessment within the qualification. For further details regarding malpractice and advice on preventing malpractice by students, please see Pearson's *Provider guidance: Dealing with malpractice and maladministration in vocational qualifications*, available on our [website](#).

Providers are required to take steps to prevent malpractice and to investigate instances of suspected malpractice. Students must be given information that explains what malpractice is for internal assessment and how suspected incidents will be dealt with by the Provider. The *Provider guidance: Dealing with malpractice and maladministration in vocational qualifications* document gives comprehensive information on the actions we expect you to take.

Pearson may conduct investigations if we believe that a Provider is failing to conduct the assessments according to our policies. The above document gives further information and examples, and details the penalties and sanctions that may be imposed.

In the interests of students and Provider staff, Providers need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

Student malpractice

Student malpractice refers to any act by a student that compromises or seeks to compromise the process of assessment, or which undermines the integrity of the qualifications or the validity of results.

Student malpractice in examinations **must** be reported to Pearson using a *JCQ Form M1* (available at www.jcq.org.uk/exams-office/malpractice). The form should be emailed to studentmalpractice@pearson.com. Please provide as much information and supporting documentation as possible. Note that the final decision regarding appropriate sanctions lies with Pearson.

Failure to report malpractice constitutes staff or Provider malpractice.

Tutor/Provider malpractice

Providers are required to inform Pearson's Investigation Team of any incident of suspected malpractice by staff before any investigation is undertaken. Providers are requested to inform the Investigation Team by submitting a JCQ M2(a) form (downloadable from www.jcq.org.uk/malpractice) with supporting documentation to pqsmalpractice@pearson.com.

Where Pearson receives allegations of malpractice from other sources (for example, Pearson staff or anonymous informants), the Investigation Team will conduct the investigation directly or may ask the Provider to assist.

Incidents of maladministration (accidental errors in the delivery of Pearson qualifications that may affect the assessment of students) must also be reported to the Investigation Team using the same method.

Heads of Providers/Principals/Chief Executive Officers or their nominees are required to inform students and Provider staff suspected of malpractice of their responsibilities and rights; see 6.15 of *JCQ Suspected Malpractice in Examinations and Assessments Policies and Procedures*.

In cases of suspected malpractice, Pearson reserves the right to withhold the issuing of results while an investigation is in progress. Depending on the outcome of the investigation, results may be released or withheld.

We reserve the right to withhold results when undertaking investigations, audits and quality assurance processes. You will be notified within a reasonable period of time if this occurs.

Results transfer to Providers

To ensure you are supported, we will communicate with you on and before results day.

Results day will follow the format below:

Assessment Window	Results day
Summer 2021	August 2021 (Level 3 results day)
November 2021	January/February 2022

As we are not required to issue Technical Qualification certificates, T Level certificates or T Level statements of achievement, we will not require you to complete any forms or processes to claim the Technical Qualification from Pearson. Instead, we will issue the results directly to you.

We will make available:

- Scorecards: outlining the achievement in percentage terms against each Assessment Objective
- Results Plus: a service whereby achievement will be presented in an item-by-item format. This means Providers will be able to ascertain trends across and within cohorts, and clearly label the associated Assessment Objective
- Statement of Provisional Results: we will offer a provisional component result slip, clearly watermarked as a provisional component result.

Post-Results Services

Our Technical Qualification post-results services (PRS) and appeals will be implemented in line with Ofqual requirements, paying particular attention to the *Rules and Guidance for Technical Qualifications*, where sections Ofqual TQ13–23 refer to post-results activities, ‘Review of Marking or Moderation’ (RoMM) or Appeals.

We will provide the following:

- access to student assessment evidence
- appeal
- clerical checks
- expedited review of marking
- review of marking.

Our [post-results services](#) webpage will include all the necessary information for you to access the services for the T Level Technical Qualification. There will also be a specific *T Level Technical Qualification Post-Results Service Guide* for Providers to use following our first live assessment series in 2021. This information should be used alongside the *JCQ Post-Results Service Guide*.

PRS will be available after each assessment opportunity. Exams officers will be able to apply for PRS via our online system; however, you must have permission from the student before applying. If a student wishes to apply for PRS they must do so via their Provider. We state within the PRS guidance on our website that we cannot accept appeals directly from students, their parents or other third parties acting on their behalf.

In addition, our unique Results Plus service and a free Access to Scripts service will be available, so that Providers are able to transparently see how marks are awarded.

Appeals process

Our appeals process for the Technical Qualification will reflect industry standards, as outlined by the relevant Ofqual Condition(s) (TQ17–TQ22) relating to appeals.

You will be able to appeal the outcome of marking, decisions made regarding reasonable adjustments or special consideration tariffs applied, and any consequence of malpractice or maladministration investigations by us or other Technical Qualification AOs.

All our investigations will be conducted in accordance with the *JCQ General and Vocational Qualifications Suspected Malpractice in Examinations and Assessments Policies and Procedures*.

12. Provider recognition and approval

Introduction

Our Provider approval process and criteria have been developed in collaboration with other awarding organisations offering Technical Qualifications to ensure you have a seamless experience across awarding organisations when requesting approval to deliver the Technical Qualification.

Approving Eligible Providers as Approved Providers

Eligible Providers, i.e. those who submitted an Intention to Teach and have been approved by the DfE to deliver T Levels, will be required to seek approval from Pearson for each Technical Qualification they wish to deliver. They will do this by completing **one** of the two Provider Application forms:

5. T Level Technical Qualification Delivery Approval Application Form
6. Pearson UK Vocational Provider Approval Application for T Level Technical Qualifications.

The first form is for existing vocational Pearson centres to gain approval to deliver the Technical Qualification.

The second form is for non-vocational Pearson centres, i.e. centres not delivering any other vocational Pearson qualification. These are **new** Providers applying for centre approval to deliver vocational qualifications and the T Level Technical Qualification.

In order to assist **new** Providers in their application process, we have provided additional guidance: *Guidance to assist in the completion of the Pearson Vocational Provider Approval Application for T Level Technical Qualifications*.

In addition, we will also support you in the following ways:

- phone support via our Approvals Team
- on-boarding training via Provider Support.

Provider and Technical Qualification approval

As part of the approval process, you must make sure that the resource requirements listed below are in place before offering the qualification:

- Providers must have appropriate physical resources (for example, equipment, IT, learning materials, teaching rooms) to support the delivery and assessment of the qualification.
- There must be systems in place to ensure continuing professional development for staff delivering the qualification.
- Providers must have in place appropriate health and safety policies relating to the use of equipment by students.
- Providers must deliver the qualification in accordance with current equality and diversity legislation and/or regulations.
- Providers should refer to the Resources for delivery of content section in the components to check for any specific resources required.
- Administration arrangements, including security of live assessments, must be in place.

The methods we use to ensure Providers have the above resources in place include:

- making sure that all Providers complete appropriate declarations at the time of approval
- undertaking approval visits to Providers
- an overarching review and assessment of a Provider's strategy for delivering and quality assuring its technical qualifications.

Providers that do not comply with remedial action plans may have their approval to deliver qualifications removed.

What level of sector knowledge is needed to teach this qualification?

We do not set any requirements for tutors, but recommend that Providers assess the overall skills and knowledge of the teaching team to ensure that they are relevant and up to date. This will give students a rich programme to prepare them for employment in the sector.

For this Technical Qualification, tutors with the following knowledge and skills will be beneficial to the delivery of the programme:

Core component:

- Qualified to HN (level 4) or above, in construction, or
- 5 Years of experience working at the appropriate level in the construction sector, or
- Membership of an appropriate professional body allied to the construction sector, or
- 3 years' experience in teaching in the construction subject area.

Teachers that are familiar with Level 3 construction qualifications will be able to teach all core topics but should have:

- Experience of delivering project based qualifications
- Experience of preparing students for examination based assessment

- Knowledge of emerging technologies and sustainability.

CAD may be taught by an expert outside of construction.

Civil Engineering:

- Qualified to HN (level 4) or above, in construction, or
- 5 Years of experience working at the appropriate level in the construction sector, or
- Membership of an appropriate professional body allied to the construction sector, or
- 3 years' experience in teaching in the construction subject area.

Teachers should have:

- Experience of delivering project based qualifications
- Experience of preparing students for examination based assessment
- Knowledge of emerging technologies and sustainability

The maths and science components may also be taught by a construction 'maths/science' expert.

CAD may also be taught by an expert outside of construction.

Surveying and design:

- Qualified to HN (level 4) or above, in construction, or
- 5 Years of experience working at the appropriate level in the construction sector, or
- Membership of an appropriate professional body allied to the construction sector, or
- 3 years' experience in teaching in the construction subject area.

Teachers should have:

- Experience of delivering project based qualifications
- Experience of preparing students for examination based assessment
- Knowledge of emerging technologies and sustainability

For the CAD and modelling content a non-construction specialist could be used to deliver.

Building Services Design:

- Qualified to HN (level 4) or above, in construction, or
- 5 Years of experience working at the appropriate level in the construction sector, or
- Membership of an appropriate professional body allied to the construction sector, or
- 3 years' experience in teaching in the Building Services Engineering subject area.

Teachers should have:

- Experience of delivering project based qualifications
- Experience of preparing students for examination based assessment
- Knowledge of emerging technologies and sustainability

For the CAD and modelling content a non-construction specialist could be used to deliver.

Teachers with level 3 or above qualifications in specific Building services such as Electrical installations or Plumbing can be used can teach the relevant services in Building Services Design.

Hazardous Materials Analysis and Surveying:

For teaching of the 'Hazardous Materials Analysis and Surveying' specialism, the teacher should be familiar as a minimum with the Level 3 construction qualifications.

Teachers should have:

- Experience of delivering project based qualifications
- Experience of preparing students for examination based assessment
- Knowledge of emerging technologies and sustainability

Teachers must hold the following qualifications:

- A minimum of the foundation BOHS courses in Asbestos surveying and analysis and Basic principles in occupational hygiene.

What resources are required to deliver this qualification?

As part of your Provider Approval, you will need to show that the necessary material resources and work spaces are available to deliver this technical qualification. Where specific resources are required to deliver the content, these are stated in the relevant component.

Providers should refer to the *Resources for delivery of content* section in the components to check for any specific resources required.

Quality Assurance for the delivery of the Technical Qualification

All Providers will be subject to the same level of scrutiny for the delivery of the Technical Qualification.

We will monitor you throughout the delivery of the contract. This is to ensure you have appropriate and consistent quality assurance measures in place for the delivery of the Technical Qualification, and to ensure that you maintain ongoing compliance with our quality assurance measures in order to retain your approval status.

To maintain ongoing quality, give support and monitor standards, you will receive a termly phone call, and support visit if necessary, from a Provider Quality Manager (PQM). The PQM will check the quality of delivery, confirm implementation of guide/grade exemplification materials, and confirm you are on track for assessment and are accessing our Provider Support.

We will monitor the following activity that could impact approval status:

- registration patterns
- student outcomes
- quality issues identified by our PQM
- reports of maladministration or malpractice.

The PQM will identify any concerns during the termly phone call, provide support and escalate as required. In order to resolve any issues you may have in meeting our quality assurance measures, the PQM will create an action plan with goals and timescales, and support you through the process. If you do not make adequate progress against the action plan, we will notify IfATE of our intention to remove approval status.

Live assessment monitoring

Each assessment in the Technical Qualification is set and marked by Pearson.

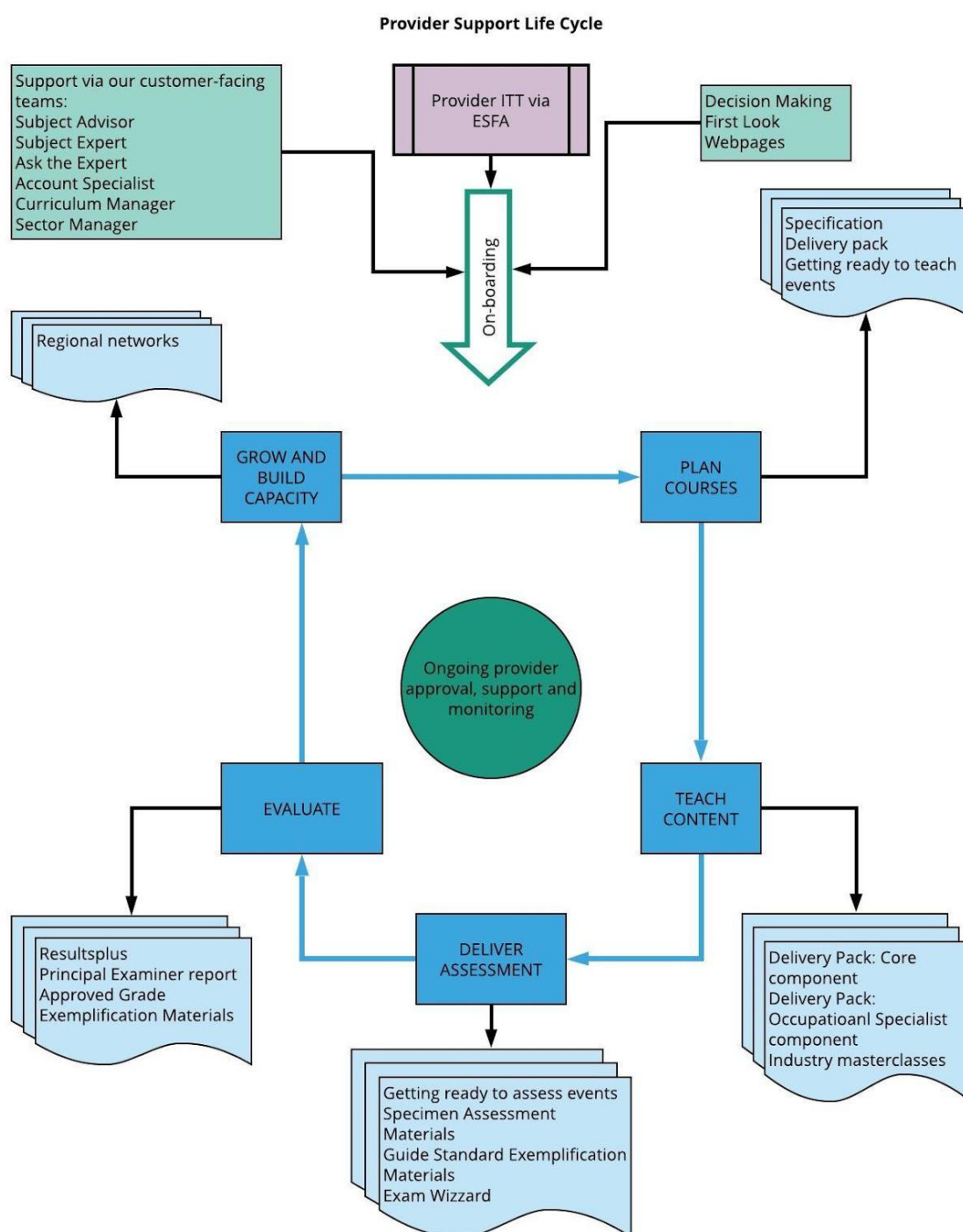
The Core examinations and the Employer Set Project will be sat under exam conditions, following *JCQ's ICE guidance*.

The Occupational Specialist project has different controls depending on the tasks being undertaken by the student. Therefore, full detail of student monitoring will be provided within the assessment materials; these will be published on our T Level webpage before the assessment window commences.

13. Resources and support

The Technical Qualification represents a significant change. It will change how you recruit students, who teaches the occupational specialism, how you incorporate the industry placement, and how you teach and prepare students for external assessment. We will create an innovative range of bespoke support for admin/exams officers, tutors and students that accounts for the step-change the reforms are looking to make in teaching and learning technical skills.

Our aim is to give you a range of support centred on the assessment life cycle, to enable you to deliver the Technical Qualification with confidence. We will include details about our support on our website and inform you via our regular e-bulletins as the materials are launched.



Teaching, learning and assessment materials

1. Plan

- Specification for 2020: content elaboration for the Core and Occupational Specialist Components, guidance and support.
- Delivery Pack: for each component, a Delivery Pack introduction providing advice, help and inspiration.
- Onboarding materials: Provider journey from initial enquiry through to results.

2. Teach

- Delivery Pack: for the Core Component, a number of Topic Guides with lesson activities, industry links and topics linked to assessment.
- Delivery Pack: for the Occupational Specialist Component, an industry project designed with our EVP to enable holistic delivery of the occupational specialism to enhance student experience and prepare for synoptic assessment; used 'off the shelf' or adapted for local or student needs.

3. Assess

- Specimen Assessment Materials (SAMs).
- Guide Standard Exemplification Materials (GSEM).
- Grade Standard Assessment Materials.
- Student exemplar response for ESP.

4. Evaluate

- Principal examiner (PE) report for each component: commentary on performance, including Approved Grade Standard Exemplification Materials.

With the exception of the PE reports, materials will be developed alongside the Technical Qualification. From April 2020 we will have a phased launch of our Provider Support, depending on the resource and where it features within the teaching or assessment life cycle; this is aimed at ensuring you have time to plan, yet aren't bombarded with materials and events within close proximity of each other.

Provider training

Our training will incorporate the above teaching, learning and assessment materials and allow for an in-depth look at content, pedagogy and assessment, providing an opportunity for tutors to network, share ideas and unpick common issues.

The events are targeted at a variety of roles and fit into the Provider journey as follows:

1. Plan

- Admin/Exams Officer: set-up and support on administrative, technical or operational matters.
- First Look: review of the Technical Qualification specification for Providers.
- Getting Ready to Teach: planning, using the support materials, exploring teaching strategies, external and synoptic assessment.

2. Teach

- Regional networks facilitated by our curriculum development managers: sharing good practice and building employer networks to drive innovation and build capacity.

- Industry masterclasses designed and delivered with our EVP: to improve depth of understanding of industry topics.

3. Assess

- Getting Ready to Assess: understanding the standard (using GSEM and mark schemes).

4. Evaluate

- Feedback: examiner feedback and implications for future delivery; demonstrating Exam Wizard and ResultsPlus (see below) to support teaching and exam preparation.

Our events will start in spring 2020 and continue through the contract. To support easy access, the materials will be on our website and events will be delivered in a diverse range of formats:

- face-to-face by a sector specialist
- live online, using interactive technology by a sector specialist
- recorded modules.

Preparing students for external assessment will be new to many tutors. The following two services are unique to Pearson, have proved very popular and will be available for free:

- Exam Wizard is an exam-paper creation tool that allows you to create mock exams and topic tests from a database of sample questions and papers, as well as past papers. Tutors specify the type of assessment they want and a bespoke test with mark scheme and examiner report is created for students to use as practice.
- ResultsPlus is a post-results data analysis tool. It gives item-level analysis by student, class, cohort or cluster of Providers. This allows the user to pinpoint areas of strength and weakness, and to amend teaching and learning to improve student outcomes and motivation.

Provider contact

In addition to the bespoke area of our website which is located [here](#), we will also offer a personal, easy-to-access and expert service via the following:

- Customer Service Account Specialist: named contact for admin/exams officer on administrative or operational matters via phone or email.
- Subject Advisor: named contact for teaching and delivery questions via phone, email, live chat, Facebook, Twitter; provides monthly news promoting support, training and updates.
- Ask the Expert: email address to ask complex or specialist questions relating to content, delivery and assessment.
- Curriculum Development Managers: regional staff who will promote the Technical Qualification, support onboarding and facilitate network events.
- Sector Manager: collect feedback from Providers and employers to identify improvements to our support and services.

Our [T Levels Support](#) webpage gives you all the contact details in order to support you.

This includes our:

7. Pearson Support Portal
8. email addresses for administration and teacher support
9. call centre, which is open between 8am and 5pm
10. postal address.

Appendix 1: Glossary of terms used

This is a summary of the key terms used to define the requirements in the components.

Term	Definition
Assess	Give careful consideration to all the factors or events that apply and identify which are the most important or relevant. Make a judgement on the importance of something, and come to a conclusion where needed.
Complete (diagram)	Complete a diagram or process flow that has already been started.
Calculate	Obtain a numerical answer, showing relevant working if necessary. If the answer has a unit, this must be included.
Complete (table)	Provide the missing information for a table/diagram so that it is complete (contains all the necessary information).
Describe	Present two (or more) linked descriptive points on characteristics, features, uses or processes. Do not need to include a justification or reason.
Discuss	Consider the different aspects in detail of an issue, situation, problem or argument, and how they interrelate.
Draw	Produce a diagram, either using a ruler or using freehand OR create a graphical or visual representation of information.
Evaluate	Consider various aspects of a subject's qualities in relation to its context such as: strengths or weaknesses, advantages or disadvantages. 9 mark questions will require you to come to a judgment supported by evidence which will often be in the form of a conclusion. 12 mark questions will require a comparative exercise involving at least two options, with a judgement supported by evidence which will often be in the form of a conclusion.
Explain	Present one point that identifies a reason, way or importance and a second point that justifies/explains the first point. Where used, a third point is a further justification/explanation.
Give	Recall from memory a feature, characteristic or use.
Identify	Select the correct answer from the given context or stimulus.
Label	Correctly indicate parts of a diagram/image/graphical representation.
List	Recall from memory facts, dates, legal implications, etc. More than one.
State	Recall from memory a fact, date, legal implication, etc.



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Schedule 3

Implementation

The content for this Schedule is contained in separate files at:

S3_GEN2W1_DSP_Implementation_Plan

S3_GEN2W1_DSP_Resource_Plan

Schedule 3

Implementation Plan

S3_GEN2W1_DSP_Implementation_Plan

Schedule 3

Resource Plan

S3_GEN2W1_DSP_Resource_Plan

Award Questionnaire Q10.7: Resource Plan - Instructions

Lot (qualification) name: T Level Technical Qualification in Design, Surveying and Planning for Construction
Potential Supplier name: Pearson Education Ltd

Introduction

The following three tabs are designed for Potential Suppliers to outline and explain their Resource Plan.

How to complete the document & etc.

Potential Suppliers must complete and submit one copy of this document for each TQ (ie a separate response for each Lot they intend to submit a Tender for).

The three sheets that follow form the requirement of Q10.7:

>> Outline Resource Plan: Potential Suppliers are to complete all highlighted (yellow) blank boxes in the table, providing an overall outline of the proposed Resource Plan. All answers should include a level of detail that enables the Authority to assess the basis and reasonableness of the proposed strategy. For the first 6 named resources (marked as * key resources), Potential Suppliers are required to provide a named replacement resource and detail their relevant experience.

>> Blank Diagram Sheet: This sheet has been left blank for Potential Suppliers to include a diagram or picture of their resourcing and/or readiness approach should they wish to include this to further support/illustrate their Resource Plan.

>> Further 10.7 Requirements: The information requested here is designed to supplement the Resource Plan provided in Sheet 1. Potential Suppliers must complete all blank boxes, providing an appropriate amount of detail.

Schedule 4

Co-operation

1 Objective of the joint arrangements

- 1.1 The Supplier shall cooperate, coordinate and seek to agree certain arrangements with all third party Awarding Organisations, including the Former Supplier, involved in the delivery of the technical education qualification element of each T Level forming part of the T Levels Programme ("**T Level Awarding Organisations**") from time to time with the aim of:
- 1.1.1 ensuring the quality, consistency, efficiency and effectiveness of the T Levels Programme as a whole; and
 - 1.1.2 in the interest of Students and Providers, streamlining administration relating to the T Levels Programme.
- 1.2 The Supplier shall ensure that all activities carried out by it under this Schedule appropriately take into account the views of each T Level Awarding Organisation (including T Level Awarding Organisations appointed subsequent and/or prior to the appointment of the Supplier) and do not risk or result in:
- 1.2.1 a disproportionate burden falling on any given T Level Awarding Organisation or on Providers; and/or
 - 1.2.2 a disproportionate burden (whether by any act or omission on the part of the Supplier) on Providers and/or Students.

2 Joint arrangements

- 2.1 In particular, the Supplier shall (at its own cost):
- 2.1.1 attend a meeting convened by the Authority (on reasonable prior notice and at least once per calendar quarter) with all other T Level Awarding Organisations to discuss progress on coordination efforts including the activities set out below, and to make decisions relating to any outstanding areas of coordination;

- 2.1.2 in order to minimise the administrative burden on Providers, cooperate with all other T Level Awarding Organisations to coordinate and deliver an efficient method of both regular and ad hoc inspections (on an ongoing basis) of the delivery by Approved Providers of the technical education qualification element of each T Level, to ensure that the relevant Approved Providers continue to meet the requirements of their Provider Approval by the Supplier and equivalent approval by other T Level Awarding Organisations, provided always that where, as a result of such cooperation and/or coordination it is necessary for the Supplier to amend and/or modify that part of the Supplier's Response to which the provisions of paragraph 3.1.2 of Part 1 of the Service Requirements apply, then the Supplier shall obtain Approval to such amendment and/or modification;
- 2.1.3 coordinate and seek to agree with all other T Level Awarding Organisations (at the earliest possible date) common rules and guidance applicable to the teaching and assessment of and provision of Post-Results Services for the technical education qualification element of each T Level with the aim of having aligned rules, guidance and Post-Results Services, where appropriate, across the T Levels Programme, addressing topics such as conducting examinations;
- 2.1.4 share information between T Level Awarding Organisations as necessary (subject to the relevant obligations on confidentiality in this Contract) to:
- (i) facilitate the joint arrangements anticipated by this Schedule;
 - (ii) enable transfer of achievement of the TQ Core Component of a T Level between T Level Awarding Organisations; and
 - (iii) enable results analysis in respect of the Route of which the TQ forms part;
- 2.1.5 where possible, utilise systems in the delivery of the Services which are interoperable with those utilised by other T Level Awarding Organisations so as to facilitate the portability of the Services to any Future Supplier;

- 2.1.6 coordinate and seek to agree with all other T Level Awarding Organisations pre-assessment access arrangements for T Levels to ensure equivalence of approach between T Level Awarding Organisations;
- 2.1.7 adopt a common process and, where possible, system, to that used by other T Level Awarding Organisations for applications for access arrangements for T Levels to be made and considered for the benefit of Students;
- 2.1.8 coordinate and seek to agree with all other T Level Awarding Organisations a common process and approach and, where possible, system to that used by other T Level Awarding Organisations, to manage and/or facilitate Reasonable Adjustments and/or applications for Special Consideration to ensure equivalence of approach between T Level Awarding Organisations;
- 2.1.9 seek to agree between T Level Awarding Organisations a Key Dates Schedule, such schedule to be developed in consultation with the Department, GCE Awarding Organisations, Providers and UCAS and to be Approved by the Authority;
- 2.1.10 attend regular meetings (at least once per calendar month unless otherwise notified by the Authority) with all other T Level Awarding Organisations to discuss operational issues in relation to the T Level Programme;
- 2.1.11 in order to minimise the administrative burden on Providers, co-operate with the Former Supplier, where relevant, to facilitate a smooth transition during the Entry Transition Period; and
- 2.1.12 where notified by the Authority, work with other T Level Awarding Organisations responsible for TQs in the same Route with the aim to, where appropriate, harmonise the common TQ Core Component across that Route.

3 Disputes relating to joint arrangements

- 3.1 In the event the Supplier contends that it is unable to meet its obligations under this Schedule as a result of the action or inaction of one or more third party T Level Awarding Organisation, the Supplier shall seek to resolve such matter with the relevant T Level Awarding Organisation(s). In the event that the Supplier is unable to resolve

such matter, having used its reasonable endeavours to do so, the Supplier shall promptly notify the Authority in writing with the relevant details including the steps taken to attempt to resolve the matter, and the Authority shall use its reasonable endeavours to promptly resolve such matter.

- 3.2 In the event that a third party T Level Awarding Organisation contends that it is unable to meet its joint arrangement obligations as a result of the action or inaction of the Supplier, then the Supplier shall comply with the reasonable instructions of the Authority in relation to such action or inaction.
- 3.3 Nothing in this Schedule (including any failure to agree any matters referred to in paragraph 2 of this Schedule) shall operate to reduce or otherwise diminish the Supplier's obligations and/or the Authority's rights under this Contract.

4 Reporting

- 4.1 The Supplier shall, on request by the Authority, promptly provide a written report to the Authority setting out its progress in achieving the joint arrangements set out in paragraph 2 of this Schedule.

Schedule 5

Supplier's Response

The content for this Schedule is contained in a separate file at.

S5_GEN2W1_DSP_Risk_Register

S5_GEN2W1_DSP_AQ9.1-10.7_Supplier_Responses

S5_GEN2W1_DSP_Q9.5_Grading_and_Awarding_Structure

S5_GEN2W1_DSP_Q10.4_Internal_Quality_Assurance_Process

S5_GEN2W1_DSP_Q10.7_Management_and_Governance

S5_GEN2W1_DSP_Q10.7_Escalation_Process_Flow

S5_GEN2W1_DSP_Issues_Log

S5_GEN2W1_Clarifications

Schedule 5

Risk Register

S5_GEN2W1_DSP_Q10.1_TQ_Risk_Register

Schedule 5

Supplier Responses

S5_GEN2W1_DSP_AQ9.1 - Q10.7_Supplier_Responses

Schedule 5

Awarding Structure

S5_GEN2W1_DSP_Q9.5_Grading_and_Awarding_Structure

Schedule 5

Internal Quality Assurance Process

S5_GEN2W1_DSP_Q10.4_Internal_Quality_Assurance_Process

Schedule 5

Management and Governance

S5_GEN2W1_DSP_Q10.7_Management_and_Governance

Schedule 5

Escalation Process Flow

S5_GEN2W1_DSP_Q10.7_Escalation_Process_Flow

Schedule 5

Issues Log

S5_GEN2W1_DSP_Q10.7_Issues_log

Schedule 5

Clarifications

S5_GEN2W1_DSP_Clarifications

Schedule 6

Pricing Schedule

The content for this Schedule is contained in a separate file at:

S6_GEN2W1_DSP_Pricing_Schedule

Pricing Schedule - Instructions

Lot (qualification) name:

DESIGN SURVEYING AND PLANNING (FOR CONSTRUCTION)

Potential Supplier name:

Pearson Education Ltd

Introduction

This Pricing Schedule enables Potential Suppliers to complete the price element of their Tender. This is to be done against the price elements defined in the definition section below and with reference to the rest of the documents forming part of this ITT, particularly the Service Requirements. Note the separate instructions relating to question 10.5 which must also be followed by Potential Suppliers.

The figures provided against each of the pricing elements will be used in conjunction with expected numbers of Technical Qualification (TQ) students (5 cohorts), chargeable updates to the TQ content and uptake of Additional Services to calculate an estimated Total Contract Value ("TCV"). The TCV calculated in this Pricing Schedule will form the basis of the pricing evaluation, as described in the Evaluation Methodology and Guidance.

Please note that all of the volumes given in this Pricing Schedule are estimates and are not guaranteed. Please also note that no price impacting assumptions or caveats will be accepted in Tenders and the Potential Supplier will not be permitted to vary any charges or fees included in this Pricing Schedule in the event that its estimates prove to be inaccurate. The only charges and fees which will be payable to Suppliers for the Services provided under the Contract are those set out in the Pricing Schedule, subject only to the variation procedures set out in the Contract.

How to complete this Pricing Schedule

Potential Suppliers must complete and submit one copy of this Pricing Schedule for each Lot they intend to submit a Tender for. There are 7 versions of the Pricing Schedule, one for each Lot, and Potential Suppliers should ensure that they complete and submit the correct version of the Pricing Schedule for the Lot which they are submitting a Tender for. Potential Suppliers must complete their name on this instructions tab.

Potential Suppliers must complete all boxes coloured yellow in each of tabs 'Input A', 'Input B', 'Input C' and 'Input D'. The spreadsheet will then automatically calculate the TCV in the "Total Contract Value" tab using the values entered. The rate card in 'Input B' will automatically populate the relevant rows in 'Input C' and 'Input D'. Values should be entered in £ pounds sterling and rounded to the nearest pound. Prices should exclude any applicable VAT.

>> **Input A:** Potential Suppliers should enter their proposed entry fee and the price for each of their Additional Services (each as defined below). The Qualification Development Fee will automatically be populated when 'Input C' is completed. The scenario based update charge will be automatically populated when 'Input D' is completed. Potential Suppliers submitting a Tender for multiple Lots should note the requirement to apply the multi-lot discount to the entry fee at Contract Award stage, should the Potential Supplier be awarded multiple lots. The discount to the entry fee will be applied as described in paragraph 5.16 of the ITT.

>> **Input B:** In the 'Personnel Costs' section, Potential Suppliers should enter a daily rate (for a 7 hour working day) of each type / grade of individual who may be involved in work on the refresh of, and updates to, the Technical Qualification (TQ), together with their grade or level where applicable to their role and whether they are an internal (i.e. employed) or external resource. Individual roles should be entered in the relevant category of Drafting, Consultation / Stakeholder Engagement, or Quality Assurance / Review that best describes the majority of their role in relation to the refresh of / update to the TQ or 'Other' where none of the other listed categories are relevant. Only complete as many lines as needed for the number of roles that will be involved, and leave the remaining lines blank. A blended day rate will automatically be calculated for evaluation purposes only based on the total of all daily rates divided by the number of roles listed. This will form part of the TCV calculation. In the 'Other Costs' section, Potential Suppliers should enter any non personnel related costs which they wish to include in either or both of their development costs or change costs in 'Input C' and 'Input D'. Non personnel related costs should be broken down into different types of cost. Details of each type of costs and the unit cost should be provided. If the unit cost for a non personnel cost is different for development and change, the cost should be entered twice with a different unit cost for each entry (e.g. Software licensing costs - development £x; software licensing costs - change £y). Both the personnel cost and other cost lines entered in 'Input B' will then be available for Potential Suppliers to select from when completing 'Input C' and 'Input D'. Only enter details for personnel and other costs if they are relevant to be able to complete 'Input C' or 'Input D' tabs. For the purpose of this exercise, marketing costs are not to be included. The Rate Card costs may be subject to indexation based increase as set out in the Contract.

>> **Input C:** Potential Suppliers should enter the number of days of input which would be required from each of the listed individual roles to refresh the qualification. The available roles will automatically complete from your entries in 'Input B' (which should therefore be completed before this section). Potential Suppliers should provide the type and estimated frequency of any non personnel related costs that will be incurred to refresh the qualification in the 'Other Costs' section. The available types of non personnel cost will automatically complete from your entries in 'Input B'.

>> **Input D:** Potential Suppliers should enter the number of days of input which would be required from each of the listed roles to complete the relevant change to the TQ as described in the relevant scenario. The available roles will automatically complete from your entries in 'Input B' (which should therefore be completed before this section). Potential Suppliers should provide the estimated frequency of any non personnel related costs that will be incurred in the 'Other Costs' section. The available types of non personnel cost will automatically complete from your entries in 'Input B'.

>> **Total Contract Value:** This is for information and evaluation purposes only, and no cells need to be completed by Potential Suppliers. Please note the figures for estimating the take up of Additional Services (dependent on the Additional Service, 0.1%, 0.5%, 5%, 10% or 20% of TQ students/assessments as applicable, or 40 instances of visits/reviews as applicable) including the anticipated number of assessments, is for evaluation purposes only. The unspecified TQ update charge based on a fixed number of days (20), is also an estimate used for evaluation purposes only. The Total Contract Value will be based on 5 cohorts only (please note that the estimated total contract value provided in the PIN Notice is based on 5 cohorts including the optional 1 + 1 cohort extension which is at the discretion of the Authority).

Fee definitions

- 1. Qualification Development Fee:** A fixed charge for the initial refresh and update of the TQ covering the elements set out in paragraph 10.4 of the Evaluation Guidance. This will be paid in three installments as set out in the Contract. To complete this pricing schedule, Potential Suppliers must fill in tab 'Input C' with the relevant details as described above. The total Qualification Refresh charge, will then be automatically shown on the 'Input A' tab, cell H7, and will be the Qualification Refresh Charge as defined in the Contract.
- 2. Entry fee:** A per student entry fee charged to Providers. This will cover all assessment and support services for the whole TQ. The fee provided here remains fixed throughout the Contract term (noting that in the occasion where a Potential Supplier is awarded more than one lot, the discount to the entry fee described above will be applied) other than inflationary increases in accordance with the Contract. Note that Potential Suppliers may not make any separate charge for Provider approval. Anticipated costs for Provider approval services must be included in other charges or fees in this Pricing Schedule. The entry fee must be inputted directly on the 'Input A' tab.
- 3. Fees for Additional Services:** These are fees charged directly to Providers in relation to the provision of Additional Services from the menu of services that Suppliers must make available to Providers. Each Additional Service must be delivered on request. Each fee provided here should cover one instance of the relevant Additional Service being delivered. The fee provided here is expected to remain fixed throughout the Contract, other than inflationary increases in accordance with the Contract. The Additional Services fees are to be inputted directly on the 'Input A' tab.
- 4. Fees for Exclusive Changes to the TQ:** The Authority will pay the Supplier for making changes to the TQ during the Contract term where these are defined as Exclusive TQ Changes in the Contract. For evaluation purposes, Potential Suppliers must price two TQ change scenarios as described in tab 'Input D'.
- For evaluation purposes, the rate card completed in 'Input B' and the detail entered in 'Input D' will be used to calculate the cost of two scenarios, and a cost of an unspecified TQ change as follows:
- > The weighted average for the two scenarios is calculated by multiplying the total charges of the 2 scenarios by their relative weighting and adding them together, to represent an average charge for a Exclusive TQ Change. This charge will then be automatically shown on the 'Input A' tab, cell H17. For the purposes of the TCV, this average charge will be multiplied by the estimated number of Exclusive TQ Changes over the Contract term that are similar to the scenarios (i.e. 2).
 - > The unspecified TQ update charge is calculated using a blended day rate. The blended day rate will be calculated on 'Input B' using the total of all daily rates listed in the rate card divided by the number of roles that are listed. For the purposes of the TCV, an unspecified TQ update charge will then be calculated by multiplying the blended day rate by 20 days. This is for the purposes of evaluation only and neither the blended rate or the unspecified TQ update charge are expected to form the basis for a specific charge to be paid by the Authority.

Schedule 6A

Adaptive Pricing

1. The Review Triggers

- 1.1 The Parties agree that the Entry Fee, as referred to in Schedule 6, shall be reviewed and may change, in the following two instances:
- 1.1.1 in or around [December 2026], which shall be referred to as the Mid-Term Review; and
 - 1.1.2 in the event that the Authority seeks to extend the Contract in accordance with clause 2.2 and 15.2 of the Contract, in or around [December 2028], which shall be referred to as the Extension Review.

2. The Mid Term Review

- 2.1 On or around [1st December 2026] the Authority shall provide the Supplier with an updated projection of total learner volumes for the five Exclusive Cohorts under the Contract which shall be referred to as the Updated Projection.
- 2.2 The Updated Projection shall be calculated by the Authority by combining the actual learner volumes for Exclusive Cohorts one and two, as confirmed by the Department to the Authority, with the revised estimates for the remaining three Exclusive cohorts of the Contract, as determined by the Department and confirmed to the Authority.

Circumstances in which an Enhanced Entry Fee is permitted

- 2.3 Where the Updated Projection is calculated to be at least 15% less than the total learner volume contained in the original tender documents, which shall be referred to as the Initial Projection, the Authority shall determine a revision to the Entry Fee which shall be referred to as the Enhanced Entry Fee and will be in such amount as to enable the Supplier to retain the opportunity to achieve its % profit margin, as set out in Schedule 6, over the life of the original Contract and;

- 2.3.1 the Authority shall notify the Supplier in writing, on or before the [31st December 2026] of the Enhanced Entry Fee;
- 2.3.2 by no later than the end of February in the Academic Year prior to the Academic Year in which the Enhanced Entry Fee may be applied the Supplier shall notify the Authority in writing of its intention to substitute the Entry Fee with the Enhanced Entry Fee, or such other Entry Fee not exceeding the Enhanced Entry Fee, as the case may be;
- 2.3.3 for the avoidance of doubt, any Entry Fee to be adopted by the Supplier pursuant to the provisions of this paragraph 2.3, will also incorporate any adjustments proposed by the Supplier under clause 4.12 of the Contract. The collective adjustments calculated in accordance with this paragraph 2.3 and or clause 4.12 will not exceed the Enhanced Entry Fee.
- 2.3.4 Any Enhanced Entry Fee shall apply for the Cohort for the Academic Year commencing 1 August [2027] and shall continue to apply to the Cohort for the Academic Year commencing 1 August [2027] and the Cohort for the Academic Year commencing 1 August [2027], and may be subject to later adjustments effected by the further application of clause 4.12 of the Contract.

Circumstances in which a Reduced Entry Fee will be required

- 2.4 Where the Updated Projection is calculated to be at least 15% more than the Initial Projection, the Authority shall determine a reduced Entry Fee which shall be referred to as the Reduced Entry Fee which will be in such amount as to enable the Supplier to retain the opportunity to achieve, but not exceed, its % profit margin, as set out in Schedule 6.
 - 2.4.1 The Authority shall notify the Supplier in writing, on or before the [31st December 2026] of the Reduced Entry Fee;
 - 2.4.2 For the avoidance of doubt, the Reduced Entry Fee will also incorporate any adjustments proposed by the Supplier under clause 4.12 of the Contract.
 - 2.4.3 The Reduced Entry Fee shall apply for the Cohort for the Academic Year commencing 1 August [2027] and shall apply to the Cohort for the Academic Year commencing 1 August [2027] and the Cohort for the Academic Year

commencing 1 August [2027], and may be subject to later adjustments effected by the further application of clause 4.12 of the Contract.

3. The Extension Review

3.1 In the event of notification by the Authority to the Supplier of their intention to extend the Contract in accordance with clause 2.2 and 15.2, which shall be referred to as 'the First Extension Period', the Authority shall:

3.1.1 before the end of the final Exclusive Cohort, provide the Supplier with the projection of learners for the Academic Years which fall within the First Extension Period following the end of the fifth Exclusive Cohort, as determined by the Department and confirmed to the Authority, which shall be referred to as the Final Updated Projection;

3.1.2 where the Final Updated Projection is calculated to be at least 15% less than the Updated Projection for the fifth Exclusive Cohort, calculate the Entry Fee applicable to the First Extension which shall be referred to as the Extension Entry Fee, in such a sum which ensures that the Supplier retains the opportunity to achieve its % profit margin, as set out in Schedule 6, during the First Extension Period;

3.1.3 the Authority shall notify the Supplier in writing, on or before the [31st December 2028] of the Extension Entry Fee;

3.1.4 by no later than the end of February in the Academic Year prior to the Academic Year in which the Extension Entry Fee may be applied the Supplier shall notify the Authority in writing of its intention to substitute the Entry Fee with such other Entry Fee not exceeding the Extension Entry Fee, as the case may be;

3.1.5 the Extension Entry Fee shall also incorporate any adjustments to the Entry Fee effected by the application of clause 4.12;

3.1.6 any Extension Entry Fee shall apply for the Cohorts for the Academic Years which fall within the First Extension Period.

- 3.2 In the event that the Authority seeks to extend the Contract beyond the First Extension Period, in accordance with the provisions of clause 2.2 and 15.2 of the Contract, the Extension Entry Fee shall not be amended further save for any adjustments effected by the application of clause 4.12.

Circumstances in which a Reduced Extension Entry Fee will be required

- 3.3 Where the Final Updated Projection is calculated to be at least 15% more than the Updated Projection for the fifth Exclusive Cohort, the Authority shall determine a reduced Entry Fee which shall be referred to as the 'Reduced Extension Entry Fee' which will be in such amount as to enable the Supplier to retain the opportunity to achieve, but not exceed, its % profit margin, as set out in Schedule 6.
- 3.3.1 The Authority shall notify the Supplier in writing, on or before the [31st December 2028] of the Reduced Extension Entry Fee;
- 3.3.2 For the avoidance of doubt, the Reduced Extension Entry Fee will also incorporate any adjustments proposed by the Supplier under clause 4.12 of the Contract.
- 3.3.3 The Reduced Extension Entry Fee shall apply for the Cohorts for the Academic Years which fall in with the First Extension Period, and may be subject to later adjustments effected by the further application of clause 4.12 of the Contract.

4. General

- 4.1 The Authority does not provide any assurance that the Updated Projection will be achieved and the Supplier bears all risks arising from any variance between the Updated Projection, the Final Updated Projection and the actual learner volumes that emerge through the life of the contract.

Schedule 7

Staff (including Key Personnel)

1 Key Personnel

- 1.1 The Supplier shall ensure that the Key Personnel fulfil the Key Roles during the Term. The Annex to this Schedule 7 lists the Key Roles, remit and names of the persons who the Supplier shall appoint to fill those Key Roles at the Effective Date.
- 1.2 The Authority can identify any further roles as being Key Roles and, following agreement on this by the Supplier (such agreement not to be unreasonably withheld or delayed) any relevant person selected to fill those Key Roles (and details of the role itself) shall be included on the list of Key Personnel in the Annex to this Schedule 7.
- 1.3 The Supplier shall not remove or replace any Key Personnel (including when carrying out its obligations under Schedule 12 (*Exit Management*)) unless:
 - 1.3.1 requested to do so by the Authority;
 - 1.3.2 the person concerned resigns, retires or dies or is on maternity or long-term sick leave;
 - 1.3.3 the person's employment or contractual arrangement with the Supplier or a Subcontractor is terminated for material breach of contract by the employee; or
 - 1.3.4 the Supplier obtains Approval (such Approval not to be unreasonably withheld or delayed).
- 1.4 The Supplier shall:
 - 1.4.1 notify the Authority promptly of the absence of any Key Personnel (other than for short-term sickness or holidays of 2 weeks or less, in which case the Supplier shall ensure appropriate temporary cover for that Key Role);
 - 1.4.2 ensure that any Key Role is not vacant for any longer than 10 Working Days;
 - 1.4.3 give as much notice as is reasonably practicable of its intention to remove or replace any member of Key Personnel and, except in the cases of death,

unexpected ill health or a material breach of the Key Personnel's employment contract, this will mean at least 60 Working Days' notice;

1.4.4 ensure that all arrangements for planned changes in Key Personnel provide adequate periods during which incoming and outgoing personnel work together to transfer responsibilities and ensure that such change does not have an adverse impact on the performance of the Services and/or supply of any Products; and

1.4.5 ensure that any replacement for a Key Role:

(i) has a level of qualifications and experience appropriate to the relevant Key Role; and

(ii) is fully competent to carry out the tasks assigned to the Key Personnel whom he or she has replaced.

2 Staff vetting

2.1 For the purposes of this paragraph 2, "**Convictions**" means, other than in relation to minor road traffic offences, any previous or pending prosecutions, convictions, cautions and binding-over orders (including any spent convictions as contemplated by section 1(1) of the Rehabilitation of Offenders Act 1974 or any replacement or amendment to that Act).

2.2 The Supplier shall ensure that all potential Supplier Staff or persons performing any of the Services during the Term who may reasonably be expected in the course of performing any of the Services under this Contract to have access to or come into contact with Students or vulnerable persons (and/or access to data or information relating to such Students or vulnerable persons) are, to the extent permitted by Law:

2.2.1 questioned concerning their Convictions; and

2.2.2 required to obtain appropriate disclosures from the Disclosure and Barring Service (or other appropriate body) where required by Law,

before the Supplier engages the potential staff or persons in the provision of the Services.

- 2.3 The Supplier shall take all necessary steps to ensure that such potential staff or persons referred to in paragraph 2.2 obtain standard and enhanced disclosures from the Disclosure and Barring Service (or other appropriate body) and shall ensure all such disclosures are kept up to date. The obtaining of such disclosures shall be at the Supplier's cost and expense.
- 2.4 The Supplier shall ensure that no person is employed or otherwise engaged in the provision of the Services without the Authority's prior written consent if:
- 2.4.1 the person has disclosed any Convictions upon being questioned about their Convictions in accordance with paragraph 2.2.1;
 - 2.4.2 the person is found to have any Convictions following receipt of standard and/or enhanced disclosures from the Disclosure and Barring Service (or other appropriate body) in accordance with paragraph 2.2.2; or
 - 2.4.3 the person fails to obtain standard and/or enhanced disclosures from the Disclosure and Barring Service (or other appropriate body) upon request by the Supplier under paragraph 2.2.2.
- 2.5 In addition to the requirements of paragraphs 2.1 to 2.4, where the Services are or include regulated activities as defined by the Safeguarding Vulnerable Groups Act 2006 the Supplier shall:
- 2.5.1 comply with all requirements placed on it by the Safeguarding Vulnerable Groups Act 2006;
 - 2.5.2 ensure that it has no reason to believe that any member of Supplier Staff is barred in accordance with the Safeguarding Vulnerable Groups Act 2006; and
 - 2.5.3 ensure that no person is employed or otherwise engaged in the provision of the Services if that person is barred from carrying out, or whose previous conduct or records indicate that they would not be suitable to carry out, any regulated activities as defined by the Safeguarding Vulnerable Groups Act 2006 or may present a risk to Students or any other person.
- 2.6 The Supplier shall ensure that the Authority is kept advised at all times of any member of the Supplier Staff who, subsequent to their commencement of employment as a

member of the Supplier Staff receives a Conviction or whose previous Convictions become known to the Supplier or whose conduct or records indicate that they are not suitable to carry out any regulated activities as defined by the Safeguarding Vulnerable Groups Act 2006 or may present a risk to Students or any other person. The Supplier shall only be entitled to continue to engage or employ such individual with the Authority's written consent and with such safeguards being put in place as the Authority may reasonably request. Should the Authority withhold consent the Supplier shall immediately remove such individual from the Supplier Staff.

- 2.7 The Supplier shall immediately provide to the Authority any information that the Authority reasonably requests to enable the Authority to satisfy itself that the obligations set out in paragraphs 2.1 to 2.6 of this Schedule have been met.
- 2.8 For Supplier Staff appointed following the Effective Date who shall or may have access to IfATE Data, in addition to meeting its obligations under this paragraph 2, the Supplier shall carry out pre-employment screening meeting the HMG Baseline Personnel Security Standard (BPSS) or equivalent in accordance with Schedule 9 (*Data Handling and Security Management*).

Annex to Schedule 7

List of Key Personnel

The content for this Annex is contained in a separate file at:

S7_A1_GEN2W1_DSP_List_of_Key_Personnel

Schedule 8

Supply Chain (including approved Subcontractors)

1 Appointment of Key Subcontractors

- 1.1 Where the Supplier wishes to enter into a Key Sub-Contract or replace a Key Subcontractor, it must obtain Approval, such Approval not to be unreasonably withheld or delayed. For these purposes, the Authority may withhold its Approval to the appointment of a Key Subcontractor if it reasonably considers that:
 - 1.1.1 the appointment of a proposed Key Subcontractor may prejudice the provision of the Services and/or the supply of the Products or may be contrary to the interests of the Authority and/or the TQ;
 - 1.1.2 the proposed Key Subcontractor is unreliable and/or has not provided reasonable services to its other customers or clients;
 - 1.1.3 the proposed Key Subcontractor employs unfit persons; or
 - 1.1.4 the proposed Key Subcontractor should be excluded in accordance with clause 15.715.8 (*Ending or extending this Contract*).
- 1.2 The Authority confirms its Approval of the appointment of the Key Subcontractors listed in Annex 1 to this Schedule 8.
- 1.3 Except where the Authority has given its Approval otherwise, the Supplier shall ensure that each Key Sub-Contract shall include:
 - 1.3.1 provisions which will enable the Supplier to discharge its obligations under this Contract;
 - 1.3.2 a right for the Authority to enforce any provisions under the Key Sub-Contract which are capable of conferring a benefit upon the Authority;
 - 1.3.3 a provision enabling the Authority to enforce the Key Sub-contract as if it were the Supplier;
 - 1.3.4 a provision enabling the Supplier to assign, novate or otherwise transfer any of its rights and/or obligations under the Key Sub-Contract to the

Authority or any Replacement Supplier without restriction (including any need to obtain any consent or approval) or payment by the Authority; and

1.3.5 obligations no less onerous on the Key Subcontractor than those imposed on the Supplier under this Contract:

- (i) under clauses 18.1 to 18.9.4 (*Data protection and information*);
- (ii) under clause 20 (*When information can be shared*);
- (iii) in respect of any obligation not to bring the Authority, the Department or the ESFA and/or the T Levels Programme into disrepute and/or otherwise diminish the trust that the public places in the Authority, the Department or the ESFA, as set out in clause 3.1.9 (*How the Services must be supplied*); and
- (iv) in respect of the keeping of records and provision of information (including (as applicable) Management Information) in relation to that part of the Services being provided and/or those Products being supplied under the Key Sub-Contract.

1.4 The Supplier shall, as soon as reasonably practicable following a request by the Authority, provide a copy of any proposed Key Sub-Contract (and/or any Key Sub-Contract which it has entered into) to demonstrate compliance by the Supplier with its obligations under this paragraph 1.

2 Subcontractor information

2.1 If the Authority asks the Supplier for details about Subcontractors, the Supplier must provide details of Subcontractors at all levels of the supply chain including:

- 2.1.1 their name;
- 2.1.2 the scope of their appointment; and
- 2.1.3 the duration of their appointment.

Annex 1 to Schedule 8

Key Subcontractors

Not Used

Schedule 9

Data Handling and Security Management

- 1 The Supplier shall maintain Cyber Essentials certification and shall operate an Information Security Management System in relation to the Services that is compliant with ISO 27001 (the International Standard for Information Security Management Systems) or an equivalent standard.
- 2 The Supplier shall have in place and maintain physical security, in line with the requirements outlined in ISO 27002 (the International Standard describing the Code of Practice for Information Security Controls), including entry control mechanisms (e.g. door access) to premises and sensitive areas.
- 3 The Supplier shall have in place and maintain an access control policy and process for the logical access (e.g. identification and authentication) to IT systems to ensure only authorised personnel have access to IfATE Data.
- 4 The Supplier shall have in place and shall maintain procedural, personnel, physical and technical safeguards to protect IfATE Data, including: physical security controls; Good Industry Practice policies and processes; anti-virus and firewalls; security updates and up-to-date patching regimes for anti-virus solutions, operating systems, network devices and application software; user access controls; and the creation and retention of audit logs of system use.
- 5 The Supplier shall carry out and shall maintain records of appropriate technical risk assessments in respect of all aspects of the Supplier's handling of IfATE Data. The Supplier shall provide such records to the Authority on request and shall ensure that such records are capable of demonstrating to the Authority's reasonable satisfaction that appropriate procedures are in place to address any significant risks identified.
- 6 The Supplier shall ensure that IfATE Data is processed and stored in a manner which enables such IfATE Data to be identified and securely deleted when required. The Supplier shall ensure that IfATE Data which is not in electronic form is kept physically separate from the data of the Supplier and any of the Supplier's other customers.
- 7 Any IfATE Data transferred by the Supplier using electronic transfer methods across public space or cyberspace, including mail and courier systems, or third party provider

networks must be encrypted to an encryption standard meeting Transport Layer Security (TLS) 1.2 or later.

- 8 Storage of IfATE Data on any portable devices or media shall be limited to the absolute minimum required to deliver the stated requirement and shall be subject to paragraphs 9 and 10 below.
- 9 Any portable removable media (including pen drives, flash drives, memory sticks, CDs, DVDs, or other devices) which handle, store or process IfATE Data to deliver or support the Services, shall be under the control and configuration management of the Supplier, shall be necessary to deliver the Services and shall be encrypted to the Advanced Encryption Standard (AES) 256 or equivalent.
- 10 All portable IT devices (including laptops, tablets, smartphones or other devices, such as smart watches) which handle, store or process IfATE Data to deliver and support the Services, shall be under the control and configuration management of the Supplier, shall be necessary to deliver the Services and shall be full-disk encrypted to the Advanced Encryption Standard (AES) 256 or equivalent.
- 11 Whilst in the Supplier's care, all removable media and hardcopy paper documents containing IfATE Data must be handled securely and secured under lock and key when not in use and shall be securely destroyed when no longer required, using either a cross-cut shredder, a professional secure disposal organisation or an equivalent secure disposal method.
- 12 When necessary to hand-carry removable media and/or hardcopy paper documents containing IfATE Data, the media or documents being carried shall be kept under cover and transported in such a way as to ensure that no unauthorised person has either visual or physical access to the material being carried. This paragraph shall apply equally regardless of whether the material is being carried inside or outside of the Supplier's premises.
- 13 The Supplier shall ensure throughout the Term that it is in a position (and is able to demonstrate to the Authority's reasonable satisfaction that it is in a position) to provide a complete copy of all IfATE Data at the Authority's request at any time and on the termination or expiry of the Contract.

- 14 At the end of the Contract or in the event of equipment failure or obsolescence, all IfATE Data, in either hardcopy or electronic format, that is physically held or logically stored on the Supplier's IT infrastructure must be securely sanitised or destroyed and accounted for in a manner that ensures that the relevant data is not retrievable using normally available methods and/or tools and which allows the Supplier to demonstrate its compliance with this paragraph 14 at the Authority's request. Where sanitisation or destruction is not possible for legal, regulatory or technical reasons, then the Supplier shall protect the Authority's information and data until such time that it can be securely cleansed or destroyed.
- 15 Access by Supplier Staff to IfATE Data shall be confined to those individuals who have a "need-to-know" in order to carry out their role and have undergone pre-employment screening appropriate to the nature and sensitivity of the IfATE Data and, for Supplier Staff appointed following the Effective Date, have undergone pre-employment screening which is at least equivalent to the HMG Baseline Personnel Security Standard (BPSS).
- 16 All Supplier Staff who handle IfATE Data must have annual awareness training in protecting information.
- 17 The Supplier shall have in place robust business continuity arrangements and processes including IT disaster recovery plans and procedures to ensure that the delivery of the Services is not adversely affected in the event of an incident (as set out in the Supplier's Business Continuity Plan). An incident shall be defined as any situation that might, or could lead to, a disruption, loss, emergency or crisis to the Services. Upon request from the Authority, the Supplier will provide evidence of the effectiveness of their business continuity arrangements and processes including IT disaster recovery plans and procedures. This should include evidence that the Supplier has tested or exercised these plans within the last 12 months and produced a written report of the outcome, including required actions.
- 18 Any suspected or actual breach of the confidentiality, integrity or availability of IfATE Data being handled in the course of providing the Services, or any non-compliance with security standards pertaining to the Services, shall be investigated immediately and escalated to the Authority. The Supplier shall maintain audit records and event logs in respect of any such security events in accordance with documented retention policies approved by the Authority.

- 19 The Supplier shall ensure that any IT systems and hosting environments that are used to handle, store or process IfATE Data shall be subject to independent penetration testing, to take place within the three month period immediately prior to the start of each Academic Year, to test the security of such systems and hosting environments, by a penetration testing provider that is CHECK, CREST or TIGER scheme approved. The Supplier shall include a summary of the findings of such penetration testing and the details of any necessary remedial work carried out in the annual penetration testing report required under Schedule 2 (*Service Requirements*). In the event of security issues being identified which are ranked as “high” importance or above, the Supplier shall notify the Authority as soon as reasonably possible (and in any event within 2 Working Days), shall promptly remedy such issues, and shall promptly carry out a follow-up remediation test at the Authority’s request.
- 20 The Supplier shall ensure that any consumer-off-the-shelf software used in relation to the IfATE Data or otherwise to deliver the Services is kept up-to-date and subject to mainstream support.
- 21 The Supplier shall procure and implement security patches to address any vulnerabilities in the IT systems used to handle the IfATE Data or to deliver the Services, within a period of time appropriate to the risk the vulnerability presents.
- 22 The Supplier shall not without the prior written agreement of the Authority store any IfATE Data outside of the UK or perform any form of IT management, support or development function from outside the UK. The Supplier shall provide the Authority with full details of any proposal to do so and shall not go ahead with any such proposal without the prior written agreement of the Authority.
- 23 The Supplier shall undergo appropriate security assurance activities as may reasonably be determined by the Authority from time to time and shall support the provision of appropriate evidence of assurance and the production of the necessary security documentation. This will include obtaining any necessary professional security resources required to support the Supplier’s security assurance activities.
- 24 The Supplier shall have in place and maintain a secure system for data exchange sufficient to enable the Supplier to make all required Management Information and Ofqual information returns in relation to the TQ and the Services.

- 25 Unless otherwise agreed in writing by the Authority, the Supplier shall ensure that any of their Subcontractors, third party suppliers or partners (including any Assessor who is self-employed or who provides services to the Supplier through that Assessor's own personal service company) who could potentially access any IfATE Data meet all of the requirements in this Schedule as they apply to the Supplier and shall contractually enforce such requirements onto any such Subcontractors, third party suppliers or partners (including any Assessor who is self-employed or who provides services to the Supplier through that Assessor's own personal service company).

Schedule 10

Business Continuity

The content for this Schedule is contained in a separate file at:

S10_GEN2W1_DSP_Business_Continuity

Schedule 11

Change Management

Variation Form

Variation Form / change control note (CCN) No:	Contract:	Effective Date of Variation:
Initiated by: Change requested by [Supplier OR Authority]		
Date of request:		
Period of validity: This Variation Form is valid for acceptance until [DATE].		
Reason for change:		
Description and impact of the change (including to delivery and performance):		
Time limit for Impact Assessment:		
Required amendments to wording of Contract or Schedules:		
Adjustment to Charges resulting from change:		
Supporting or additional information:		
SIGNED ON BEHALF OF THE AUTHORITY	SIGNED ON BEHALF OF THE SUPPLIER	
Signature:	Signature:	
Name:	Name:	
Position:	Position:	
Date:	Date:	

Schedule 12

Exit Management

PART A: GENERAL

1 Exit Plan

- 1.1 The Supplier shall, within two Months after the Effective Date, deliver to the Authority an initial Exit Plan (adopting and updating the form of plan at Annex 1 to this Schedule 12) that:
 - 1.1.1 sets out the Supplier's proposed methodology for achieving an orderly transfer of the Services to the Authority and/or its Replacement Supplier on the expiry or termination of this Contract;
 - 1.1.2 complies with the requirements set out in paragraph 1.3 below; and
 - 1.1.3 is otherwise reasonably satisfactory to the Authority.
- 1.2 The Authority shall consider the initial Exit Plan and shall notify the Supplier of any amendments it believes are necessary. The Parties shall use reasonable endeavours to agree the contents of the Exit Plan. If the Parties are unable to agree the contents of the Exit Plan within 30 Working Days of the Authority requesting any amendments, then such Dispute shall be resolved in accordance with the Dispute Resolution Procedure.
- 1.3 The Exit Plan shall set out, as a minimum:
 - 1.3.1 how the Exit Information will be obtained;
 - 1.3.2 separate mechanisms for dealing with Ordinary Exit, Early Exit and Emergency Exit, with the provisions relating to Early Exit and Emergency Exit prepared on the assumption that the Supplier may be unable to provide the full level of assistance that is required by the provisions relating to Ordinary Exit, and to include in the case of Early Exit and Emergency Exit, provision for the supply by the Supplier of all such reasonable assistance as the Authority shall require to enable the Authority or its sub-contractors to provide the Services;

- 1.3.3 the management structure to be employed during the transfer of the Services in the event of each of an Ordinary Exit, an Early Exit and an Emergency Exit;
- 1.3.4 a detailed description of the transfer processes, including a timetable, applicable in the case of each of an Ordinary Exit, an Early Exit and an Emergency Exit;
- 1.3.5 steps the Supplier will take to mitigate the potential for and/or costs of any redundancies (if applicable) of any individual employed by either the Supplier or any Subcontractor in the provision of the Services in the event of each of an Ordinary Exit, an Early Exit and an Emergency Exit; and
- 1.3.6 without prejudice to the Supplier's obligations elsewhere in this Schedule, the scope of any further termination-related assistance that may reasonably be required by the Authority to achieve an orderly transfer of the Services to the Authority and/or its Replacement Supplier in the case of each of an Ordinary Exit, an Early Exit, and an Emergency Exit.

2 Updates to the Exit Plan

2.1 The Supplier shall review and (if appropriate) update the Exit Plan:

- 2.1.1 following IfATE Approval;
- 2.1.2 at least once every Academic Year;
- 2.1.3 whenever there is a material change to the Services (including any TQ Change); and
- 2.1.4 within 10 Working Days of the service of a Termination Notice,

and consider what changes (if any) are necessary to reflect the current state of the Services and the TQ at the relevant point in time and to ensure that the Exit Plan meets the requirements of this Schedule and is capable of being implemented promptly.

2.2 Following each review required under paragraph 2.1, the Supplier shall submit for the Authority's approval a revised draft of the Exit Plan showing any proposed amendments necessary to ensure the Exit Plan continues to meet the requirements of this Schedule. The Authority shall consider each such revised draft and shall notify the

Supplier of any further amendments it believes are necessary. The Supplier shall incorporate all reasonable amendments requested by the Authority in a further revised draft of the Exit Plan. If the Parties are unable to agree the contents of a revised Exit Plan within 30 Working Days of the Authority requesting any amendments, then such Dispute shall be resolved in accordance with the Dispute Resolution Procedure.

- 2.3 When the revised Exit Plan is agreed, it shall be signed by both Parties, following which it shall supersede any previous versions of the Exit Plan.

3 Provision of Exit Information

- 3.1 The Supplier shall provide to the Authority the Exit Information (as defined in paragraph 3.2 below) in an appropriate documentary form:

3.1.1 within one Month of the date 12 Months prior to the Expiry Date (as extended by any Extension Period);

3.1.2 as soon as reasonably practicable after (and in any event within one Month of) the date of service of a Termination Notice by either Party; and

3.1.3 at the Authority's request on reasonable notice at any point during the Term provided that the Authority shall not make such a request more than twice in any 6 month period.

- 3.2 Subject to paragraph 3.3, the information to be provided under paragraph 3.1 shall include all such information as is reasonably necessary and sufficient to enable the Authority and/or any Replacement Supplier to take over and provide the Services and the TQ following the expiry or termination of this Contract (the "**Exit Information**"), and in particular shall include:

3.2.1 details of all Supplier third party contracts or licences used for the provision of the Services (including any Transferable Contracts) including, where applicable, whether such contracts or licences are used by the Supplier to provide services to other customers of the Supplier, save to the extent these details are subject to an obligation of confidence to a third party that is not part of the Supplier's corporate group;

3.2.2 details of all the Intellectual Property Rights used in the provision of the Services or developed as part of the Services;

- 3.2.3 details of any IfATE Data that is in the possession or control of the Supplier or any Subcontractors or that is otherwise used in the provision of the Services;
- 3.2.4 details of any Key Materials and Ancillary Materials;
- 3.2.5 details of any ongoing projects or other work carried out under this Contract; and
- 3.2.6 in respect of all individuals engaged in providing the Services, such information as the Authority may reasonably request (subject, at all times, to any relevant Data Protection Legislation), including in an anonymised format full and accurate details of:
- (i) the total number of such individuals;
 - (ii) details of whether they are employed, self-employed contractors or consultants, agency workers or otherwise;
 - (iii) their dates of commencement of employment or engagement;
 - (iv) their remuneration and other benefits;
 - (v) their other terms and conditions of employment, as applicable (including their relevant contractual notice periods and any other terms relating to termination of employment, redundancy procedures and redundancy payments);
 - (vi) their job titles and job descriptions;
 - (vii) details of any such individuals on long term sickness absence, parental leave, maternity leave, paternity leave or other authorised long-term absence;
 - (viii) any outstanding or potential contractual, statutory or other liabilities in respect of such individuals (including in respect of personal injury claims);
 - (ix) details of who reports to each individual and to whom each individual reports; and

- (x) any collective agreements that apply to them; and
- 3.2.7 any other material or information reasonably requested by the Authority.
- 3.3 The Supplier shall not be required to provide in the Exit Information any information that has already been provided to the Authority as part of the Management Information, unless that information has become outdated and/or inaccurate since it was last provided as part of the Management Information.
- 3.4 Once provided in accordance with paragraph 3.1 above, the Supplier shall provide any updates to the Exit Information to the Authority:
 - 3.4.1 on a Monthly basis (following any Month where there are changes to the Exit Information) following the earliest of the dates referred in to paragraphs 3.1.1 and 3.1.2; and
 - 3.4.2 as soon as reasonably practicable following (and in any case within one Month of) the Authority's reasonable request, provided that the Authority shall not make such a request more than twice in any 6 Month period.
- 3.5 The Exit Information shall be deemed to be Confidential Information. The Authority shall only use the Exit Information for the Exit Purposes as defined in paragraph 4.2 below, and shall ensure that such Exit Information is only disclosed within the Authority to those individuals who need to know the Exit Information for the Exit Purposes. The Authority may disclose the Exit Information to any Replacement Supplier for the Exit Purposes.

4 Provision of assistance on termination or expiry

- 4.1 In connection with any expiry or termination of this Contract for whatever reason, the Parties shall perform their respective obligations as stated in the Exit Plan, and without prejudice to the generality of this obligation:
 - 4.1.1 the Supplier shall provide to the Authority and/or any Replacement Supplier (as applicable) all reasonable assistance requested by the Authority for the transfer of the Services and the TQ from the Supplier to the Authority and/or the Replacement Supplier (as applicable) with the minimum of disruption and inconvenience to Students and Stakeholders;

- 4.1.2 the Supplier shall provide the Authority with:
- (i) a complete copy of all Key Materials;
 - (ii) a complete copy of any Ancillary Materials that have not previously been provided or that have been updated since they were last provided; and
 - (iii) at the Authority's request, further copies of any Ancillary Materials previously provided;
- 4.1.3 the Supplier shall provide the Authority or, at the Authority's request, any Replacement Supplier, with a copy of all IfATE Data that is in the possession or control of the Supplier or any Subcontractors or that is otherwise used in the provision of the Services;
- 4.1.4 the Supplier shall provide any additional information reasonably required by the Authority to understand and access any data or information provided by the Supplier; and
- 4.1.5 at the Authority's request, the Supplier shall enter into a period of parallel running of the Services alongside the running of any Replacement Services and shall use its reasonable endeavours to facilitate a phased transfer of the Services to the Authority and/or any Replacement Supplier (but only where that phased transfer does not impact on the Supplier's ability to deliver the Services that it remains responsible for providing under this Contract).
- 4.2 Without prejudice to the terms of clause 13 (*Intellectual Property Rights*), the Supplier hereby grants to the Authority a worldwide, royalty free licence (with a right to sublicense to any Replacement Supplier) to use any information, data, software or materials referred to in the Exit Information or provided by the Supplier or its Subcontractors in the performance of the Supplier's obligations under this paragraph 4. The Authority and any Replacement Supplier sub-licensees may only use such information, data, software and materials for such purposes and for such period as is reasonably necessary to ensure an orderly transfer of the Services to the Authority or a Replacement Supplier that minimises disruption and inconvenience to Students and Stakeholders ("**Exit Purposes**").

- 4.3 In the event of an Emergency Exit, the Supplier shall grant or procure the grant to the Authority and any Replacement Supplier the right during any Transition Period and on termination of this Contract to access and use the IT systems used by the Supplier (including software and databases) insofar as such access and use is necessary in order to enable an orderly transfer of the Services to the Authority and/or its Replacement Supplier on the termination of this Contract, and the Supplier shall provide such access, information and credentials as are required for the Authority and/or Replacement Supplier to access such systems for such purposes.

5 Transferable Contracts

- 5.1 During the period beginning 6 Months prior to the End Date or following the service of a Termination Notice by either party, the Supplier shall not without the Authority's prior written consent terminate, enter into or vary:
- 5.1.1 any Transferable Contract; or
- 5.1.2 any other Sub-Contract, except to the extent such change does not or will not affect the provision of the Services or the Charges.
- 5.2 On expiry or termination of this Contract for any reason, the Supplier shall at the Authority's request assign, novate or procure the novation of the Supplier's interest in the Transferable Contracts to the Authority or a Replacement Supplier.

6 Costs of assistance on termination or expiry

- 6.1 Save in respect of the provision of the Services (for which the Supplier shall continue to be remunerated in accordance with Schedule 6 (*Pricing Schedule*)):
- 6.1.1 where the Contract is terminated by the Authority as a result of a Supplier Termination Event under clause 15.3 (*Ending or extending this Contract*) or where the Contract is wrongfully terminated or repudiated by the Supplier, the Parties' costs of compliance with paragraph 4 shall be borne by the Supplier; and
- 6.1.2 where the Contract is terminated by the Supplier under clause 15.5 (*Ending or extending this Contract*) or where the Contract is wrongfully terminated or repudiated by the Authority, the Parties' costs of compliance with paragraph 4 shall be borne by the Authority.

- 6.2 References to “**costs**” in paragraph 6.1 shall be deemed to refer only to direct, reasonable and verifiable costs (which, in the case of the Supplier, shall be calculated in accordance with the Rate Card). Both Parties shall use all reasonable endeavours to mitigate such costs and, to the extent reasonably practicable, each Party shall notify and obtain the consent of the other Party before incurring any costs for which the other Party would be liable under paragraph 6.1.
- 6.3 Subject to paragraph 6.1, each Party shall bear its own costs of compliance with this Schedule.

7 General

- 7.1 The Supplier warrants to the Authority that all the information provided under paragraphs 3 and 4 shall conform to the requirements of this Contract or, where there are no such requirements, shall be prepared in accordance with Good Industry Practice.
- 7.2 Except as otherwise stated in the Exit Plan:
- 7.2.1 the obligations in paragraphs 4 and 5 shall be in addition to, and not in substitution for, the provision of the Services; and
 - 7.2.2 subject to the continued payment of the Charges in accordance with the terms of this Contract, the Supplier shall continue to provide, and the Authority shall continue to receive, the Services during the Term in accordance with the terms and conditions of this Contract.

PART B: EMPLOYMENT

8 Employment exit provisions

- 8.1 This Contract envisages that subsequent to its commencement, the identity of the provider of the Services (or any part of the Services) may change (whether as a result of termination of this Contract, or part or otherwise) resulting in a transfer of the Services in whole or in part (“**Subsequent Transfer**”). If a Subsequent Transfer is a Relevant Transfer then the Authority or Replacement Supplier will inherit liabilities in respect of the Relevant Employees with effect from the Relevant Transfer Date.

- 8.2 The Supplier shall and shall procure that any Subcontractor shall on receiving notice of termination of this Contract or otherwise, on request from the Authority and at such times as required by TUPE, provide in respect of any person engaged or employed by the Supplier or any Subcontractor in the provision of the Services, the Supplier's Provisional Supplier Personnel List and the Staffing Information together with any additional information required by the Authority, including information as to the application of TUPE to each individual listed on the Supplier's Provisional Supplier Personnel List. The Supplier shall notify the Authority of any material changes to this information as and when they occur.
- 8.3 At least 28 days prior to the Relevant Transfer Date, the Supplier shall and shall procure that any Subcontractor shall prepare and provide to the Authority and/or, at the direction of the Authority, to the Replacement Supplier, the Supplier's Final Supplier Personnel List, which shall be complete and accurate in all material respects. The Supplier's Final Supplier Personnel List shall identify which of the Supplier's and Subcontractor's personnel named are Relevant Employees.
- 8.4 The Authority shall be permitted to use and disclose the Supplier's Provisional Supplier Personnel List, the Supplier's Final Supplier Personnel List and the Staffing Information for informing any tenderer or other prospective Replacement Supplier for any services that are substantially the same type of services as (or any part of) the Services.
- 8.5 The Supplier warrants to the Authority and the Replacement Supplier that the Supplier's Provisional Supplier Personnel List, the Supplier's Final Supplier Personnel List and the Staffing Information ("**TUPE Information**") will be true and accurate in all material respects and that no persons are employed or engaged in the provision of the Services other than those included on the Supplier's Final Supplier Personnel List.
- 8.6 The Supplier shall and shall procure that any Subcontractor shall ensure at all times that it has the right to provide the TUPE Information under Data Protection Legislation.
- 8.7 Any change to the TUPE Information which would increase the total employment costs of the staff in the 12 months prior to the Expiry Date and/or the period following the date of service of a Termination Notice by either Party, shall not (so far as reasonably practicable) take place without the Authority's prior written consent, unless such changes are required by law. The Supplier shall and shall procure that any

Subcontractor shall supply to the Authority full particulars of such proposed changes and the Authority shall be afforded reasonable time to consider them.

- 8.8 In the 12 months prior to the Expiry Date and the period following the date of service of a Termination Notice by either Party, the Supplier shall not and shall procure that any Subcontractor shall not materially increase or decrease the total number of staff listed on the Supplier's Provisional Supplier Personnel List, their remuneration, or make any other change in the terms and conditions of those employees without the Authority's prior written consent.
- 8.9 The Supplier shall be responsible for all remuneration, benefits, entitlements and outgoings in respect of the Supplier's Personnel, including without limitation, all wages, holiday pay, bonuses, commissions, payments of PAYE, National Insurance, pension contributions and otherwise, up to the Relevant Transfer Date.
- 8.10 The Supplier shall indemnify and keep indemnified in full the Authority and at the Authority's request each and every Replacement Supplier against all Employee Liabilities relating to:
- 8.10.1 any person who is or has been employed or engaged by the Supplier or any Subcontractor in connection with the provision of any of the Services;
or
- 8.10.2 any trade union or staff association or employee representative,

arising from or connected with any failure by the Supplier and/or any Subcontractor to comply with any legal obligation, and whether any such claim arises or has its origin before or after the Relevant Transfer Date.
- 8.11 The Authority will and/or shall ensure that any Replacement Supplier will indemnify and keep indemnified in full the Supplier against any liability to the extent only arising from any failure by the Authority and/or any Replacement Supplier to comply with their obligations under TUPE.
- 8.12 The parties shall co-operate to ensure that any requirement to inform and consult with the employees and or employee representatives in relation to any Relevant Transfer as a consequence of a Subsequent Transfer will be fulfilled.

- 8.13 The parties agree that the Contracts (Rights of Third Parties) Act 1999 shall apply in respect of paragraph 8.2 to paragraph 8.10 to the extent necessary to ensure that any Replacement Supplier shall have the right to enforce the obligations owed to, and indemnities given to, the Replacement Supplier by the Supplier or the Authority in its own right under the Contracts (Rights of Third Parties) Act 1999.
- 8.14 Despite paragraph 8.13, it is expressly agreed that the parties may by agreement rescind or vary any terms of this Contract without the consent of any other person who has the right to enforce its terms or the term in question despite that such rescission or variation may extinguish or alter that person's entitlement under that right.

Schedule 12: Annex 1 – Exit Plan

The content for this Annex is contained in a separate file at:

S12_A1_GEN2W1_DSP_Q10.4_Exit_Plan

S12_A1_GEN2W1_DSP_Q10.4_Entry_Plan

Schedule 12 Annex 1

Exit Plan

S12_A1_GEN2W1_DSP_Q10.4_Exit_Plan

Schedule 12 Annex 1

Entry Plan

S12_A1_GEN2W1_DSP_Q10.4_Entry_Plan

Schedule 13

Form of Guarantee

Not Used

Schedule 14

Form of Assignment and Licence

DATED

THE INSTITUTE FOR
APPRENTICESHIPS AND TECHNICAL
EDUCATION

and

[Supplier]

INTELLECTUAL PROPERTY
ASSIGNMENT AND LICENCE IN
RELATION TO
THE [xxx] T LEVEL TECHNICAL
QUALIFICATION

**[DN: The highlighted details above are
to be completed at the Contract award
stage]**

THIS ASSIGNMENT AND LICENCE is made on

BETWEEN:

- (1) **THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION** of Sanctuary Buildings, 20 Great Smith Street, London SW1P 3BT (“**Authority**”); and
 - (2) **[DN: Insert Supplier name and details at Contract award stage]** (“**Supplier**”),
- each a “**Party**” and together the “**Parties**”.

BACKGROUND TO THIS ASSIGNMENT AND LICENCE

- (A) The Authority and the Supplier have entered into a contract on the date of this Assignment and Licence for the design, development and delivery of the technical education qualification element (“**TQ**”) for the **[DN: Relevant pathway to be inserted at Contract award stage]** T Level (“the **TQ Agreement**”).
- (B) The Supplier has agreed to assign certain intellectual property rights to the Authority, and to licence certain intellectual property rights to the Authority in connection with the TQ. The Authority has agreed to grant a licence back to the Supplier in relation to certain assigned intellectual property rights.
- (C) This Assignment and Licence, together with the TQ Agreement sets out the agreed terms of such assignment and licences.

1 Assignment and Licence start, formation and interpretation

- 1.1 This Assignment and Licence is legally binding from the Effective Date until it ends in accordance with its terms.
- 1.2 In this Assignment and Licence, unless the context otherwise requires, capitalised expressions shall have the meanings set out in this clause 1 or, where no definition is given in this clause 1, Schedule 1 to the TQ Agreement.
- 1.3 If a capitalised expression does not have an interpretation in this clause 1 or Schedule 1 to the TQ Agreement, it shall, in the first instance, be interpreted in accordance with the common interpretation within the relevant market sector where appropriate. Otherwise, it shall be interpreted in accordance with the dictionary meaning.

- 1.4 In this Assignment and Licence, unless the context otherwise requires:
- 1.4.1 the singular includes the plural and vice versa;
 - 1.4.2 reference to a gender includes the other gender and the neuter;
 - 1.4.3 references to a person include an individual, company, body corporate, corporation, unincorporated association, firm, partnership or other legal entity or Crown Body;
 - 1.4.4 references to a legal entity (other than the Supplier) shall include unless otherwise expressly stated any statutory successor to such entity and/or the relevant functions of such entity, and references to the Department shall include, where relevant, the ESFA;
 - 1.4.5 a reference to any Law includes a reference to that Law as amended, extended, consolidated or re-enacted from time to time;
 - 1.4.6 the words “**including**”, “**other**”, “**in particular**”, “**for example**” and similar words shall not limit the generality of the preceding words and shall be construed as if they were immediately followed by the words “**without limitation**”;
 - 1.4.7 references to “**writing**” include typing, printing, lithography, photography, display on a screen, electronic and facsimile transmission and other modes of representing or reproducing words in a visible form, and expressions referring to writing shall be construed accordingly;
 - 1.4.8 references to “**clauses**” and “**Schedules**” are, unless otherwise provided, references to the clauses and schedules of this Assignment and Licence and references in any Schedule to parts, paragraphs, annexes and tables are, unless otherwise provided, references to the parts, paragraphs, annexes and tables of the Schedule in which these references appear;
 - 1.4.9 references to “**paragraphs**” are, unless otherwise provided, references to the paragraph of the appropriate Schedules unless otherwise provided; and

1.4.10 the headings in this Assignment and Licence are for ease of reference only and shall not affect the interpretation or construction of this Assignment and Licence.

1.5 In this Assignment and Licence, unless the context otherwise requires, the following words shall have the following meanings:

“Ancillary Materials” means all information and materials (other than Key Materials) to which the Authority and/or a Future Supplier would require access for the Portability Purposes, and any other materials which would be required on or to facilitate succession to a Future Supplier in a seamless manner in relation to the TQ offered or Operated by the Supplier.

Ancillary Materials shall include, without limitation:

- (a) Student results including grades;
- (b) statistical analysis for grading (excludes the systems supporting the analysis);
- (c) lists of Providers;
- (d) marked Student evidence (with moderation outcomes);
- (e) documentation which provides an overview or analysis of Student performance (including chief examiner and chief moderator reports), which include but are not limited to, examples of student responses to assessment questions and/or tasks as well as narrative explaining why students did well/ less well on individual items/ components/ subcomponents);
- (f) data on Student credits;
- (g) data on Student appeals;
- (h) data on special considerations for Students;
- (i) the Assessment Strategy;
- (j) Student registrations;
- (k) draft materials in preparation for forthcoming assessments;

- (l) the Key Dates Schedule (in respect of forthcoming assessments);
- (m) lists, with contact details, of people contracted by the Supplier to perform or oversee activities which are necessary for the conduct and quality assurance of assessments for the TQ;
- (n) materials from completed assessments, such as completed Students' examination answer booklets; and
- (o) TQ Live Assessment Materials

"Approval" has the same meaning as in the TQ Agreement;

"Assigned Rights" means the Intellectual Property Rights in the Key Materials;

"Authority Authorised Representative" has the same meaning as in the TQ Agreement;

"Background IPR" means any IPR owned by a Party prior to the Effective Date or created or developed by a Party otherwise than in the provision of the Services or under or in connection with the TQ Agreement, but does not include IPR in Key Materials;

"Beneficiary" means a Party having (or claiming to have) the benefit of an indemnity under this Assignment and Licence;

"Claim" means any claim for which it appears that a Beneficiary is, or may become, entitled to indemnification under this Assignment and Licence;

"Continuing Activities" means activities of the Supplier under the TQ Agreement which continue following the end of the second Academic Year for the final Exclusive Cohort (each as defined in the TQ Agreement) in relation to the TQ as offered by the Supplier, such as retakes, appeals, and any ongoing records management contracted to the Supplier;

"Default" means any breach of the obligations of the Supplier (including abandonment of the Assignment and Licence in breach of its terms) or any other default (including material default), act, omission, negligence or statement of the Supplier, of its Subcontractors or any Supplier Staff howsoever arising in connection with or in relation to the subject-matter of this Assignment and Licence and in respect of which the Supplier is liable to the Authority;

“Deliverables” means all information and data the Supplier creates, identifies for use, or uses as part of or for the Operation of the TQ, including Products and Management Information;

“Dispute” means any claim, dispute or difference which arises out of or in connection with this Assignment and Licence or in connection with the negotiation, existence, legal validity, enforceability or termination of this Assignment and Licence, whether the alleged liability shall arise under English law or under the law of some other country and regardless of whether a particular cause of action may successfully be brought in the English courts;

“Effective Date” means the date on which the last Party to sign has signed this Assignment and Licence;

“Final Approval Milestone” has the meaning given in the TQ Agreement;

“Future Supplier” means any Awarding Organisation appointed, at any point in the future and including any Replacement Supplier, to operate one or more T Level technical education qualifications by or at the direction of the Authority from time to time, and where the Authority is operating a T Level technical education qualification, shall also include the Authority;

“Indemnifier” means a Party from whom an indemnity is sought under this Assignment and Licence;

“Insolvency Event” means:

- (a) in respect of a company:
 - (i) a proposal is made for a voluntary arrangement within Part I of the Insolvency Act 1986 or of any other composition scheme or arrangement with, or assignment for the benefit of, its creditors;
or
 - (ii) a shareholders' meeting is convened for the purpose of considering a resolution that it be wound up or a resolution for its winding-up is passed (other than as part of, and exclusively for the purpose of, a bona fide reconstruction or amalgamation);
or
 - (iii) a petition is presented for its winding up (which is not dismissed within fourteen (14) Working Days of its service) or an

application is made for the appointment of a provisional liquidator or a creditors' meeting is convened pursuant to section 98 of the Insolvency Act 1986; or

- (iv) a receiver, administrative receiver or similar officer is appointed over the whole or any part of its business or assets; or
 - (v) an application order is made either for the appointment of an administrator or for an administration order, an administrator is appointed, or notice of intention to appoint an administrator is given; or
 - (vi) it is or becomes insolvent within the meaning of section 123 of the Insolvency Act 1986; or
 - (vii) being a “**small company**” within the meaning of section 382(3) of the Companies Act 2006, a moratorium comes into force pursuant to Schedule A1 of the Insolvency Act 1986; or
- (b) where the person is an individual or partnership, any event analogous to those listed in limbs (a) (i) to (vii) (inclusive) occurs in relation to that individual or partnership; or
- (c) any event analogous to those listed in limbs (a) (i) to (vii) (inclusive) occurs under the law of any other jurisdiction;

“Intellectual Property Rights” or “IPR” means:

- (a) copyright, rights related to or affording protection similar to copyright, rights in databases, patents and rights in inventions, semi-conductor topography rights, trade marks, rights in internet domain names and website addresses and other rights in trade or business names, goodwill, designs, Know-How, trade secrets and other rights in Confidential Information;
- (b) applications for registration, and the right to apply for registration, for any of the rights listed at (a) that are capable of being registered in any country or jurisdiction; and
- (c) all other rights having equivalent or similar effect in any country or jurisdiction;

“IPR Claim” means any claim of infringement or alleged infringement (including the defence of such infringement or alleged infringement) of any IPR used to provide the Services and/or supply the Products or otherwise provided and/or licensed by the Supplier (or to which the Supplier has provided access) to the Authority in the fulfilment of its obligations under the TQ Agreement or this Assignment and Licence;

“Key Materials” means materials the IPR in which the Authority reasonably requires ownership of for the Portability Purposes. Examples of where the Authority may reasonably require ownership include because the Authority or a Future Supplier (or, where relevant, a potential Future Supplier) may need to copy or otherwise reproduce such materials (in whole or in part), to supply or communicate the same, or to be able control the use (in whole or in part) of such materials by third parties, or to authorise others to do so.

Key Materials shall include:

- (a) specifications of content for each TQ including core and all specialist components;
- (b) assessment guidelines (for Providers);
- (c) quality assurance requirements (for Providers);
- (d) specimen assessment materials;
- (e) standards exemplification materials;
- (f) supplementary specimen assessment materials
- (g) employer set project guide exemplar responses
- (h) employer set project grade exemplar responses
- (i) updates or redevelopments of specifications of content;
- (j) updates and redevelopments of any Key Materials; and
- (k) any materials equivalent to the above to which a Skilled Future Supplier would reasonably require access for the Portability Purposes.

Key Materials shall not include:

- (1) Support Materials, insofar as they are not part of any of the expressly included items listed above;
- (2) question banks insofar as they are not part of any of the included items listed above and are not developed for the TQ; and
- (3) any systems and platforms used to support the delivery of the TQ, provided that the relevant TQ content or data held in or processed by such systems and/or platforms can be extracted without requiring further processing post-extraction (and the Supplier can demonstrate that they can be so extracted) to enable use of the relevant content and/or data by a Skilled Future Supplier in conjunction with a non-proprietary or generally commercially available system or platform;

“Know-How” means all ideas, concepts, schemes, information, knowledge, techniques, methodology, and anything else in the nature of know-how relating to the Services;

“Law” means any law, subordinate legislation within the meaning of Section 21(1) of the Interpretation Act 1978, bye-law, enforceable right within the meaning of Section 2 of the European Communities Act 1972, regulation, order, regulatory policy, mandatory guidance or code of practice, judgment of a relevant court of law, or directives or requirements with which the Supplier is bound to comply;

“Losses” means all losses, liabilities, damages, costs, expenses (including legal fees), disbursements, costs of investigation, litigation, settlement, judgment, interest and penalties whether arising in contract, tort (including negligence), breach of statutory duty, misrepresentation or otherwise and **“Loss”** shall be interpreted accordingly;

“New IPR” means :

- (a) IPR in items created by the Supplier (or by a third party on behalf of the Supplier) specifically for the purposes of the TQ Agreement and updates and amendments of these items including (but not limited to) database schema; and/or
- (b) IPR in or arising as a result of the performance of the Supplier's obligations under the TQ Agreement and all updates and amendments to the same,

but shall not include any IPR owned by the Supplier prior to the Effective Date;

“Operate” in relation to a qualification means to provide the Services or a material part of the Services, or services replacing the Services or a material part of the Services, or of an equivalent character to the Services or a material part of the Services in relation to any other qualification (whether a T Level technical education qualification or not); and **“Operation”** and other cognate terms shall have a corresponding meaning;

“Party” means the Authority or the Supplier and **“Parties”** means both of them where the context permits;

“Product” has the meaning given in the TQ Agreement;

“Provider” means an organisation that has a grant agreement and/or a contract in place with the ESFA to provide qualifications to Students;

“Replacement Services” means any services which are substantially similar to any of the Services (including the supply of any Products) and which the Authority receives in substitution for any of the Services, whether those services are provided by the Authority internally and/or by any third party;

“Replacement Supplier” has the meaning given in the TQ Agreement;

“Required Insurances” has the meaning given in the TQ Agreement;

“Services” means the services as described in Schedule 2 to the TQ Agreement (*Service Requirements*) including any Additional Services as defined in the TQ Agreement;

“Termination Notice” means a written notice of termination given by one Party to the other, notifying the Party receiving the notice of the intention of the Party giving the notice to terminate this Assignment and Licence on a specified date and setting out the grounds for termination;

“Third Party IPR” means Intellectual Property Rights owned by a third party which is or will be used by the Supplier for the purpose of providing the Services and/or supplying the Products;

“TQ Agreement” has the meaning given in recital A (above);

“Transparent” means that students and employers will regard the TQ delivered by a Future Supplier as materially the same as the TQ delivered and operated by the (existing) Supplier;

“Working Day” means any day other than a Saturday or Sunday or public holiday in England and Wales.

2 Assignment

2.1 Pursuant to and for the consideration set out in the TQ Agreement, the Supplier assigns to the Authority, absolutely with full title guarantee all its right, title and interest in and to all of the Intellectual Property Rights in the Key Materials (which, for the avoidance of doubt, includes the Guide Standard Exemplification Materials) including the right to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Assigned Rights on or after the date of this Assignment and Licence. Such assignment shall take place on the earlier of:

2.1.1 the creation of any relevant materials known to be Key Materials;

2.1.2 the identification by the Supplier of the use of the relevant materials as part of the TQ; and

2.1.3 delivery of the relevant Key Materials to the Authority, or Operation of the TQ by the Supplier.

2.2 With the exception of Guide Standard Exemplification Materials, all Key Materials are relevant course documents for the purposes of section A2D3(4) of the Apprenticeships, Skills, Children and Learning Act 2009, and on approval of the TQ at the Final Approval Milestone and on any subsequent Approval, to the extent that any copyright or any rights in copyright forming part of the Assigned Rights have not then been assigned to and vested absolutely in the Authority, they shall be transferred to the Authority by operation of statute in accordance with section A2IA of the Apprenticeships, Skills, Children and Learning Act 2009. Intellectual Property Rights in the Guide Standard Exemplification Materials is assigned to the Authority by virtue of 2.1 above.

3 Licences to the Authority

3.1 The Supplier hereby grants to the Authority (and the Authority shall have, in addition to any retained rights under clause 13.8 of the TQ Agreement) a non-exclusive,

perpetual, royalty-free, irrevocable, transferable worldwide licence to use, exploit and sub-license the IPR in the Ancillary Materials and the Supplier's Background IPR and, in respect of any IPR in Key Materials, in each case to the extent that the same are not at the relevant time vested absolutely in the Authority, as necessary to enable the Authority (and its sub-licensees) to:

- 3.1.1 use the Key Materials and Ancillary Materials in its administration, approval and oversight of the TQ and other T Level technical education qualifications and to make the same available to others (such as Ofqual) to do the same; and
 - 3.1.2 to use the Key Materials and the Ancillary Materials, and for any Future Supplier or potential Future Supplier to use the Key Materials and the Ancillary Materials:
 - (i) for competing or tendering for the delivery and Operation of the TQ and/or any Replacement TQ, during any Transition Period and following expiry or termination of the TQ Agreement; and
 - (ii) to deliver and Operate the TQ and any Replacement TQ, during any Transition Period and following expiry or termination of the TQ Agreement; and
 - 3.1.3 otherwise to receive and use the Services and the Deliverables and allow any Future Supplier to use the Deliverables; and
 - 3.1.4 to sub-license others to exercise the rights set out in this clause 3.1.
- 3.2 The Authority agrees that it shall use any Ancillary Materials which fall solely within element (l) of the definition of Ancillary Materials (being "*lists, with contact details, of people contracted by the Supplier to perform or oversee activities which are necessary for the conduct and quality assurance of assessments for the TQ*") only for the purposes of planning for or executing an Emergency Exit.

4 Licence to the Supplier

- 4.1 The Authority hereby grants to the Supplier, in respect of the Assigned Rights, a worldwide, royalty free, perpetual and irrevocable non-exclusive licence, with the right

to sublicense, to use and exploit the IPR in the Key Materials during and after the Term, but not, save as provided in the TQ Agreement, to use the same as part of a T Level, such licence being subject to clauses 13.13 and 13.14 of the TQ Agreement (which for these purposes shall survive any termination or expiry of the TQ Agreement).

5 Warranties and representations

5.1 The Supplier warrants and represents (on the Effective Date and on any relevant assignment or grant of licence taking effect) that:

- 5.1.1 it is or will be the sole legal and beneficial owner of, and that it owns all the rights and interests in the Assigned Rights no later than the time for assignment specified in clause 2.1 or when they are assigned in accordance with clause 13.2.1 of the TQ Agreement, save for Assigned Rights other than New IPR, in respect of which it has previously notified the Authority and the Authority has agreed in writing that this warranty shall not apply;
- 5.1.2 where it is not the sole legal and beneficial owner of the Assigned Rights, including the Assigned Rights which are to be used or embodied in any Key Materials, it has established that all owners of such rights consent to their assignment and transfer absolutely to the Authority;
- 5.1.3 it has all the necessary right and title to grant all the licences granted to the Authority under this Assignment and Licence and the TQ Agreement;
- 5.1.4 it has not licensed or assigned any of the Assigned Rights other than pursuant to this Assignment and Licence or the TQ Agreement;
- 5.1.5 the Assigned Rights are free from any security interest, option, mortgage, charge or lien;
- 5.1.6 it is unaware of any infringement or likely infringement of any of the Assigned Rights;
- 5.1.7 as far as it is aware, all the Assigned Rights are valid and subsisting and there are and have been no claims, challenges, disputes or proceedings,

pending or threatened, in relation to the ownership, validity or use of any of the Assigned Rights;

5.1.8 the use of the Key Materials and Ancillary Materials, and exploitation of the Assigned Rights by the Supplier in the provision of the Services and Deliverables or by the Authority in receiving and using the Services and Deliverables or procuring any Replacement Services or by any Future Supplier in Operating any Replacement Services, will not infringe the rights of any third party; and

5.1.9 the Key Materials are its original work and have not been copied wholly or substantially from any other source.

6 Indemnity

6.1 Subject to clause 19, if there is an IPR Claim, the Supplier indemnifies the Authority against all losses, damages, costs or expenses (including professional fees and fines) incurred as a result.

6.2 If an IPR Claim is made or anticipated, the Supplier must at its own expense and the Authority's sole option, either:

6.2.1 obtain for the Authority the rights in clause 2.1 and 3.1 without infringing any Third Party IPR; or

6.2.2 replace or modify the relevant item with substitutes that do not infringe IPR without adversely affecting the functionality or performance of the Deliverables.

7 Moral rights

7.1 The Supplier shall procure written absolute waivers from all authors of the Key Materials and Ancillary Materials in relation to all their moral rights arising under the Copyright, Designs and Patents Act 1988 in relation to the Key Materials and Ancillary Materials and, as far as is legally possible, any broadly equivalent rights such authors may have in any territory of the world.

8 Ending or extending the Assignment and Licence

8.1 This Assignment and Licence ends if terminated by the Authority for any reason set out in this Assignment and Licence.

8.2 If any of the following events happen, the Authority has the right to immediately terminate this Assignment and Licence or any of the licences granted under this Assignment and Licence by issuing a Termination Notice to the Supplier (in the latter case specifying the relevant licences):

8.2.1 a Default incapable of remedy;

8.2.2 a Default capable of remedy that is not corrected within 30 days; and

8.2.3 anything occurs which entitles the Authority to terminate the TQ Agreement.

9 Claims against third parties

9.1 The Supplier may take any action it considers appropriate or necessary, subject to the Authority's prior written consent, not to be unreasonably withheld or delayed, if there is a breach, other than in connection with the TQ, by a third party of the Authority's rights in any IPR licensed to the Supplier under clause 4, and the Authority agrees to provide all such assistance as the Supplier may reasonably require (subject to meeting the Authority's reasonably agreed costs and expenses and the Supplier hereby indemnifying the Authority in respect of any loss, damage or liability the Authority incurs by reason of any such action).

10 Further assurance

10.1 At the Authority's expense the Supplier shall, and shall use all reasonable endeavours to procure that any necessary third party shall, promptly execute and deliver such documents and perform such acts as may reasonably be required for the purpose of giving full effect to this Assignment and Licence and the TQ Agreement, including:

10.1.1 registration of the Authority as applicant or (as applicable) proprietor of the Assigned Rights; and

- 10.1.2 assisting the Authority in obtaining, defending and enforcing the Assigned Rights, and assisting with any other proceedings which may be brought by or against the Authority against or by any third party relating to the Assigned Rights.
- 10.2 The Supplier appoints the Authority to be its attorney in its name and on its behalf to execute documents, use the Supplier's name and do all things which are necessary or desirable for the Authority to obtain for itself or its nominee the full benefit of this Assignment and Licence.
- 10.3 This power of attorney is irrevocable and is given by way of security to secure the performance of the Supplier's obligations under this Assignment and Licence and the proprietary interest of the Authority in the Assigned Rights and so long as such obligations of the Supplier remain undischarged, or the Authority has such interest, the power may not be revoked by the Supplier, save with the consent of the Authority.
- 10.4 Without prejudice to clause 10.2, the Authority may, in any way it thinks fit and in the name and on behalf of the Supplier:
- 10.4.1 take any action that this Assignment and Licence requires the Supplier to take;
- 10.4.2 exercise any rights which this Assignment and Licence gives to the Supplier; and
- 10.4.3 appoint one or more persons to act as substitute attorney(s) for the Supplier and to exercise such of the powers conferred by this power of attorney as the Authority thinks fit and revoke such appointment.
- 10.5 The Supplier undertakes to ratify and confirm everything that the Authority and any substitute attorney does or arranges or purports to do or arrange in good faith in exercise of any power granted under this clause 10.

11 How much each Party can be held responsible for

- 11.1 Each Party's total aggregate liability under this Assignment and Licence (whether in tort, contract or otherwise) for each claim or series of connected claims is no more than £1 million.

- 11.2 No Party is liable to the other for:
- 11.2.1 any indirect Losses; or
 - 11.2.2 loss of profits, turnover, savings, business opportunities or damage to goodwill (in each case whether direct or indirect).
- 11.3 The limitation of liability set out in clause 11.1 does not apply to either Party in relation to the following:
- 11.3.1 its liability for death or personal injury caused by its negligence, or that of its employees, agents or subcontractors;
 - 11.3.2 bribery or fraud or fraudulent misrepresentation by it or its employees; or
 - 11.3.3 any liability that cannot be excluded or permitted by Law.
- 11.4 Each Party must use all reasonable endeavours to mitigate any Losses which it suffers under or in connection with this Assignment and Licence, including where any such Losses are covered by an indemnity.
- 11.5 When calculating the Supplier's liability under clause 11.1, Losses covered by Required Insurances will not be taken into consideration.

12 Invalid parts of this Assignment and Licence

- 12.1 If any part of this Assignment and Licence is prohibited by Law or judged by a court to be unlawful, void or unenforceable, it must be removed from this Assignment and Licence as much as required and rendered ineffective as far as possible without affecting the rest of the Assignment and Licence, or whether it is valid or enforceable.

13 No other terms apply

- 13.1 Except as otherwise expressly provided in this Assignment and Licence or in the TQ Agreement, the provisions incorporated into this Assignment and Licence are the entire agreement between the Parties. The Assignment and Licence replaces all previous statements and agreements whether written or oral. No other provisions apply.

- 13.2 Variation of this Assignment and Licence is only effective if agreed in writing and signed by both Parties.

14 Other people's rights in this Assignment and Licence

- 14.1 No third parties may use the Contracts (Rights of Third Parties) Act ("CRTPA") to enforce any term of this Assignment and Licence unless stated (referring to CRTPA) in this Assignment and Licence. This does not affect third party rights and remedies that exist independently from CRTPA.

15 Relationships created by this Assignment and Licence

- 15.1 This Assignment and Licence does not create a partnership, joint venture or employment relationship. The Supplier must represent themselves accordingly and ensure others do so.

16 Giving up contract rights

- 16.1 A partial or full waiver or relaxation of the terms of this Assignment and Licence is only valid if it is stated to be a waiver in writing to the other Party.

17 Transferring responsibilities

- 17.1 The Supplier must not assign this Assignment and Licence without Approval.
- 17.2 The Authority can assign, novate or transfer this Assignment and Licence or any part of it to any Crown Body, public or private sector body which performs the functions of the Authority.
- 17.3 The Supplier must enter into a novation agreement in the form that the Authority specifies in order to use its rights under clause 17.2.
- 17.4 The Supplier can terminate this Assignment and Licence if it is novated under clause 17.2 to a private sector body that is experiencing an Insolvency Event.

18 How to communicate about this Assignment and Licence

- 18.1 All notices under this Assignment and Licence must be in writing and are considered effective on the Working Day of delivery as long as delivered before 5:00 pm on a

Working Day. Otherwise the notice is effective on the next Working Day. An email is effective when sent unless an error message is received.

- 18.2 Notices to the Authority must be sent to the Authority Authorised Representative's address and email address, and all notices must be copied to the Authority's Head of Commercial Delivery Management (xxx@education.gov.uk) and the Authority's Head of Legal (xxx@education.gov.uk) .
- 18.3 This clause does not apply to the service of legal proceedings or any documents in any legal action, arbitration or dispute resolution.

19 Dealing with claims

- 19.1 If a Beneficiary is notified or otherwise becomes aware of a Claim then it must notify the Indemnifier as soon as reasonably practical and no later than 10 Working Days after such notification or date of first awareness.
- 19.2 At the Indemnifier's cost the Beneficiary must both:
- 19.2.1 allow the Indemnifier to conduct all negotiations and proceedings to do with a Claim; and
 - 19.2.2 give the Indemnifier reasonable assistance with the Claim if requested.
- 19.3 The Beneficiary must not make admissions about the Claim without the prior written consent of the Indemnifier which cannot be unreasonably withheld or delayed.
- 19.4 The Indemnifier must consider and defend the Claim diligently using competent legal advisors and in a way that does not damage the Beneficiary's reputation.
- 19.5 The Indemnifier must not settle or compromise any Claim without the Beneficiary's prior written consent which it must not unreasonably withhold or delay.
- 19.6 Each Beneficiary must take all reasonable steps to minimise and mitigate any losses that it suffers because of the Claim.
- 19.7 If the Indemnifier pays the Beneficiary money under an indemnity and the Beneficiary later recovers money which is directly related to the Claim, the Beneficiary must immediately repay the Indemnifier the lesser of either:

19.7.1 the sum recovered minus any legitimate amount spent by the Beneficiary when recovering this money; or

19.7.2 the amount the Indemnifier paid the Beneficiary for the Claim.

20 Resolving disputes

20.1 If there is a Dispute, the senior representatives of the Parties who have authority to settle the Dispute will, within 28 days of a written request from the other Party, meet in good faith to resolve the Dispute.

20.2 If the Dispute is not resolved at that meeting, the Parties can attempt to settle it by mediation using the Centre for Effective Dispute Resolution (“CEDR”) Model Mediation Procedure current at the time of the Dispute. If the Parties cannot agree on a mediator, the mediator will be nominated by CEDR. If either Party does not wish to use, or continue to use mediation, or mediation does not resolve the Dispute, the Dispute must be resolved using clauses 20.3 to 20.5.

20.3 Unless the Authority refers the Dispute to arbitration using clause 20.4, the Parties irrevocably agree that the courts of England and Wales have the exclusive jurisdiction to:

20.3.1 determine the Dispute;

20.3.2 grant interim remedies, or any other provisional or protective relief.

20.4 The Supplier agrees that the Authority has the exclusive right to refer any Dispute to be finally resolved by arbitration under the London Court of International Arbitration Rules current at the time of the Dispute. There will be only one arbitrator. The seat or legal place of the arbitration will be London and the proceedings will be in English.

20.5 The Authority has the right to refer a Dispute to arbitration even if the Supplier has started or has attempted to start court proceedings under clause 20.4, unless the Authority has agreed to the court proceedings or participated in them. Even if court proceedings have started, the Parties must do everything necessary to ensure that the court proceedings are stayed in favour of any arbitration proceedings if they are started under clause 20.4.

20.6 The Supplier cannot suspend the performance of this Assignment and Licence during any Dispute.

21 Which law applies

21.1 This Assignment and Licence and any issues arising out of, or connected to it, are governed by English law.

ANNEX

IPR Assurance Certificate

This certificate is given pursuant to clause 13.9 of the agreement (“**Contract**”) between the Institute for Apprenticeships and Technical Education (“**Authority**”) and the supplier named below (“**Supplier**”), and the Intellectual Property Assignment and Licence between the Authority and the Supplier (which also forms Schedule 14 of the Contract) (“**Assignment and Licence**”).

Guidance:

When to complete this certificate: This certificate should be completed in respect of each Deliverable (as defined in the Contract) which is made available to the Authority under the Contract, and a completed certificate should be supplied to the Authority with that Deliverable. This includes updates to existing Deliverables.

Purpose of this certificate: This certificate is intended to confirm that the specific Deliverable fully complies with the intellectual property provisions of the Contract. A copy of the certificate will be retained by the Authority as evidence of the intellectual property position.

Supplier Declaration:

We (being the Supplier named below) confirm that the Deliverable(s) supplied together with (or shortly before or after) this certificate, all elements of which are listed in either Table 1 or Table 2 below¹, comply with the intellectual property provisions in the Contract, in particular the applicable warranties set out in clause 5 of the Assignment and Licence.

We confirm that the Deliverable(s) either:

- (i) contain no third party intellectual property rights, or
- (ii) contain third party intellectual property rights and we have obtained the consent of the applicable third party:

- in the case of Key Materials, to their assignment and transfer to the Authority;
and/or

- in the case of Ancillary Materials, to their licence to the Authority,

in each case on the terms and conditions of the Contract and Assignment and Licence.

We confirm that this certificate overrides any statement or copyright notice forming part of the Deliverable(s) which is in any way inconsistent with this certificate. We agree that this certificate does not detract in any way from the rights granted to the Authority in the Contract.

Key Materials

We confirm that the Deliverable(s) set out in Table 1 below, or the elements of the Deliverable(s) set out in Table 1 below, are Key Materials, as defined in the Contract:

¹ If, by exception, the Supplier asserts that the Deliverable includes elements which are neither Key Materials nor Ancillary Materials, this should be notified in writing to the Authority prior to the relevant Deliverable being made available to the Authority.

Table 1

Deliverable	Key Materials
[Set out title / description of the Deliverable]	Set out elements which are Key Materials, or confirm "entire Deliverable"
[insert additional rows if required]	

All intellectual property rights in the Deliverable(s), or elements of the Deliverable(s) listed above in Table 1 as Key Materials, have vested or hereby vest in the Authority pursuant to the Assignment and Licence.

Ancillary Materials

We confirm that the Deliverable(s) set out in Table 2 below, or the elements of the Deliverable set out in Table 2 below are Ancillary Materials, as defined in the Contract:

Table 2

Deliverable	Ancillary Materials
[Set out title / description of the Deliverable]	Set out elements which are Ancillary Materials, or confirm "entire Deliverable"
[insert additional rows if required]	

All intellectual property rights in the Deliverable(s), or elements of the Deliverable(s) listed above in Table 2 as Ancillary Materials, are licensed to the Authority on the terms and conditions of and pursuant to the Assignment and Licence.

Signed for and on behalf of the Supplier:

Name

Position

Date

Signed by

[Supplier]

Director:[Insert/print name]

Signature:

Signed by

THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION

Director:[Insert/print name]

Signature:

Schedule 15

Monitoring of Performance

1 Self monitoring

- 1.1 The Supplier shall monitor its performance of the Services (other than the Initial Development Services) and (where applicable) the supply of the Products against each KPI (in the manner set out in paragraph 1.2) and shall deliver to the Authority Authorised Representative the Operational Delivery Report in accordance with paragraph 3 (*Operational Delivery Report and Performance Review Meetings*).
- 1.2 The Supplier shall, in respect of each KPI, apply the applicable Performance Monitoring Methodology to such KPI to assess the Supplier's performance of such relevant KPI during the relevant Performance Monitoring Period.

2 What happens if you don't meet the Service Levels

- 2.1 The Supplier shall at all times provide the Services and (where applicable) supply the Products to meet or exceed the Target Service Level for each KPI.
- 2.2 If, in any Contract Month in which a Performance Monitoring Period for a KPI ends, the Supplier fails to achieve the Target Service Level for that KPI ("**Service Failure**"), the Supplier shall submit to the Authority (as part of the Operational Delivery Report for that Contract Month) for Approval an improvement plan ("**KPI Improvement Plan**") setting out:
- 2.2.1 the reasons for such Service Failure; and
- 2.2.2 what steps the Supplier proposes to take to:
- (i) mitigate the impact of the Service Failure;
 - (ii) rectify the event, matter or circumstance giving rise to the Service Failure (including details of the proposed timings for such rectification); and
 - (iii) prevent the Service Failure from recurring.

2.3 The Authority shall (as soon as reasonably practicable following receipt of the KPI Improvement Plan) either:

2.3.1 confirm to the Supplier that the KPI Improvement Plan is Approved and following receipt of such Approval the Supplier shall:

- (i) carry out and complete all of the actions in accordance with the approved KPI Improvement Plan; and
- (ii) report on its progress against such KPI Improvement Plan in each and every Performance Review Meeting which occurs whilst the Supplier is (or should be, if it was complying with its obligations under this Contract) carrying out and completing the actions in accordance with the KPI Improvement Plan; or

2.3.2 confirm to the Supplier that the Authority is not satisfied with the KPI Improvement Plan and/or that the steps proposed by the Supplier in the KPI Improvement Plan will address the matters referred to in paragraph 2.2.1, in which case the provisions of clause 14.2 (*What may happen if there are issues with your provision of the Services*) shall apply.

2.4 Where:

2.4.1 the Supplier fails to provide a KPI Improvement Plan in accordance with paragraph 2.2; or

2.4.2 following Approval by the Authority of the KPI Improvement Plan in accordance with paragraph 2.3, the Supplier fails to carry out and/or complete the actions in accordance with the KPI Improvement Plan (as Approved),

then such failure shall be deemed to be a Critical Service Failure.

3 Operational Delivery Report and Performance Review Meetings

3.1 Within 5 Working Days after the end of each Contract Month, the Supplier shall deliver to the Authority Authorised Representative the Operational Delivery Report in respect of the performance by the Supplier of the Services (and (where applicable) the supply

of the Products) during the Contract Month just ended together with updated versions (meeting, where applicable, all of the requirements of the relevant Product Description) of the following:

- 3.1.1 the Implementation and Delivery Plan;
- 3.1.2 the Resource Plan;
- 3.1.3 the Risk Register;
- 3.1.4 the Issues Log;
- 3.1.5 the Assessment Strategy; and
- 3.1.6 any draft version of the Key Dates Schedule that the Supplier intends shall (if Approved) become the Key Dates Schedule for the purposes of this Contract from time to time.

3.2 Within 5 Working Days of receipt by the Authority Authorised Representative of the Operational Delivery Report for the relevant Contract Month, the Parties shall attend a meeting to discuss the content of the relevant Operational Delivery Report (the **“Performance Review Meeting”**) at such location and time (within normal business hours) as the Authority shall reasonably require and such Performance Review Meeting shall:

- 3.2.1 be attended by the Authority Authorised Representative and the Supplier Authorised Representative and/or such other senior representatives of either Party as the Authority Authorised Representative and/or the Supplier Authorised Representative shall reasonably require (having regard to the matters to be discussed at the relevant Performance Review Meeting); and
- 3.2.2 be fully minuted by the Supplier and the minutes shall be circulated by the Supplier to all attendees at the relevant Performance Review Meeting (and any other recipients agreed at the relevant meeting) as soon as reasonably practicable following the relevant Performance Review Meeting.

3.3 The minutes of the preceding Contract Month's Performance Review Meeting will be agreed and signed by both the Authority Authorised Representative and the Supplier Authorised Representative at or prior to the following Performance Review Meeting.

3.4 Without prejudice to clause 9 (*Record keeping, monitoring and reporting*), the Supplier shall provide to the Authority such additional information and/or documentation as the Authority may reasonably require in order to verify the Supplier's compliance with its obligations under this Contract, including to verify:

3.4.1 whether a Service Failure has occurred; and/or

3.4.2 the level of the performance by the Supplier of the whole or any part of the Services and (where applicable) the supply of the Products,

and the Supplier shall provide such information and/or documentation within such time period as the Authority shall reasonably specify at the time of making the request for such information and/or documentation.

Schedule 15: Annex 1 – Key Performance Indicators

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
1.The Supplier has in place clear and TQ specific arrangements to approve Eligible Providers and monitor Approved Providers and (i) completes the relevant processes for approval quickly upon application and (ii) carries out the required monitoring	TQ Provider approval and monitoring services – paragraph 3	(i) 100% of applications from Eligible Providers decided within 30 Working Days of receipt of application; and (ii) Supplier has carried out the required monitoring in accordance with the Implementation and Delivery Plan and/or the	Each Contract Month following IfATE Approval	Management Information in relation to: (i) Eligible Providers that have applied for approval and in respect of which a decision has been made; and (ii) details of monitoring undertaken.	Performance measurement will include Eligible Providers new to the Supplier as well as the Supplier's existing Eligible Providers who have applied to have their approval extended to include the TQ.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
		Assessment Strategy.			
2. Supplier has ensured that Approved Providers are clear about what they are expected to teach and to what standard of attainment, and about how Students will be assessed	Initial TQ deliverables and development services – paragraph 2 TQ Provider support services – paragraph 4 TQ live assessment design and delivery – paragraph 6	80% of Approved Providers that have responded to the survey, rating at least 4 on a 1-5 scale. The target performance scale will use 2 positive, 2 negative and 1 neutral response. (For example (noting that the exact wording of the descriptors may vary))	During the Summer Term each Academic Year from September 2025	The Authority shall undertake or commission a survey of Approved Providers delivering the TQ	Online questionnaire to Approved Providers delivering the TQ in the relevant Academic Year. This survey should achieve a minimum response rate of 20% of those surveyed to be valid

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
		<p>where 5 = very clear</p> <p>4 = mostly clear</p> <p>3 = moderately clear</p> <p>2 = mostly unclear</p> <p>1 = not clear at all)</p>			
3.Queries from Eligible Providers and Approved Providers (other than those related to KPI 4 and KPI 11) are satisfactorily resolved in accordance with the Target Service Level	<p>Initial TQ deliverables and development services – paragraph 2</p> <p>TQ Provider approval and monitoring services – paragraph 3</p> <p>TQ Provider support services – paragraph 4</p> <p>Student registration and student entry – paragraph 5</p>	<p>Queries raised by letter and other forms of electronic correspondence: 90% resolved within 10 Working Days; remaining 10% resolved within 15 Working Days; and</p> <p>Queries raised through telephone</p>	Each Contract Month from the Effective Date	Management Information based on data and information collected from the Supplier's customer management systems referred to in Service Requirement 5 in Part 2 of the Service Requirements. This must include relevant information that closed queries have been satisfactorily resolved.	<p>The required resolution time commences on and from the Working Day on which the relevant query is received by the Supplier</p> <p>Percentage of queries that are resolved in accordance with the applicable Target Service Level</p>

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
	TQ live assessment design and delivery – paragraph 6 TQ Post-Results Services – paragraph 9	calls: 90% resolved within 2 Working Days; remaining 10% resolved within 10 Working Days			
4. Formal complaints made about the Services are satisfactorily resolved (i) in accordance with the timescales set out in the Implementation and Delivery Plan ² or (ii) where complaints are received solely by the Department, ESFA or the Authority, within the timescales reasonably required by the Department, ESFA	Initial TQ deliverables and development services – paragraph 2 TQ Provider approval and monitoring services – paragraph 3 TQ Provider support services – paragraph 4 Student registration and student entry – paragraph 5	100% of formal complaints are resolved within: (i) the relevant timescales detailed in the Implementation and Delivery Plan; or (ii) the timescales specified by the Department, ESFA or the Authority,	Each Contract Month from the Effective Date	Management Information based on data and information collected from the Supplier's customer management systems referred to in Service Requirement 5 in Part 2 of the Service Requirements. This must include relevant information that complaints have been satisfactorily resolved.	The required resolution time commences on and from the Working Day on which the relevant complaint is received by the Supplier. Percentage of complaints that are satisfactorily resolved within the applicable Target Service Level. Any complaints received solely by the Department, ESFA or

² The Supplier Response should detail the Supplier's proposals for resolving formal complaints.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
or the Authority at the time of notifying the Supplier of such complaints	TQ live assessment design and delivery – paragraph 6 TQ Post-Results Services – paragraph 9	(as the case may be).			the Authority, in relation to the Services, shall be deemed to have been received by the Supplier on the date on which the Supplier is notified of the complaint by the Department, ESFA or the Authority.
5.Approved Providers are satisfied with the quality of the Provider Services	TQ Provider approval and monitoring services – paragraph 3 TQ Provider support services – paragraph 4 Student registration and student entry – paragraph 5 TQ live assessment design and delivery – paragraph 6	80% of Approved Providers that have responded to the survey, rating at least 4 on a 1-5 scale. The target performance scale will use 2 positive, 2 negative and 1 neutral response. For example (noting that the	During the Summer Term each Academic Year from September 2025	The Authority shall undertake or commission a survey of Approved Providers delivering the TQ	Online questionnaire to Approved Providers delivering the TQ in the relevant Academic Year. This survey should achieve a minimum response rate of 20% of those surveyed to be valid.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
	TQ Post-Results Services – paragraph 9	exact wording of the descriptors may vary) (where 5 = very satisfied 4 = satisfied 3 = neither satisfied nor dissatisfied 2 = dissatisfied 1 = very dissatisfied).			
6.A sufficient number of appropriately qualified and trained Assessors (and Moderators where permitted in accordance with the Approved Assessment Strategy) are available to assess (or Moderate, if	TQ live assessment design and delivery – paragraph 6	100% of appropriately qualified and trained Assessors (and Moderators, if applicable) are available in accordance with the Implementation and Delivery Plan	Each Contract Month from (and including) September 2025	Management Information in relation to Assessor (and Moderator, if applicable) actual recruitment, training, and retention against the details set out in the Implementation and Delivery Plan and	Performance will be measured against the number of Assessors (and Moderators, if applicable) that are envisaged as being trained and available as detailed in the Implementation and Delivery Plan and/or

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
applicable) Student assessment evidence when required in accordance with the Implementation and Delivery and/or the Resource Plan (as the case may be)		and/or the Resource Plan (as the case may be).		Resource Plan (as the case may be).	the Resource Plan (as the case may be).
7. The TQ Live Assessment Materials (as defined in the Service Requirements) are high quality and developed in accordance with the Assessment Strategy	TQ live assessment design and delivery – paragraph 6	Full compliance with parts of both the Assessment Strategy and Implementation Plan that relate to the development of the TQ Live Assessment Materials; and TQ Live Assessment Materials are 100% free of errors that could affect clarity	Each Contract Month from IfATE Approval	Management Information in relation to: (i) progress against and compliance with the relevant part of the Assessment Strategy and Implementation Plan; and (ii) any errors reported in TQ Live Assessment Materials.	Review of Supplier self-reporting Identification of any reported errors in TQ Live Assessment Materials.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
		about requirements for Students.			
8. Student assessment evidence is accurately assessed and processed for grading and awarding in accordance with the relevant parts of the Assessment Strategy and the Implementation and Delivery Plan	TQ live assessment design and delivery – paragraph 6 TQ Grade awarding – paragraph 7	Assessing of Student assessment evidence is conducted in accordance with the relevant parts of the Assessment Strategy; and 100% of Students' assessments are marked and processed in accordance with the relevant parts of the Implementation and Delivery Plan.	Each Contract Month from September 2025 until the end of the Term	Management Information in relation to compliance with the relevant parts of the Assessment Strategy and the relevant parts of the Implementation and Delivery Plan.	Review of Supplier self-reporting.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
9. Grade Standard Exemplification Materials are validated by Employers	TQ live assessment design and delivery – paragraph 6 TQ Grade awarding – paragraph 7	At least 5 Employers in each relevant Occupational Specialist Component.	In October in each Academic Year following the first grade awarding but in any event no later than from October 2027	Evidence of validation from Employers relevant to the Occupational Specialist Components that validate the Grade Standard Exemplification Materials. The Supplier may use its existing network of Employers, but it must ensure a turnover of Employers each Academic Year. Employers may take part in validation activity for up to two consecutive Academic Years, after which they must not take part in validation activity for a period of one Academic Year. Suppliers may then repeat this cycle, ensuring that Employers do not take part in validation activity for	Validation means that Employers relevant to the Occupational Specialist Components judge that the Grade Standard Exemplification Materials are comparable to the Approved Guide Standard Exemplification Materials. Validation also means that Employers relevant to the Occupational Specialist Components judge that the Grade Standard Exemplification Material on the pass boundary is the type of work Employers would expect to see from an employee, who is of Occupational Entry Competence and that the Grade Standard

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
				<p>more than two consecutive Academic Years.</p> <p>For each Occupational Specialist Component, validations are required from at least two new Employers each Academic Year who did not submit evidence of validation in any previous Academic Year.</p>	<p>Exemplification Material on the distinction boundary, is the type of work that exceeds Employer expectations of what they would expect to see from an employee who is of Occupational Entry Competence, as defined within the assessment strategy as distinction. Review by the Authority of the evidence of Validation from Employers.</p>
10. Student assessment results are submitted to the Authority (or its nominee (as applicable)) by the relevant date(s) set	TQ Grade awarding – paragraph 7 TQ Results – paragraph 8	100% of results are submitted to the Authority (or its nominee) by the date(s) set out in the relevant Key Dates Schedule.	Each Contract Month from September 2025 until the end of the Term	Results have been received by the Authority (or its nominee (as applicable)) in the required format.	Receipt of the results by the relevant date(s) in the relevant Key Dates Schedule.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
out in the Key Dates Schedule					
11. Post-Results Services (excluding the issuing of revised assessment results, which is covered by KPI 10) are delivered in accordance with the relevant part of the Assessment Strategy	TQ Post-Results Services – paragraph 9	100% of the Post- Results Services are carried out and completed in accordance with the relevant part of the Assessment Strategy.	Each Contract Month from (and including) September 2025 until the end of the Term	Management Information in relation to compliance with the relevant part of the Assessment Strategy.	Review of self-reporting.
12. Submission to the Authority of: (i) all Management Information in accordance with the requirements of Service Requirement 9	TQ Provider approval and monitoring services – paragraph 3 Student registration and student entry – paragraph 5 Reporting – paragraph 10	100% for timeliness of the submission of all Management Information and all required (including requested) Products and/or	Each Contract Month from the Effective Date	Management Information and updated versions of the Products and/or other documents referred to in column one and/ or Key Materials and Ancillary Materials are received by	Review of self-reporting.

KPI (desired outcome)	Relevant Service Requirements (incl references to the relevant paragraph of Part 1 of the Service Requirements detailing the relevant element of the Services)	Target performance levels	Performance Monitoring Period	Evidence of performance	Measurement methodology
<p>in Part 2 of the Service Requirements; and</p> <p>(ii) updated versions of all required Products in accordance with clause 5.5.1(i) and/or paragraph 3 of Schedule 15 (as the case may be); and</p> <p>(iii) where requested by the Authority, updated versions of all requested Products and/or other documents in accordance with clause 5.5.1(ii).</p>		<p>other documents including Key Materials and Ancillary Materials; and</p> <p>100% for completeness of all:</p> <p>(i) Management Information; and</p> <p>(ii) required Products (including requested Products and/ or Key Materials and Ancillary materials).</p>		<p>the Authority by the date required by this Contract.</p> <p>Management Information, updated versions of the Products and/or other documents referred to in column one, Key Materials and Ancillary Materials are accurate and complete and cover all relevant information, Data and reports as specified in the Management Information and reporting requirements.</p> <p>Updated versions of the Products referred to in column one, Key Materials and Ancillary Materials include all relevant updates.</p>	

Schedule 16

Logos and Trademarks – T Level Trade Mark Licence

1 Interpretation

The definitions and rules of interpretation in this paragraph apply in this T Level Trade Mark Licence, in addition to the definitions and rules of interpretation in Schedule 1 to this Contract.

1.1 Definitions:

“Approved Provider” means an Eligible Provider (as defined in Schedule 1 (*Definitions and Interpretation*) of this Contract) that has been granted Provider Approval (as defined in Schedule 1 (*Definitions and Interpretation*) of this Contract) and in respect of which such Provider Approval has not been revoked pursuant to clause 7.2 of this Contract (*Interaction with Providers*).

“Brand Licensed Material” means any instance of a Brand Licensed Product or Service in material form, including as an electronic copy or any other electronic form, and any promotional or marketing material relating to any Brand Licensed Product or Service;

“Brand Licensed Product or Service” means any products or services listed as such in Appendix 1 (and **“Brand Licensed Products”** and **“Brand Licensed Services”** means such Products or Services respectively;

“Mandatory Marked Material” is material of the type identified in Appendix 1 (and to which the Mark must be applied);

“Mark” means the trade mark(s) set out in Appendix 2, including the listed registrations and applications and any registrations which may be granted pursuant to those applications and the related trade marks, devices and get-ups that may be notified in writing by the Authority to the Supplier from time to time;

“Marked Material” means any Brand Licensed Material or other material in or on which the Mark is used.

2 Grant

- 2.1 The Authority hereby grants to the Supplier a non-exclusive licence to use the Mark on or in relation to the Brand Licensed Products or Services provided or supplied in England, including in connection with the promotion, use and supply of the Brand Licensed Products or Services.
- 2.2 The Supplier may, subject to the prior written approval of the Authority and paragraph 11, sublicense (without the right to further sublicense) each Approved Provider of the TQ to use the Mark on or in relation to the Brand Licensed Products or Services provided or supplied in England, including in connection with the promotion, use and supply of the Brand Licensed Products or Services.
- 2.3 Any use of the Mark in accordance with paragraph 2.1 or 2.2 shall be strictly in accordance with the T Level Branding Guidelines and, when using the Mark, the Supplier shall fully comply with, the T Level Branding Guidelines.
- 2.4 Subject to paragraph 2.2, the Supplier shall have no right to sublicense use of the Mark.

3 Application of the Mark

- 3.1 The Supplier shall use the Mark, in accordance with this Schedule, on all Mandatory Marked Materials.
- 3.2 Subject to clause 13.10 (*Intellectual Property Rights*) of the Contract and paragraph 3.3 below, apart from the Mark, no other trade mark or logo may be affixed or used in a manner in which it may be seen to be used as a trade mark or designation of origin in relation to any Brand Licensed Products or Services or in or on any Brand Licensed Materials.
- 3.3 The Supplier may, subject to the prior written agreement of the Authority, authorise each Approved Provider of the TQ sublicensed in accordance with paragraph 2.2 to use the Approved Provider's name, logos, trademarks and/or other signs which refer to the Approved Provider on Brand Licensed Products or Services or Brand Licensed Materials on the same terms as, and subject to compliance with clauses 13.10 and 13.11 (*Intellectual Property Rights*) of the Contract (and clauses 13.10 and 13.11 shall apply *mutatis mutandis* to such Approved Provider).

- 3.4 The Supplier shall procure that the Mark, when used in or on any Brand Licensed Materials, shall be clearly and reasonably prominently identified as a trade mark of the Authority, in such manner as is set out in the T Level Branding Guidelines, or with any other statement as notified by the Authority to the Supplier.
- 3.5 The Supplier shall comply strictly with the directions of the Authority regarding the form and manner of the application of the Mark, including the directions contained in the T Level Branding Guidelines.
- 3.6 The Supplier shall, on written request from the Authority or as otherwise provided in the T Level Branding Guidelines, provide samples of all proposed Marked Materials.
- 3.7 The Supplier shall not use in its business any other trade mark confusingly similar to the Mark and shall not use the Mark or any word confusingly similar to the Mark as, or as part of, its corporate or trading name.

4 Title, goodwill and registrations

- 4.1 The Supplier acknowledges that the Authority is the owner of the Mark.
- 4.2 Any goodwill derived from the use by the Supplier of the Mark shall accrue to the Authority. The Authority may, at any time, call for a document confirming the assignment of that goodwill and the Supplier shall immediately execute it.
- 4.3 The Supplier shall not do, or omit to do, or permit to be done, any act that will or may weaken, damage or be detrimental to the Mark or the reputation or goodwill associated with the Mark or the Authority, or that may invalidate or jeopardise any registration of the Mark.
- 4.4 The Supplier shall not apply for, or obtain, registration of the Mark in any country for any goods or services.
- 4.5 The Supplier shall not apply for, or obtain, registration of any trade or service mark in any country which consists of, or comprises, or is confusingly similar to, the Mark for any goods or services.

5 Quality control

- 5.1 The Supplier shall comply with the specifications and standards relating to the Brand Licensed Products or Services which are specified in the Contract.
- 5.2 The Supplier shall promptly provide the Authority with copies of all communications relating to the Mark with any regulatory, industry or other authority.
- 5.3 The Supplier shall permit, and shall use its best endeavours to obtain permission for, the Authority at all reasonable times and on reasonable notice to enter any place used for the production, storage or distribution of the Marked Materials to inspect the Marked Materials in relation to compliance with this T Level Trade Mark Licence.
- 5.4 Without prejudice to any other rights of the Authority, in the event that the Authority finds that any sample of Marked Materials does not meet the requirements of this T Level Trade Mark Licence, it may give notice to the Supplier, and the Supplier shall take all reasonable steps to correct any deficiency as soon as reasonably practicable (having regard to constraints of the academic timetable).

6 Marketing, advertising and promotion

- 6.1 The Supplier undertakes to ensure that its advertising, marketing and promotion of Brand Licensed Products or Services shall in no way reduce or diminish the reputation, image and prestige of the Mark.

7 Recordal of licence

- 7.1 The Authority may, at its own cost, record the licence granted to it in paragraph 2 in the relevant registries against any registrations and applications for registration of the Marks.
- 7.2 The Supplier shall, at the Authority's request, execute a formal licence in such form and provide such other assistance as may be required for the purpose of such recordal.

8 Protection of the Mark

- 8.1 The Supplier shall immediately notify the Authority in writing giving full particulars if any of the following matters come to its attention:

- 8.1.1 any actual, suspected or threatened infringement of the Mark;
 - 8.1.2 any actual or threatened claim that the Mark is invalid;
 - 8.1.3 any actual or threatened opposition to the Mark;
 - 8.1.4 any claim made or threatened that use of the Mark infringes the rights of any third party;
 - 8.1.5 any person applies for, or is granted, a registered trade mark by reason of which that person may be, or has been, granted rights which conflict with any of the rights granted to the Supplier under this T Level Trade Mark Licence; or
 - 8.1.6 any other form of attack, charge or claim to which the Mark may be subject.
- 8.2 In respect of any of the matters listed in paragraph 8.1:
- 8.2.1 the Authority shall, in its absolute discretion, decide what action if any to take;
 - 8.2.2 the Authority shall have exclusive control over, and conduct of, all claims and proceedings;
 - 8.2.3 the Supplier shall not make any admissions other than to the Authority and shall provide the Authority with all assistance that it may reasonably require in the conduct of any claims or proceedings; and
 - 8.2.4 the Authority shall bear the cost of any proceedings and shall be entitled to retain all sums recovered in any action for its own account.
- 8.3 The provisions of section 30 of the Trade Marks Act 1994 (or equivalent legislation in any jurisdiction) are expressly excluded.
- 8.4 Nothing in this T Level Trade Mark Licence shall constitute any representation or warranty that:
- 8.4.1 any registration comprised in the Mark is valid;

8.4.2 any application comprised in the Mark shall proceed to grant or, if granted, shall be valid; or

8.4.3 the exercise by the Supplier of rights granted under this T Level Trade Mark Licence will not infringe the rights of any person.

9 Liability, indemnity and insurance

9.1 Nothing in this paragraph shall impose or create any liability of the Supplier to the Authority for use in England of the Mark on or in respect of Mandatory Marked Materials in accordance with the terms of this T Level Trade Mark Licence.

9.2 To the fullest extent permitted by law, the Authority shall not be liable to the Supplier for any costs, expenses, loss or damage (whether direct, indirect or consequential, and whether economic or other loss of profits, business or goodwill) arising from the Supplier's exercise of the rights granted to it under this T Level Trade Mark Licence.

9.3 Save as provided in paragraph 9.1, the Supplier indemnifies the Authority against all Loss to the Authority arising out of or in connection with the Supplier's exercise of its rights granted under this T Level Trade Mark Licence, including any claim made against the Authority for actual or alleged infringement of a third party's intellectual property rights arising out of or in connection therewith, other than where any such Loss and/or claim arises exclusively from the use of the Mark in accordance with this T Level Trade Mark Licence.

10 Additional Supplier obligations

10.1 The Supplier shall:

10.1.1 only make use of the Mark for the purposes authorised in this T Level Trade Mark Licence; and

10.1.2 comply with all regulations and practices in force or use in any territory to safeguard the Authority's rights in the Mark.

10.2 The Supplier shall not, nor directly or indirectly assist any other person to:

10.2.1 use the Mark except as permitted under this T Level Trade Mark Licence;
or

10.2.2 do or omit to do anything to diminish the rights of the Authority in the Mark or impair any registration of the Mark.

10.3 The Supplier acknowledges and agrees that the exercise of the licence granted to the Supplier under this T Level Trade Mark Licence is subject to all applicable laws, enactments, regulations and other similar instruments in any territory, and the Supplier understands and agrees that it shall at all times be solely liable and responsible for such due observance and performance.

11 Sub-licensing

11.1 The Supplier shall have the right to grant to Approved Providers a sub-licence of any of its rights under this T Level Trade Mark Licence provided that:

11.1.1 the Supplier shall ensure that the terms of any sub-licence are in writing and are substantially the same as the terms of this T Level Trade Mark Licence (except that the sub-licensee shall not have the right to sub-licence its rights) and the Supplier shall provide the Authority with a copy of the sub-licence on request and the Authority may require that any such sublicense includes the Authority as a party, and that the Authority is entitled to enforce its terms;

11.1.2 all sub-licences granted shall terminate automatically on termination or expiry of this T Level Trade Mark Licence; and

11.1.3 the Supplier shall be liable for all acts and omissions of any sub-licensee in relation to such sub-licence and indemnifies the Authority against all Losses incurred or suffered by the Authority, or for which the Authority may become liable, (whether direct, indirect or consequential and including any economic loss or other loss of profits, business or goodwill) arising out of any act or omission of any sub-licensee in relation to such sub-licence, other than to the extent any such Losses arise exclusively from the use of the Mark in accordance with this T Level Trade Mark Licence.

12 Duration and termination

12.1 This T Level Trade Mark Licence shall commence on the Effective Date and shall continue for the Term.

12.2 Without affecting any other right or remedy available to it under this T Level Trade Mark Licence or the Contract, the Authority may terminate this T Level Trade Mark Licence in respect of any Brand Licensed Product or Service with immediate effect by giving notice to the Supplier if:

12.2.1 the Supplier commits a material breach of any term of this T Level Trade Mark Licence in respect of such Brand Licensed Product or Service which breach is irremediable, or (if such breach is remediable) fails to remedy that breach within a period of 7 days after being notified to do so;

12.2.2 the Supplier repeatedly breaches any of the terms of this T Level Trade Mark Licence in respect of relevant Brand Licensed Products or Services or Brand Licensed Materials in such a manner as to reasonably justify the opinion that its conduct is inconsistent with it having the intention or ability to give effect to the terms of this T Level Trade Mark Licence; or

12.2.3 the Supplier challenges the validity of the Mark.

For the purposes of paragraph 12.2.1, **material breach** means a breach that is serious in the widest sense or of any of the obligations set out in paragraphs 3, 4.3, 4.4, 4.5, 5, 6.1, 10.1 or 11.1. In deciding whether any breach is material no regard shall be had to whether it occurs by some accident, mishap, mistake or misunderstanding.

13 Consequences of termination

13.1 On expiry or termination of this T Level Trade Mark Licence for any reason and subject to any express provisions set out elsewhere in this T Level Trade Mark Licence:

13.1.1 all rights and licences granted pursuant to this T Level Trade Mark Licence shall cease;

13.1.2 the Supplier shall cease all use of the Mark save as set out in this paragraph 13;

13.1.3 the Supplier shall co-operate with the Authority in the cancellation of any licences registered pursuant to this T Level Trade Mark Licence and shall execute such documents and do all acts and things as may be necessary to effect such cancellation;

- 13.1.4 the Supplier shall promptly deliver up to the Authority (or at the Authority's option, destroy) at the Supplier's expense all copies of promotional material which is Marked Material or otherwise bears any Mark as a designation of origin; and
 - 13.1.5 any provision of this T Level Trade Mark Licence that expressly or by implication is intended to come into or continue in force on or after termination or expiry of this T Level Trade Mark Licence shall remain in full force and effect.
- 13.2 Termination or expiry of this T Level Trade Mark Licence shall not affect any rights, remedies, obligations or liabilities of the parties that have accrued up to the date of termination or expiry, including the right to claim damages in respect of any breach of the T Level Trade Mark Licence which existed at or before the date of termination or expiry.

Schedule 16 Appendix 1

Brand Licensed Products or Services

Those products and services identified as such in the T Level Branding Guidelines.

Mandatory Marked Materials

All Key Materials and such other materials as are identified as such in the T Level Branding Guidelines.

T Level Branding Guidelines

(November 2023)

T Level Branding Guidelines

1 Introduction

- 1.1 T Levels are high-quality technical qualifications for 16 to 19-year olds which are approved and managed by the Institute for Apprenticeships and Technical Education (IfATE). The T Level brand has been devised to ensure that Government, Awarding Organisations, Employers, Suppliers, Providers (schools and colleges), Students, and others involved with the qualification, support and promote T Levels in a positive manner that inspires confidence.
- 1.2 IfATE's T Level Branding Guidelines, including supporting annexes (the 'Guidelines') are essential reference material for all Suppliers responsible for the delivery of the Technical Qualification (TQ) component of the T Level qualification.
- 1.3 For simplicity, the registered trade marks associated with the T Level brand are referred to in the Guidelines as the 'T Level Marks' and are as follows:
- ❖ The word 'T Level';
 - ❖ The Department for Education's (DfE's) 'T Level' logo (in black);
 - ❖ IfATE's name and accompanying flower logo (in blue and black as detailed within the IfATE brand guide); and
 - ❖ the respective Supplier's corporate name and logo.
- 1.4 These Guidelines set out essential information as to how the T Levels Marks should be used in: a) TQ materials and b) other T Level communications including for marketing, advertising and promotional purposes.
- 1.5 These Guidelines are subject to reasonable development. They adopt many of the general principles which apply in relation to good branding practice, and where they are developed further IfATE intends that they will, in terms of general principles, be similar in many respects to commonly used branding guidelines.

2 General principles for use of the T Level Marks

- 2.1 When using the T Level Marks, Suppliers (and any other authorised users, such as Providers) must comply with these Guidelines (in addition to any other requirements of the TQ Contract and the IfATE brand guide).
- 2.2 The T Level Marks must be used by Suppliers on the front/landing/home page **only** of all Mandatory Marked Materials, key TQ documents and supporting resources (unless otherwise agreed by IfATE), in accordance with and in the form set out at **Annex 1**.
- 2.3 Nothing in these Guidelines is intended to restrict the use of the text mark 'T Level' where that use is necessary to indicate the intended purpose of a product or service and is in accordance with honest practices in industrial or commercial matters. (This does not apply, unless authorised and used in accordance with these Guidelines, to the use of the T Level logo.)
- 2.4 By way of example, use to describe the relevance or purpose of a text book or support materials for a specific technical education qualification forming part of a T Level is generally acceptable, but any such use which is liable to confuse third parties as to whether the relevant T Level is approved, managed or otherwise controlled by a party other than IfATE, or that the text book or support materials are endorsed and/or approved by IfATE would not be acceptable.
- 2.5 The Secretary of State for Education, or IfATE under delegation by the Secretary of State for Education, shall have the exclusive power to issue certificates of award and statements of achievement (and equivalent documents, excluding a breakdown of attainment) within the T Level Programme. It is intended that such documents will include the Supplier's name but not the Supplier's logo.
- 2.6 Suppliers must not issue any document bearing the title or name, or described or represented as, a 'certificate' or 'statement of achievement' or its substantial equivalent to which, or in respect of which, any T Level Mark is applied or used, or otherwise apply the T Level Marks to, or create an association with any T Level or TQ with any document or material bearing the title or name, or described or represented as, a 'certificate' or 'statement of achievement'" or its substantial equivalent.
- 2.7 Suppliers must use the T Level Marks on all *Mandatory Marked Materials* used in the operational delivery of the TQ. The documents classified as *Mandatory Marked Materials* are listed in **Annex 2**.

- 2.8 *Mandatory Marked Materials* should include a descriptive qualification name, as determined and/or mutually agreed by IfATE and the Supplier, in line with the TQ Contract and these Guidelines e.g. [technical qualification] in x [Pathway]”.
- 2.9 Suppliers must ensure that it is clear that any T Level, or qualification associated with a T Level (such as the TQ), is a qualification approved and managed by IfATE. T Level Marks must not be used on any materials which relate to a T Level or TQ which has been wholly or partly superseded, unless the material is equally prominently identified as such.
- 2.10 Suppliers must, on request from IfATE, submit copies of any material where their name or branding, or any other trade marks or branding are used and/or in association with a T Level or a TQ.
- 2.11 Suppliers must not promote that, or give the impression that, any of its other qualifications - similar or equivalent – are linked to the TQ or T Level qualification i.e. other Level 2, 3 or 4 qualifications.

3 Intellectual Property Rights (IPR) and the TQ Contract

- 3.1 Full details of Suppliers’ rights and responsibilities in respect of IPR are set out in the TQ Contract, and Suppliers should pay particularly close attention to clause 13 Intellectual Property Rights; Schedule 14 Form of Assignment and License; and Schedule 16 Logos and Trademarks – T Level Trade Mark Licence.
- 3.2 Providers engaged with the T Level qualification may use the T Level Marks but it is the responsibility of Suppliers to ensure that they comply with these Guidelines and the TQ Contract.
- 3.3 Suppliers should note that the T Level Marks are registered trade marks; any breach could lead to an action for trade mark infringement (as well as other consequences under the TQ Contract).

4 Advertising, marketing and promotion

- 4.1 Suppliers must ensure that any advertising, marketing and promotion products or services i.e. those activities outside the scope of the core TQ delivery component, do not undermine or diminish the reputation, image and prestige of the T Level Marks when used in any such aforementioned activity e.g. media advertising.

- 4.2 Suppliers may use the T Level Marks in relation to *Brand Licensed Products or Services* set out in **Annex 3**, in accordance with (and subject to) the terms of the TQ Contract and these Guidelines.
- 4.3 Suppliers must not give the impression that their visual identity is being used as a distinct brand, trade mark or designation of origin for any materials, including for activity defined as *Brand Licensed Products or Services*.

5 Style, positioning and form of T Level Marks

- 5.1 Suppliers must ensure that, except for the T Level Marks, no other trade marks, logos, banners or graphics are to be presented and/or affixed to any materials which relate to a T Level or TQ.

T Level Marks on TQ Materials

- 5.2 The T Level Marks should be included on the front page only of the TQ materials (whether in paper or digital form) in accordance with and in the form set out at **Annex 1**.
- 5.3 The T Level Marks should be acknowledged on the final page of the TQ materials (whether in paper or digital form) in accordance with and in the form set out at **Annex 1**.

T Level Marks on other T Level communications (including for marketing, advertising and promotional purposes)

Positioning/Layout:

- 5.4 T Level Marks may be represented in the form of a logo or graphic image ("**Logo Mark**"); or as an isolated word mark ("**Isolated Word Mark**"); or as a text or word mark¹ used within relevant text ("**Text Mark**") as described below. There are some common requirements in relation to each type of use (sections 6 to 8 - "No mixing", "Prominence" and "Acknowledgements") and some requirements which differ depending on the form in which Suppliers plan to use the mark (set out below).
- 5.5 Use of the word mark may also be made in oral form. The same principles should, so far as practicable, apply to oral use of any T Level Marks i.e. if appropriate, the respective changes being proposed are applied consistently.
- 5.6 Where it is used otherwise than in text form, the form in which the Supplier reproduces the logo or graphic should conform precisely to the logo and graphic forms designated by IfATE.

¹ Text form includes in spoken text

5.7 **Logo Mark:**

- Suppliers must use the Logo Mark in precisely the form and subject to any requirements set out in **Annex 1**;
- Suppliers must not change the colours, or skew, stretch or angle the logo, or distort, add a border or otherwise alter the logo in any way;
- Suppliers must ensure that the logos are always clearly separate from any other material, and in particular that it has a clear space surrounding the logos, as illustrated, specified or referenced at **Annex 1**.
- Suppliers must not resize the logo, unless resizing is permitted in accordance with these Guidelines.

5.8 **Isolated Word Mark**

- Suppliers must use the fonts and size ranges of font set out in or referenced in these Guidelines and/ or as otherwise specified by IfATE;
- Suppliers must use only the colours and weights set out in or referenced in these Guidelines and/ or as otherwise specified by IfATE;
- Suppliers must not use underlining;
- The words should have initial capitalisation (only) and no other punctuation etc. “T Level” is acceptable; “T LEVEL”, “T level” or T-Level” are not acceptable; and
- Suppliers must not use the Isolated Word Mark as a watermark.

5.9 **Text Mark:**

- Suppliers must use the Text Mark in the same font as the surrounding text; and
- Suppliers must acknowledge its first use in the text as noted under paragraph 5.15 (Acknowledgement) of these Guidelines.

No mixing/combination/background use

- 5.10 Suppliers must ensure that the T Level Marks are always clearly separate from any other trade mark or name used in the same document. In particular:

- Suppliers must not use their trade mark mixed or combined with any other trade mark or name such that they could be seen or understood to be part of a single trade mark. For example, “the Mrs Blogs [Supplier] T Level” would not be acceptable use; and
- Suppliers must not combine a T Level Mark into a single logo or something which might be seen to be or have a unitary character. For example:



- The T Level Mark and a Supplier’s mark should not be combined into a single logo or something which might be seen to be or have a unitary character. For example:



- There should always be a clear separation between the T Level Mark and any other mark used by Suppliers or on any documents, and, when used as a logo or graphic, Suppliers should take account of any requirements for separation set out in these Guidelines.

5.11 Any use of a name given to the qualification element of a T Level (including any use of “TQ” as a reference to part of a T Level) should also only be such that it is always a clearly separate mark or name from any other trade mark or name used in the same document with any other trade mark or trade name.

5.12 Suppliers must not place a T Level Mark against a background colour, pattern or picture except as specified below:

- as set out in or referenced in **Annex 1** or as otherwise agreed in writing by IfATE or specified in these Guidelines; or
- with imagery which is of a purely illustrative character, and does not suggest any other source or business connection, and is appropriate to the context and brand identity, and allows the entire mark to be clearly visible more prominently than such imagery, and complies with any other limitations notified by IfATE in writing from time to time,

and in any event any imagery must be consistent with the overall brand identity and values of the T Level Marks and the T Level Programme, and not be liable to bring the T Level Marks or the T Level Programme into disrepute.

Prominence

- 5.13 Where Suppliers use the T Level Marks on material which carries other branding in conjunction with or in the same part of the material, the T Level Marks should be given at least equal prominence with the other branding. For example:
- it should appear in script of at least the same font size as the script of any Supplier's trade mark, and where Suppliers use a logo covering at least the same overall surface area;
 - the style used for the other mark should not lead to it being more prominent than the style used for the T Level Mark;
 - the colouring used for the other mark should not draw more attention to it than the T Level Mark; and
 - it should appear in at least as prominent a position.
- 5.14 Typically, use of one T Level Mark will not be regarded as 'in conjunction' with another mark when they are in separate distinct parts of the document, including for example, use of a Supplier's letter head (one part) and use of the T Level Mark in the body of the letter (a separate part).

Acknowledgement

- 5.15 Subject to paragraph 5.16 of these Guidelines, where the T Level Marks are used in any document, Suppliers should place in the document reasonably prominently (so that it would reasonably be expected to come to the attention of the reader or addressee of the document) an acknowledgement that IfATE's name and logo are registered trade marks of IfATE. For example:
- where the T Level Mark is used in the title or opening description of the document or in a manner intended to show that the document relates to a T Level or a TQ, by using a referenced footnote acknowledging that 'T Level is a registered trade mark of The Institute for Apprenticeships and Technical Education' or 'Registered trade mark of The Institute for Apprenticeships and Technical Education';

- where it is used in the text of a document, the first time it appears it should include a referenced footnote acknowledging that the '[Mark] is a registered trade mark of The Institute for Apprenticeships and Technical Education' or 'Registered trade mark of The Institute for Apprenticeships and Technical Education';
- in each case the referenced footnote should, where practicable, appear in the same visual field as the use of the T Level Marks, or in other cases, where such notice would otherwise commonly be placed. For example, on the rear of a single page which is printed on both sides, on the rear of the front page of a booklet, or on the rear of the last page of a booklet; and
- where a Supplier's or a Provider's name or branding is also used in the document, the referenced footnote should also make clear that the T Level is a qualification approved and managed by IfATE, and that the Supplier is currently authorised by IfATE to develop and deliver the qualification (and/or that the Provider offers or provides courses for part of the T Level, which is a qualification approved and managed by IfATE), as appropriate.

5.16 Where a reference is made to T Level in any document indirectly (for example with a description which is evidently a reference to a T Level or the TQ) in association with a Supplier (whether using a Supplier's name or otherwise), the document should make clear that the T Level and a TQ is a qualification approved and managed by IfATE.

5.17 No further acknowledgement is necessary where the use of the T Level Marks or a reference to a T Level or TQ is in a document, other than those materials/document listed in **Annex 2** of these Guidelines. To illustrate: such use is in word form (as part of the text²) of the document and would clearly be understood by addressees and readers as being a reference to the T Level or, as appropriate and reference has been to the fact that the TQ is approved and managed by IfATE and it is not being suggested otherwise: it has been made clear that the role of the Supplier is focused on developing and/or delivering the TQ component of the T Level and it has a relationship with IfATE.

Illustrations

The approach may be adjusted sensibly for the particular materials and circumstances of use. For example:

5.18 On promotional documentation intended for Providers, where it might be expected that a high level of prominence would be given to a Supplier's name or branding (for example in large

² including spoken text in the case of spoken material

script), or on explanatory documentation intended for Providers, the use of T Level (and T Level Marks, including text marks) should be given equal prominence. In a referenced footnote should appear on the reverse of the first page (for example with other similar notices, such as copyright notices, but no less prominently than those notices);

- 5.19 For promotional and explanatory documentation aimed at students or employers, the use of T Level should be given equal prominence; and a clear note should appear on the same page in the same visual field that the T Level is a qualification approved and managed by IfATE, and a Supplier's development and delivery of the qualification and use of the mark is under the authority of IfATE;
- 5.20 For assessment or examination papers (for single use) relating to materials for examiners, a reasonably prominent note should appear at the bottom of the first page that the T Level is a qualification approved and managed by IfATE, and a Supplier's development and delivery of the qualification and use of the mark is under the authority of IfATE;
- 5.21 For sample papers which may be re-used, there should in addition be a note that T Level is a registered trade mark of IfATE; and
- 5.22 For any supplementary materials (such as text books and learning aids), other than those materials/ documents listed in Annex 2, there should be a clear reasonably prominent explanation that the material is designed for use with the relevant T Level; including the date of the T Level, and that the T Level is a qualification approved and managed by IfATE, and that the T Level is a registered trade mark of IfATE used by a Supplier (or other source) with the authority of IfATE.

Providers (Schools and Colleges)

- 5.23 Suppliers are responsible for ensuring that:
- each Provider complies with these marking requirements, as they apply to use of a Supplier's name or branding and equally, to any permitted use of the Provider's name or branding in association with the T Level Mark; and
 - any use by a Provider of the T Level Mark is clearly a reference to a T Level approved and managed by IfATE.

6 Inspection and Approval

- 6.1 Suppliers must permit IfATE to inspect on reasonable request and on reasonable notice any materials bearing or intended to bear a T Level Mark, for the purposes of ascertaining compliance with these Guidelines.
- 6.2 Where IfATE determines (acting reasonably) that it appears that there is a non-compliance with these Guidelines, Suppliers must consult with IfATE on how such non-compliance may be remedied, taking into account both the seriousness of the non-compliance, including how the relevant material does not comply, what the potential impact may be (bearing in mind the volumes of material in question and the audience for those materials) and the potential impact of remedial steps, with a view to reaching fair and reasonable consensus on remedial action (which may range from taking steps in relation to future materials to the withdrawal and reissue of current materials).
- 6.3 In the event that no consensus can be reached, the disagreement or difference will be subject to the Dispute Resolution Procedure.

7 Amendments to the Guidelines

- 7.1 IfATE may amend these Guidelines from time to time, in a manner consistent with the general principles (Section 2).
- 7.2 IfATE will notify Suppliers of any changes together with the date on which such amendments are to take effect.
- 7.3 IfATE will take reasonable account of Suppliers' comments or concerns in relation to any amendments and the timetable for implementation, and Suppliers agree to act reasonably to seek a consensus. In the absence of consensus the disagreement or difference may be referred by Suppliers or IfATE to be resolved under the Dispute Resolution Procedure, as set out in Annex 4.

Annex 1 (a): T Level Marks on Mandatory Marked TQ materials

Front page



*to be placed top right within the header

Supplier logo]**

**to be placed bottom right within the footer

Final page

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‘T-LEVELS’ is a registered trade mark of the Department for Education.

‘T Level’ is a registered trade mark of the Institute for Apprenticeships and Technical Education.

‘Institute for Apprenticeships & Technical Education’ and logo are registered trade marks of the Institute for Apprenticeships and Technical Education.

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

[SUPPLIER] is authorised by the Institute for Apprenticeships and Technical Education to develop and deliver this Technical Qualification.

[‘MARK’] is a registered trade mark of [SUPPLIER].

Annex 1 (b): T Level Marks on Marked TQ materials

Front page

T-LEVELS*

*to be placed top right within the header

[Supplier logo]**

**to be placed bottom right within the footer

Final page

Copyright in this document belongs to, and is used under licence from, [SUPPLIER], © 20XX.

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[SUPPLIER] is authorised by the Institute for Apprenticeships and Technical Education to develop and deliver this Technical Qualification.

[‘MARK’] is a registered trade mark of [SUPPLIER].

Annex 2: Mandatory Marked Materials

Key Materials

- a) specifications of content for each TQ including core and all specialist components;
- b) assessment guidelines (for Providers);
- c) quality assurance requirements (for Providers);
- d) specimen assessment materials;
- e) standards exemplification materials;
- f) updates or redevelopments of specifications of content;
- g) updates and redevelopments of any Key Materials; and
- h) any materials equivalent to the above to which a Skilled Future Supplier would reasonably require access for the Portability Purposes.

Key Materials shall **not** include support Materials, insofar as they are not part of any of the expressly included items listed above;

Ancillary Materials

- a) Assessment Strategy;

Annex 3: Brand Licensed Products and Services

Marketing materials relating to T Levels

Suppliers will be expected to adhere to the form of branding as set out in Annex 1 wherever reasonably practicable.

Annex 4: Dispute Resolution Procedure

Definitions³

“Dispute” means any claim, dispute or difference which arises out of or in connection with these Guidelines or in connection with the existence, legal validity or enforceability of these Guidelines, whether the alleged liability shall arise under English law or under the law of some other country and regardless of whether a particular cause of action may successfully be brought in the English courts.

“Style” means any matter set out in or referred to in paragraph 5 of the Guidelines.

“Dispute Resolution Procedure” means the dispute resolution procedure set out in paragraphs 1.1 to 1.5.

1 Resolving disputes

1.1 Where a Dispute (not being a Dispute arising solely in respect of Style):

1.1.1 arises solely between IfATE and a Supplier, the dispute resolution procedure set out in clause 37 of the Supplier’s Contract shall apply and the provisions of this Dispute Resolution Procedure shall not apply; or

1.1.2 relates to or is in connection with a dispute that is progressing under the Supplier’s Contract, the parties agree to be bound by the decision that is reached in accordance with the dispute resolution procedure set out in clause 37 of the Supplier’s Contract in respect of the dispute under the Supplier’s Contract, provided always that IfATE and/or the Supplier (as the case may be) have taken into account all reasonable comments and/or submissions of any third party who is a party to, or connected with, the Dispute.

1.2 Where the Dispute is one to which the circumstances described in paragraph 1.1 do not apply:

1.2.1 and the Dispute remains unresolved, the relevant parties connected with the Dispute shall procure that nominated senior representatives of each such party who have authority to settle the Dispute will, within 28 days of a written request from another connected party, meet in good faith to resolve the Dispute; and

1.2.2 if the Dispute is not resolved at that meeting, the relevant parties can attempt to settle it by mediation using the Centre for Effective Dispute Resolution (“**CEDR**”) Model Mediation Procedure current at the time of the Dispute. If the relevant parties

cannot agree on a mediator, the mediator with experience in trade mark law will be nominated by CEDR. If a relevant party does not wish to use, or continue to use mediation, or mediation does not resolve the Dispute:

- (i) the Dispute (other than a Dispute relating to Style) must be resolved using paragraphs 1.3 to 1.5; or
- (ii) a Dispute relating to Style must be resolved using paragraph 1.6.

1.3 Unless IfATE refers the Dispute (other than a Dispute relating to Style) to arbitration using paragraph 1.4, the parties irrevocably agree that the courts of England and Wales have the exclusive jurisdiction (other than in relation to a Dispute relating to Style) to:

1.3.1 determine the Dispute; and/or

1.3.2 grant interim remedies, or any other provisional or protective relief.

1.4 The parties agree that IfATE has the exclusive right to refer any Dispute (other than a Dispute relating to Style) to be finally resolved by arbitration under the London Court of International Arbitration Rules current at the time of the Dispute. There will be only one arbitrator. The seat or legal place of the arbitration will be London and the proceedings will be in English.

1.5 IfATE has the right to refer a Dispute (other than a Dispute relating to Style) to arbitration even if a party has started or has attempted to start court proceedings under paragraph 1.3, unless IfATE has agreed to the court proceedings or participated in them. Even if court proceedings have started, the relevant party must do everything necessary to ensure that the court proceedings are stayed in favour of any arbitration proceedings if they are started under paragraph 1.4.

1.6 If the Dispute is one which relates to Style, IfATE's decision will be final.

Schedule 16 Appendix 2

Mark

T Level

Registered trade mark(s) and applications³

Country	Mark	App or regn no	Date of app or regn	Classes	Specification
UK	T Level (word)	UK00003318112	15 June 2018	9, 16, 41	<p>Class 9: Electronic apparatus and instruments for testing, examination and assessment purposes; computer software, hardware and firmware for the provision of examination and assessments including software for operation over computer networks or by remote computer access; all of the aforesaid for use in the provision of education, teaching, training and/or assessment.</p> <p>Class 16: Examination papers; syllabi; diplomas; education, academic and vocational certificates; printed examination regulations; all of the aforesaid for use in the provision of education, teaching, training and/or assessment.</p>

³ To be updated as required based on trade mark application position at the Effective Date.

					Class 41: Issuing of educational awards; awarding of educational certificates; educational assessment services; provision of examination, testing and assessment services; provision of examination, testing and assessment services electronically, by online delivery, by way of the Internet or world wide web; online publication of syllabi, examination papers, assessments; examination services; assessment services; educational certification services; certification in relation to examinations and other forms of assessment; preparation and validation, accreditation, conducting and administration of examinations, assessments and tests; provision of examination papers; information, advisory and consultancy services relating to all of the aforesaid; all of the aforesaid relating to the provision of education, teaching, training and/or assessment.
EU	T Level (word)	017999579	13 December 2018	9, 16, 41	Class 9: Educational, teaching, instruction or research apparatus and instruments; electronic apparatus and instruments for teaching, instruction, training, research, education, testing, examination and assessment purposes; media bearing electronic publications and data; electronic publications; electronic publications (downloadable) provided online from a database or the Internet; downloadable text and information provided electronically, by online delivery, by way of the

					<p>Internet or world wide web; electronic database; audio visual teaching apparatus; films and video films; computer software, hardware and firmware; computer software, hardware and firmware for the provision of teaching, instruction, training, research, education, testing, examination and assessments including software for operation over computer networks or by remote computer access; educational software; all of the aforesaid for use in the provision of education, teaching, training and/or assessment.</p> <p>Class 16: Printed publications; educational publications; printed matter; educational materials; examination papers; syllabi; diplomas; education, academic and vocational certificates; printed examination regulations; books; magazines; publications; textbooks; exercise books and notebooks; catalogues, handbooks and manuals; study guides; instructional or teaching materials; all of the aforesaid for use in the provision of education, teaching, training and/or assessment.</p> <p>Class 41: Education services; teaching services; publication services; educational publication services; publication of printed matter relating to education; issuing of educational awards; awarding of educational certificates; electronic publication; publication of printed matter; educational assessment services; provision of training, teaching,</p>
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					<p>academic, education, instruction, examination, testing and assessment services; provision of training, teaching, academic, education, instruction, examination, testing and assessment services electronically, by online delivery, by way of the Internet or world wide web; online publication of electronic texts, books, textbooks, brochures, syllabi, examination papers, assessments; examination services; assessment services; educational certification services; certification in relation to examinations and other forms of assessment, education, training and awards; preparation and validation, accreditation, conducting and administration of examinations, assessments and tests; provision of examination papers; information, advisory and consultancy services relating to all of the aforesaid services; all of the aforesaid relating to the provision of education, teaching, training and/or assessment services.</p>
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Schedule 17

Provider Contract requirements

1 Provider Contract

1.1 This Schedule sets out the requirements that Provider Contracts must meet.

1.2 Provider Contracts must:

1.2.1 be in writing, enforceable, and on terms that are fair and reasonable;

1.2.2 set out all the requirements with which the Approved Provider must comply in order to continue to deliver the TQ;

1.2.3 establish a sanctions policy to be applied in the event that the Approved Provider fails to comply with the requirements in the Provider Contract;

1.2.4 require the Approved Provider to:

- (i) take all reasonable steps to ensure that the Supplier is able to comply with its Conditions of Recognition;
- (ii) retain a workforce of appropriate size and competence to undertake the delivery of the TQ as required by the Supplier;
- (iii) have available sufficient managerial and other resources to enable it effectively and efficiently to undertake the delivery of the TQ as required by the Supplier;
- (iv) undertake the delivery of the qualification required by the awarding organisation in accordance with the Equality Act 2010, any Act that was a statutory predecessor to that Act, or any legislation in a jurisdiction other than England which has an equivalent purpose and effect; and
- (v) operate a complaints handling procedure or appeals process for the benefit of Students;

- 1.2.5 where, in accordance with the Approved Assessment Strategy an Approved Provider is permitted to carry out or procure the carrying out of marking of Student assessment evidence, set out details for carrying out Moderation;
- 1.2.6 not materially depart from any relevant industry standards and common education sector practices;
- 1.2.7 be materially consistent across all Approved Providers in respect of the provision of the Provider Services and, in particular, shall not discriminate against any particular types, sizes or geographical locations of Approved Providers in connection with the provision of any Provider Services;
- 1.2.8 include appropriate GDPR provisions: where the Supplier, in fulfilling its obligations under this Contract, is acting as a Processor on behalf of an Approved Provider, the Provider Contract will include provisions to ensure that any personal data (as defined in the GDPR) that is Processed by the Supplier in relation to the Provider Services is Processed in accordance with Data Protection Legislation;
- 1.2.9 be consistent with, and to the extent necessary allow for, any information, document and data sharing requirements contained within this Contract (to include any information, documents and data that must be provided by the Supplier to the Authority and/or any third party and any information, documents and data requested by Ofqual);
- 1.2.10 require the Approved Provider to assist the Supplier in carrying out any reasonable monitoring activities and to assist Ofqual in any investigations made for the purposes of performing its functions;
- 1.2.11 allow Approved Providers to purchase Provider Services on an “as and when needed” basis without any minimum or maximum volume commitments (including in relation to the number of Students);
- 1.2.12 require Approved Providers to register all Students on a TQ by the end of November or within such other timescales as are required by the Key Dates Schedule for the relevant Academic Year and pay that part of the Fees

referred to in limb (a) of the definition of Fees within 30 days of such registration and provide that, if a Student terminates their study of the TQ before the end of the following January in the same Academic Year, the Supplier must provide a full refund of such Fees (relating to such Student) to the Approved Provider (for the avoidance of doubt, if the Student terminates their study of the TQ after the end of the following January in the same Academic Year, the Supplier is not obliged to give a refund);

- 1.2.13 include detailed provisions relating to the Approved Provider's role in quality assurance, such provisions shall give effect to the requirements of the Approved Provider's Quality Assurance Process;
- 1.2.14 require Approved Providers to provide advice and guidance to Students (including any Student no longer enrolled with the Approved Provider) in relation to making enquiries about results (and any further steps that may be taken following such an enquiry (including those contemplated by the Additional Services)) and where such Student reasonably requests the Approved Provider (whether directly or indirectly) to request the provision of an Additional Service, require the Approved Provider to request the provision of such Additional Service from the Supplier;
- 1.2.15 require Approved Providers to seek written approval from the Supplier before permitting a third party (for example training providers or satellite centres) to deliver any part of the TQ, including its assessments, and requires the Approved Providers to agree in writing to the Supplier's requirements before the Supplier approves the use of a third party;
- 1.2.16 place responsibility on the Approved Provider to monitor whether any third party involved with the delivery and assessment of the TQ on its behalf has appropriate capacity and capability; and
- 1.2.17 specify a process to be followed in any withdrawal of the Approved Provider (whether voluntary or not) from its role in delivering the TQ and require Approved Providers to take all reasonable steps to protect the interests of Students in the case of such a withdrawal.

1.3 Provider Contracts must not:

- 1.3.1 include terms in connection with Provider Services that are not strictly necessary for the provision of the relevant Provider Services and/or which are materially inconsistent with any of the Supplier's obligations under this Contract;
- 1.3.2 make the provision of the Provider Services contingent on the take up of any further qualifications or services by the Approved Provider;
- 1.3.3 require the Approved Provider to make any payments other than the Fees (e.g. for the avoidance of doubt, Provider Contracts shall not require any fees to be paid by the Approved Provider (or an Eligible Provider) for Provider Approval in relation to a TQ);
- 1.3.4 offer any discounts to the Fees; and/or
- 1.3.5 include provisions that are materially more onerous than any comparable provisions in this Contract.

1.4 The Supplier shall not offer to any Approved Provider any rebate, discount or other incentive in relation to services outside the Provider Services (whether or not in the Provider Contract) which is contingent on or linked to the Approved Provider entering into the Provider Contract and/or registering Students for the TQ.

Schedule 18

Commercially Sensitive Information

The content for this Schedule is contained in a separate file at:

S18_GEN2W1_DSP_Commercially_Sensitive_Confidential_Information

Attachment 9: Commercially Sensitive Information and/or Confidential Information

- 1 All the information that the Authority supplies (to the Potential Supplier or otherwise) as part of this Procurement shall be treated as confidential information under paragraph 12 of the Terms of Participation.
- 2
 - a. During this Procurement, the Potential Supplier considers that the type of information listed in Table 1 below contained in its response to the ITT is 'Confidential Information'.
 - b. From the Effective Date of the Contract, the Potential Supplier considers that the type of information listed in Table 3 below contained in its response to the ITT shall be 'Confidential Information'.
- 3
 - a. During this Procurement, the Potential Supplier considers that the type of information listed in Table 2 below contained in its response to the ITT is not Confidential Information but is 'Commercially Sensitive Information'.
 - b. From the Effective Date of the Contract, the Potential Supplier considers that the type of information listed in Table 4 below contained in its response to the ITT is not Confidential Information but is 'Commercially Sensitive Information'.
- 4 The Potential Supplier must complete each Table fully and give full, valid and justifiable reasons for including any information in the Tables below. The Authority cannot accept any broad attempt to class all, or any broad categories of, information as either 'Confidential Information' or 'Commercially Sensitive Information' and may discard a Potential Supplier's attempts to classify information in this way.
- 5 The information supplied in this Attachment 9 shall be used to populate Schedule 18 of the Contract.
- 6 Potential Suppliers are reminded that notwithstanding the inclusion of any information in Table 1, Table 2, Table 3 and/or Table 4 below, the Authority shall be responsible for determining in its absolute discretion whether any information is exempt from disclosure in accordance with FoIA and/or the EIRs.

Schedule 19

Required Insurances

PART A: THIRD PARTY PUBLIC AND PRODUCTS LIABILITY INSURANCE

1 Insured

The Supplier

2 Interest

To indemnify the Insured in respect of all sums which the Insured shall become legally liable to pay as damages, including claimant's costs and expenses, in respect of accidental:

2.1 death or bodily injury to or sickness, illness or disease contracted by any person; and

2.2 loss of or damage to property,

happening during the period of insurance (as specified in paragraph 5) and arising out of or in connection with the provision of the Services under this Contract.

3 Limit of indemnity

Not less than £5,000,000 in respect of any one occurrence, the number of occurrences being unlimited, but £5,000,000 in the aggregate per annum in respect of products and pollution liability.

4 Territorial limits

United Kingdom.

5 Period of insurance

From the Effective Date and renewable on an annual basis unless agreed otherwise by the Authority in writing for the Term.

6 Cover features and extensions

Indemnity to principals clause.

7 Principal exclusions

- 7.1 War and related perils.
- 7.2 Nuclear and radioactive risks.
- 7.3 Liability for death, illness, disease or bodily injury sustained by employees of the Insured during the course of their employment.
- 7.4 Liability arising out of the use of mechanically propelled vehicles whilst required to be compulsorily insured by applicable Law in respect of such vehicles.
- 7.5 Liability in respect of predetermined penalties or liquidated damages imposed under any contract entered into by the Insured.
- 7.6 Liability arising out of technical or professional advice other than in respect of death or bodily injury to persons or damage to third party property.
- 7.7 Liability arising from the ownership, possession or use of any aircraft or marine vessel.
- 7.8 Liability arising from seepage and pollution unless caused by a sudden, unintended and unexpected occurrence.

8 Maximum deductible threshold

Not to exceed £10,000 for each and every third party property damage claim (personal injury claims to be paid in full).

PART B: PROFESSIONAL INDEMNITY INSURANCE

1 Insured

The Supplier

2 Interest

To indemnify the Insured for all sums which the Insured shall become legally liable to pay (including claimants' costs and expenses) as a result of claims first made against the Insured during the period of insurance (as specified in paragraph 13) by reason of any negligent act, error and/or omission arising from or in connection with the provision of the Services.

3 Limit of indemnity

Not less than £5,000,000 in respect of any one claim and in the aggregate per annum, exclusive of defence costs which are payable in addition.

4 Territorial Limits

United Kingdom

5 Period of insurance

From the Effective Date and renewable on an annual basis unless agreed otherwise by the Authority in writing (a) for the Term; and (b) for a period of 6 years thereafter.

6 Cover features and extensions

Retroactive cover to apply to any "claims made policy wording" in respect of this Contract or retroactive date to be no later than the Effective Date.

7 Principal exclusions

7.1 War and related perils

7.2 Nuclear and radioactive risks

8 Maximum deductible threshold

Not to exceed £10,000 for each and every claim.

PART C: UNITED KINGDOM COMPULSORY INSURANCES

1 The Supplier shall meet its insurance obligations under applicable Law in full, including, UK employers' liability insurance and motor third party liability insurance.

Schedule 20

Authorised Representatives

The content for this Annex is contained in a separate file at:

S20_GEN2W1_DSP_Authorised_Representatives

Schedule 20
Authorised Representatives

Authority Authorised Representative

██████	██████████
██████	██
Postal Address:	Sanctuary Buildings, 20 Great Smith Street, London SW1P 3BT
██████████	██

Supplier Authorised Representative

██████	██
██████	██
Postal Address:	Pearson Education Ltd 80 Strand London WC2R 0RL
██████████	██

Schedule 21

Staff Transfer

1. Definitions

1.1 In this Schedule, the following definitions shall apply:

“Former Supplier” means the Awarding Organisation that is operating or operated the T Level technical education qualification under the Original Contract;

“Notified Sub-contractor” means a Sub-contractor to whom Transferring Former Supplier Employees will transfer on a Relevant Transfer Date;

“Replacement Sub-contractor” means a sub-contractor of the Replacement Supplier to whom Transferring Supplier Employees will transfer on a Service Transfer Date (or any sub-contractor of any such sub-contractor);

“Relevant Transfer” means a transfer of employment to which TUPE applies;

“Relevant Transfer Date” means in relation to a Relevant Transfer, the date upon which the Relevant Transfer takes place;

“Service Transfer” means any transfer of the Services (or any part of the Services), for whatever reason, from the Supplier or any Sub-contractor to a Replacement Supplier or a Replacement Sub-contractor;

“Service Transfer Date” means the date of a Service Transfer;

“Staffing Information” means in relation to all persons identified on the Supplier’s Provisional Supplier Personnel List or Supplier’s Final Supplier Personnel List, as the case may be, such information as the Authority may reasonably request (subject to all applicable provisions of the Data Protection Legislation), but including in an anonymised format:

(a) their ages, dates of commencement of employment or engagement, gender and place of work;

- (b) details of whether they are employed, self-employed contractors or consultants, agency workers or otherwise;
- (c) the identity of the employer or relevant contracting Party;
- (d) their relevant contractual notice periods and any other terms relating to termination of employment, including redundancy procedures, and redundancy payments;
- (e) their wages, salaries, bonuses and profit sharing arrangements as applicable;
- (f) details of other employment-related benefits, including (without limitation) medical insurance, life assurance, pension or other retirement benefit schemes, share option schemes and company car schedules applicable to them;
- (g) any outstanding or potential contractual, statutory or other liabilities in respect of such individuals (including in respect of personal injury claims);
- (h) details of any such individuals on long term sickness absence, parental leave, maternity leave or other authorised long term absence;
- (i) copies of all relevant documents and materials relating to such information, including copies of relevant contracts of employment (or relevant standard contracts if applied generally in respect of such employees); and
- (j) any other Employee Liability Information” as such term is defined in regulation 11 of TUPE;

“Supplier’s Final Supplier Personnel List” means a list provided by the Supplier of all Supplier Personnel who will transfer under TUPE on the Service Transfer Date;

“Supplier’s Provisional Supplier Personnel List” means a list prepared and updated by the Supplier of all Supplier Personnel who are at the date of the list wholly or mainly engaged in or assigned to the provision of the Services or any relevant part of the Services which it is envisaged as at the date of such list will no longer be provided by the Supplier;

“Transferring Former Supplier Employees” means in relation to a Former Supplier, those employees of the Former Supplier to whom TUPE will apply on the Relevant Transfer Date; and

“Transferring Supplier Employees” means those employees of the Supplier and/or the Supplier’s Sub-contractors to whom TUPE will apply on the Service Transfer Date.

2. Interpretation

- 2.1 Where a provision in this Schedule imposes an obligation on the Supplier to provide an indemnity, undertaking or warranty, the Supplier shall procure that each of its Sub-contractors shall comply with such obligation and provide such indemnity, undertaking or warranty to the Authority, Former Supplier, Replacement Supplier or Replacement Sub-contractor, as the case may be.

Transferring Former Supplier Employees at Commencement of Services

3. Relevant Transfers

- 3.1 The Authority and the Supplier agree that:

3.1.1 the commencement of the provision of the Services or of any relevant part of the Services will be a Relevant Transfer in relation to the Transferring Former Supplier Employees; and

3.1.2 as a result of the operation of TUPE, the contracts of employment between each Former Supplier and the Transferring Former Supplier Employees (except in relation to any terms disapplied through the operation of regulation 10 of TUPE) shall have effect on and from the Relevant Transfer Date as if originally made between the Supplier and/or Notified Sub-contractor and each such Transferring Former Supplier Employee.

- 3.2 The Authority shall procure that each Former Supplier shall comply with all its obligations under TUPE and shall perform and discharge all its obligations in respect

of all the Transferring Former Supplier Employees in respect of the period up to (but not including) the Relevant Transfer Date (including the payment of all remuneration, benefits, entitlements and outgoings, all wages, accrued but untaken holiday pay, bonuses, commissions, payments of PAYE, national insurance contributions and pension contributions which in any case are attributable in whole or in part in respect of the period up to (but not including) the Relevant Transfer Date) and the Supplier shall make, and the Authority shall procure that each Former Supplier makes, any necessary apportionments in respect of any periodic payments.

4. Former Supplier Indemnities

4.1 Subject to Paragraph 4.2, the Authority shall procure that each Former Supplier shall indemnify the Supplier and any Notified Sub-contractor against any Employee Liabilities arising from or as a result of:

4.1.1 any act or omission by the Former Supplier in respect of any Transferring Former Supplier Employee or any appropriate employee representative (as defined in TUPE) of any Transferring Former Supplier Employee arising before the Relevant Transfer Date;

4.1.2 the breach or non-observance by the Former Supplier arising before the Relevant Transfer Date of:

- (a) any collective agreement applicable to the Transferring Former Supplier Employees; and/or
- (b) any custom or practice in respect of any Transferring Former Supplier Employees which the Former Supplier is contractually bound to honour;

4.1.3 any proceeding, claim or demand by HMRC or other statutory authority in respect of any financial obligation including, but not limited to, PAYE and primary and secondary national insurance contributions:

- (a) in relation to any Transferring Former Supplier Employee, to the extent that the proceeding, claim or demand by HMRC or other statutory authority relates to financial obligations arising before the Relevant Transfer Date; and

- (b) in relation to any employee who is not a Transferring Former Supplier Employee and in respect of whom it is later alleged or determined that TUPE applied so as to transfer his/her employment from the Former Supplier to the Supplier and/or any Notified Sub-contractor as appropriate, to the extent that the proceeding, claim or demand by HMRC or other statutory authority relates to financial obligations in respect of the period to (but excluding) the Relevant Transfer Date;
- 4.1.4 a failure of the Former Supplier to discharge or procure the discharge of all wages, salaries and all other benefits and all PAYE tax deductions and national insurance contributions relating to the Transferring Former Supplier Employees in respect of the period to (but excluding) the Relevant Transfer Date;
- 4.1.5 any claim made by or in respect of any person employed or formerly employed by the Former Supplier other than a Transferring Former Supplier Employee for whom it is alleged the Supplier and/or any Notified Sub-contractor as appropriate may be liable by virtue of this Contract and/or TUPE; and
- 4.1.6 any claim made by or in respect of a Transferring Former Supplier Employee or any appropriate employee representative (as defined in TUPE) of any Transferring Former Supplier Employee relating to any act or omission of the Former Supplier in relation to its obligations under regulation 13 of TUPE, except to the extent that the liability arises from the failure by the Supplier or any Sub-contractor to comply with regulation 13(4) of TUPE.
- 4.2 The indemnities in Paragraph 4.1 shall not apply to the extent that the Employee Liabilities arise or are attributable to an act or omission of the Supplier or any Sub-contractor whether occurring or having its origin before, on or after the Relevant Transfer Date including, without limitation, any Employee Liabilities:
 - 4.2.1 arising out of the resignation of any Transferring Former Supplier Employee before the Relevant Transfer Date on account of substantial detrimental changes to his/her working conditions proposed by the Supplier or any Sub-contractor to occur in the period from (and including) the Relevant Transfer Date; or

- 4.2.2 arising from the failure by the Supplier and/or any Sub-contractor to comply with its obligations under TUPE.
- 4.3 If any person who is not identified as a Transferring Former Supplier Employee claims, or it is determined in relation to any person who is not identified as a Transferring Former Supplier Employee, that his/her contract of employment has been transferred from a Former Supplier to the Supplier and/or any Notified Sub-contractor pursuant to TUPE then:
- 4.3.1 the Supplier shall, or shall procure that the Notified Sub-contractor shall, within 5 Working Days of becoming aware of that fact, give notice in writing to the Authority and, where required by the Authority, to the Former Supplier; and
- 4.3.2 the Former Supplier may offer (or may procure that a third party may offer) employment to such person within 15 Working Days of the notification by the Supplier and/or the Notified Sub-contractor or take such other reasonable steps as the Former Supplier considers appropriate to deal with the matter provided always that such steps are in compliance with applicable Law.
- 4.4 If an offer referred to in Paragraph 4.3.2 is accepted, or if the situation has otherwise been resolved by the Former Supplier and/or the Authority, the Supplier shall, or shall procure that the Notified Sub-contractor shall, immediately release the person from his/her employment or alleged employment.
- 4.5 If by the end of the 15 Working Day period specified in Paragraph 4.3.2:
- 4.5.1 no such offer of employment has been made;
- 4.5.2 such offer has been made but not accepted; or
- 4.5.3 the situation has not otherwise been resolved,
- the Supplier and/or any Notified Sub-contractor may within 5 Working Days give notice to terminate the employment or alleged employment of such person.
- 4.6 Subject to the Supplier and/or any Notified Sub-contractor acting in accordance with the provisions of Paragraphs 4.3 to 4.5 and in accordance with all applicable proper employment procedures set out in Law, the Authority shall procure that the Former

Supplier indemnifies the Supplier and/or any Notified Sub-contractor (as appropriate) against all Employee Liabilities arising out of the termination of employment pursuant to the provisions of Paragraph 4.5 provided that the Supplier takes, or shall procure that the Notified Sub-contractor takes, all reasonable steps to minimise any such Employee Liabilities.

4.7 The indemnity in Paragraph 4.6:

4.7.1 shall not apply to:

- (a) any claim for:
- (b) discrimination, including on the grounds of sex, race, disability, age, gender reassignment, marriage or civil partnership, pregnancy and maternity or sexual orientation, religion or belief; or
- (c) equal pay or compensation for less favourable treatment of part-time workers or fixed-term employees;
- (d) in any case in relation to any alleged act or omission of the Supplier and/or any Sub-contractor; or
- (e) any claim that the termination of employment was unfair because the Supplier and/or Notified Sub-contractor neglected to follow a fair dismissal procedure; and

4.7.2 shall apply only where the notification referred to in Paragraph 4.3.1 is made by the Supplier and/or any Notified Sub-contractor (as appropriate) to the Authority and, if applicable, the Former Supplier, within 6 months of the Relevant Transfer Date.

4.8 If any such person as is described in Paragraph 4.3 is neither re-employed by the Former Supplier nor dismissed by the Supplier and/or any Notified Sub-contractor within the time scales set out in Paragraph 4.5, such person shall be treated as having transferred to the Supplier or Notified Sub-contractor and the Supplier shall comply with such obligations as may be imposed upon it under the Law.

5. Supplier Indemnities and Obligations

- 5.1 Subject to Paragraph 5.2, the Supplier shall indemnify the Authority and/or the Former Supplier against any Employee Liabilities arising from or as a result of:
- 5.1.1 any act or omission by the Supplier or any Sub-contractor in respect of any Transferring Former Supplier Employee or any appropriate employee representative (as defined in TUPE) of any Transferring Former Supplier Employee whether occurring before, on or after the Relevant Transfer Date;
 - 5.1.2 the breach or non-observance by the Supplier or any Sub-contractor on or after the Relevant Transfer Date of:
 - (a) any collective agreement applicable to the Transferring Former Supplier Employee; and/or
 - (b) any custom or practice in respect of any Transferring Former Supplier Employees which the Supplier or any Sub-contractor is contractually bound to honour;
 - 5.1.3 any claim by any trade union or other body or person representing any Transferring Former Supplier Employees arising from or connected with any failure by the Supplier or a Sub-contractor to comply with any legal obligation to such trade union, body or person arising on or after the Relevant Transfer Date;
 - 5.1.4 any proposal by the Supplier or a Sub-contractor prior to the Relevant Transfer Date to make changes to the terms and conditions of employment or working conditions of any Transferring Former Supplier Employees to their material detriment on or after their transfer to the Supplier or a Sub-contractor (as the case may be) on the Relevant Transfer Date, or to change the terms and conditions of employment or working conditions of any person who would have been a Transferring Former Supplier Employee but for their resignation (or decision to treat their employment as terminated under regulation 4(9) of TUPE) before the Relevant Transfer Date as a result of or for a reason connected to such proposed changes;
 - 5.1.5 any statement communicated to or action undertaken by the Supplier or a Sub-contractor to, or in respect of, any Transferring Former Supplier Employee

before the Relevant Transfer Date regarding the Relevant Transfer which has not been agreed in advance with the Authority and/or the Former Supplier in writing;

- 5.1.6 any proceeding, claim or demand by HMRC or other statutory authority in respect of any financial obligation including, but not limited to, PAYE and primary and secondary national insurance contributions:
- (a) in relation to any Transferring Former Supplier Employee, to the extent that the proceeding, claim or demand by HMRC or other statutory authority relates to financial obligations arising on or after the Relevant Transfer Date; and
 - (b) in relation to any employee who is not a Transferring Former Supplier Employee, and in respect of whom it is later alleged or determined that TUPE applied so as to transfer his/her employment from the Former Supplier to the Supplier or a Sub-contractor, to the extent that the proceeding, claim or demand by the HMRC or other statutory authority relates to financial obligations arising on or after the Relevant Transfer Date;
- 5.1.7 a failure of the Supplier or any Sub-contractor to discharge or procure the discharge of all wages, salaries and all other benefits and all PAYE tax deductions and national insurance contributions relating to the Transferring Former Supplier Employees in respect of the period from (and including) the Relevant Transfer Date;
- 5.1.8 any claim made by or in respect of a Transferring Former Supplier Employee or any appropriate employee representative (as defined in TUPE) of any Transferring Former Supplier Employee relating to any act or omission of the Supplier or any Sub-contractor in relation to obligations under regulation 13 of TUPE, except to the extent that the liability arises from the Former Supplier's failure to comply with its obligations under regulation 13(4) of TUPE; and
- 5.1.9 a failure by the Supplier or any Sub-Contractor to comply with its obligations under Paragraph 2.8 above.

- 5.2 The indemnities in Paragraph 5.1 shall not apply to the extent that the Employee Liabilities arise or are attributable to an act or omission of the Former Supplier whether occurring or having its origin before, on or after the Relevant Transfer Date including, without limitation, any Employee Liabilities arising from the Former Supplier's failure to comply with its obligations under TUPE.
- 5.3 The Supplier shall comply, and shall procure that each Sub-contractor shall comply, with all its obligations under TUPE (including without limitation its obligation to inform and consult in accordance with regulation 13 of TUPE) and shall perform and discharge, and shall procure that each Sub-contractor shall perform and discharge, all its obligations in respect of all the Transferring Former Supplier Employees, on and from the Relevant Transfer Date (including the payment of all remuneration, benefits, entitlements and outgoings, all wages, accrued but untaken holiday pay, bonuses, commissions, payments of PAYE, national insurance contributions and pension contributions and any other sums due under the Admission Agreement which in any case are attributable in whole or in part to the period from (and including) the Relevant Transfer Date) and any necessary apportionments in respect of any periodic payments shall be made between the Supplier and the Former Supplier.

6. Information

- 6.1 The Supplier shall, and shall procure that each Sub-contractor shall, promptly provide to the Authority and/or at the Authority's direction, the Former Supplier, in writing such information as is necessary to enable the Authority and/or the Former Supplier to carry out their respective duties under regulation 13 of TUPE. The Authority shall procure that the Former Supplier shall promptly provide to the Supplier and each Notified Sub-contractor in writing such information as is necessary to enable the Supplier and each Notified Sub-contractor to carry out their respective duties under regulation 13 of TUPE.

7. Procurement Obligations

- 7.1 Notwithstanding any other provisions of this Schedule, where in this Schedule the Authority accepts an obligation to procure that a Former Supplier does or does not do something, such obligation shall be limited so that it extends only to the extent that the Authority's contract with the Former Supplier contains a contractual right in that regard

which the Authority may enforce, or otherwise so that it requires only that the Authority must use reasonable endeavours to procure that the Former Supplier does or does not act accordingly.

8. Pensions

- 8.1 The Supplier shall, and shall procure that each Sub-contractor shall, comply with the requirements of Part 1 of the Pensions Act 2008, section 258 of the Pensions Act 2004 and the Transfer of Employment (Pension Protection) Regulations 2005 for all transferring staff.

DATED

**THE INSTITUTE FOR
APPRENTICESHIPS AND TECHNICAL
EDUCATION**

and

PEARSON EDUCATION LIMITED

**INTELLECTUAL PROPERTY
ASSIGNMENT AND LICENCE IN
RELATION TO
THE CONSTRUCTION: DESIGN,
SURVEYING AND PLANNING
T LEVEL TECHNICAL
QUALIFICATION**

THIS ASSIGNMENT AND LICENCE is made on

BETWEEN:

- (3) **THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION** of Sanctuary Buildings, 20 Great Smith Street, London SW1P 3BT ("**Authority**"); and
- (4) **PEARSON EDUCATION LIMITED**, a company registered in England and Wales (company registration number: **00872828**), whose registered office is at **Hailey Court, Jordan Hill Business Park, Oxford, OX2 8EJ** ("**Supplier**"),

each a "**Party**" and together the "**Parties**".

BACKGROUND TO THIS ASSIGNMENT AND LICENCE

- (D) The Authority and the Supplier have entered into a contract on the date of this Assignment and Licence for the design, development and delivery of the technical education qualification element ("**TQ**") for the **Design, Surveying and Planning** T Level ("the **TQ Agreement**").
- (E) The Supplier has agreed to assign certain intellectual property rights to the Authority, and to licence certain intellectual property rights to the Authority in connection with the TQ. The Authority has agreed to grant a licence back to the Supplier in relation to certain assigned intellectual property rights.
- (F) This Assignment and Licence, together with the TQ Agreement sets out the agreed terms of such assignment and licences.

2 Assignment and Licence start, formation and interpretation

- 2.1 This Assignment and Licence is legally binding from the Effective Date until it ends in accordance with its terms.
- 2.2 In this Assignment and Licence, unless the context otherwise requires, capitalised expressions shall have the meanings set out in this clause 1 or, where no definition is given in this clause 1, Schedule 1 to the TQ Agreement.
- 2.3 If a capitalised expression does not have an interpretation in this clause 1 or Schedule 1 to the TQ Agreement, it shall, in the first instance, be interpreted in accordance with the common

interpretation within the relevant market sector where appropriate. Otherwise, it shall be interpreted in accordance with the dictionary meaning.

2.4 In this Assignment and Licence, unless the context otherwise requires:

- 2.4.1 the singular includes the plural and vice versa;
- 2.4.2 reference to a gender includes the other gender and the neuter;
- 2.4.3 references to a person include an individual, company, body corporate, corporation, unincorporated association, firm, partnership or other legal entity or Crown Body;
- 2.4.4 references to a legal entity (other than the Supplier) shall include unless otherwise expressly stated any statutory successor to such entity and/or the relevant functions of such entity, and references to the Department shall include, where relevant, the ESFA;
- 2.4.5 a reference to any Law includes a reference to that Law as amended, extended, consolidated or re-enacted from time to time;
- 2.4.6 the words “**including**”, “**other**”, “**in particular**”, “**for example**” and similar words shall not limit the generality of the preceding words and shall be construed as if they were immediately followed by the words “**without limitation**”;
- 2.4.7 references to “**writing**” include typing, printing, lithography, photography, display on a screen, electronic and facsimile transmission and other modes of representing or reproducing words in a visible form, and expressions referring to writing shall be construed accordingly;
- 2.4.8 references to “**clauses**” and “**Schedules**” are, unless otherwise provided, references to the clauses and schedules of this Assignment and Licence and references in any Schedule to parts, paragraphs, annexes and tables are, unless otherwise provided, references to the parts, paragraphs, annexes and tables of the Schedule in which these references appear;
- 2.4.9 references to “**paragraphs**” are, unless otherwise provided, references to the paragraph of the appropriate Schedules unless otherwise provided; and

2.4.10 the headings in this Assignment and Licence are for ease of reference only and shall not affect the interpretation or construction of this Assignment and Licence.

2.5 In this Assignment and Licence, unless the context otherwise requires, the following words shall have the following meanings:

“Ancillary Materials” means all information and materials (other than Key Materials) to which the Authority and/or a Future Supplier would require access for the Portability Purposes, and any other materials which would be required on or to facilitate succession to a Future Supplier in a seamless manner in relation to the TQ offered or Operated by the Supplier.

Ancillary Materials shall include, without limitation:

- (a) Student results including grades;
- (b) statistical analysis for grading (excludes the systems supporting the analysis);
- (c) lists of Providers;
- (d) marked Student evidence (with moderation outcomes);
- (e) documentation which provides an overview or analysis of Student performance (including chief examiner and chief moderator reports), which include but are not limited to, examples of student responses to assessment questions and/or tasks as well as narrative explaining why students did well/ less well on individual items/ components/ subcomponents);
- (f) data on Student credits;
- (g) data on Student appeals;
- (h) data on special considerations for Students;
- (i) the Assessment Strategy;
- (j) Student registrations;
- (k) draft materials in preparation for forthcoming assessments;
- (l) the Key Dates Schedule (in respect of forthcoming assessments);

- (m) lists, with contact details, of people contracted by the Supplier to perform or oversee activities which are necessary for the conduct and quality assurance of assessments for the TQ;
- (n) materials from completed assessments, such as completed Students' examination answer booklets; and
- (o) TQ Live Assessment Materials

"Approval" has the same meaning as in the TQ Agreement;

"Assigned Rights" means the Intellectual Property Rights in the Key Materials;

"Authority Authorised Representative" has the same meaning as in the TQ Agreement;

"Background IPR" means any IPR owned by a Party prior to the Effective Date or created or developed by a Party otherwise than in the provision of the Services or under or in connection with the TQ Agreement, but does not include IPR in Key Materials;

"Beneficiary" means a Party having (or claiming to have) the benefit of an indemnity under this Assignment and Licence;

"Claim" means any claim for which it appears that a Beneficiary is, or may become, entitled to indemnification under this Assignment and Licence;

"Continuing Activities" means activities of the Supplier under the TQ Agreement which continue following the end of the second Academic Year for the final Exclusive Cohort (each as defined in the TQ Agreement) in relation to the TQ as offered by the Supplier, such as retakes, appeals, and any ongoing records management contracted to the Supplier;

"Default" means any breach of the obligations of the Supplier (including abandonment of the Assignment and Licence in breach of its terms) or any other default (including material default), act, omission, negligence or statement of the Supplier, of its Subcontractors or any Supplier Staff howsoever arising in connection with or in relation to the subject-matter of this Assignment and Licence and in respect of which the Supplier is liable to the Authority;

"Deliverables" means all information and data the Supplier creates, identifies for use, or uses as part of or for the Operation of the TQ, including Products and Management Information;

“Dispute” means any claim, dispute or difference which arises out of or in connection with this Assignment and Licence or in connection with the negotiation, existence, legal validity, enforceability or termination of this Assignment and Licence, whether the alleged liability shall arise under English law or under the law of some other country and regardless of whether a particular cause of action may successfully be brought in the English courts;

“Effective Date” means the date on which the last Party to sign has signed this Assignment and Licence;

“Final Approval Milestone” has the meaning given in the TQ Agreement;

“Future Supplier” means any Awarding Organisation appointed, at any point in the future and including any Replacement Supplier, to operate one or more T Level technical education qualifications by or at the direction of the Authority from time to time, and where the Authority is operating a T Level technical education qualification, shall also include the Authority;

“Indemnifier” means a Party from whom an indemnity is sought under this Assignment and Licence;

“Insolvency Event” means:

- (d) in respect of a company:
 - (i) a proposal is made for a voluntary arrangement within Part I of the Insolvency Act 1986 or of any other composition scheme or arrangement with, or assignment for the benefit of, its creditors; or
 - (ii) a shareholders' meeting is convened for the purpose of considering a resolution that it be wound up or a resolution for its winding-up is passed (other than as part of, and exclusively for the purpose of, a bona fide reconstruction or amalgamation); or
 - (iii) a petition is presented for its winding up (which is not dismissed within fourteen (14) Working Days of its service) or an application is made for the appointment of a provisional liquidator or a creditors' meeting is convened pursuant to section 98 of the Insolvency Act 1986; or
 - (iv) a receiver, administrative receiver or similar officer is appointed over the whole or any part of its business or assets; or

- (v) an application order is made either for the appointment of an administrator or for an administration order, an administrator is appointed, or notice of intention to appoint an administrator is given; or
 - (vi) it is or becomes insolvent within the meaning of section 123 of the Insolvency Act 1986; or
 - (vii) being a “**small company**” within the meaning of section 382(3) of the Companies Act 2006, a moratorium comes into force pursuant to Schedule A1 of the Insolvency Act 1986; or
- (e) where the person is an individual or partnership, any event analogous to those listed in limbs (a) (i) to (vii) (inclusive) occurs in relation to that individual or partnership; or
 - (f) any event analogous to those listed in limbs (a) (i) to (vii) (inclusive) occurs under the law of any other jurisdiction;

“Intellectual Property Rights” or “IPR” means:

- (g) copyright, rights related to or affording protection similar to copyright, rights in databases, patents and rights in inventions, semi-conductor topography rights, trade marks, rights in internet domain names and website addresses and other rights in trade or business names, goodwill, designs, Know-How, trade secrets and other rights in Confidential Information;
- (h) applications for registration, and the right to apply for registration, for any of the rights listed at (a) that are capable of being registered in any country or jurisdiction; and
- (i) all other rights having equivalent or similar effect in any country or jurisdiction;

“IPR Claim” means any claim of infringement or alleged infringement (including the defence of such infringement or alleged infringement) of any IPR used to provide the Services and/or supply the Products or otherwise provided and/or licensed by the Supplier (or to which the Supplier has provided access) to the Authority in the fulfilment of its obligations under the TQ Agreement or this Assignment and Licence;

“Key Materials” means materials the IPR in which the Authority reasonably requires ownership of for the Portability Purposes. Examples of where the Authority may reasonably require ownership include because the Authority or a Future Supplier (or, where relevant, a potential Future Supplier) may need to copy or

otherwise reproduce such materials (in whole or in part), to supply or communicate the same, or to be able control the use (in whole or in part) of such materials by third parties, or to authorise others to do so.

Key Materials shall include:

- (a) specifications of content for each TQ including core and all specialist components;
- (b) assessment guidelines (for Providers);
- (c) quality assurance requirements (for Providers);
- (d) specimen assessment materials;
- (e) standards exemplification materials;
- (f) supplementary specimen assessment materials
- (g) employer set project guide exemplar responses
- (h) employer set project grade exemplar responses
- (i) updates or redevelopments of specifications of content;
- (j) updates and redevelopments of any Key Materials; and
- (k) any materials equivalent to the above to which a Skilled Future Supplier would reasonably require access for the Portability Purposes.

Key Materials shall not include:

- (1) Support Materials, insofar as they are not part of any of the expressly included items listed above;
- (2) question banks insofar as they are not part of any of the included items listed above and are not developed for the TQ; and
- (3) any systems and platforms used to support the delivery of the TQ, provided that the relevant TQ content or data held in or processed by such systems and/or platforms can be extracted without requiring further processing post-extraction (and the Supplier can demonstrate that they can be so extracted) to enable use of the relevant content and/or data by a Skilled

Future Supplier in conjunction with a non-proprietary or generally commercially available system or platform;

“Know-How” means all ideas, concepts, schemes, information, knowledge, techniques, methodology, and anything else in the nature of know-how relating to the Services;

“Law” means any law, subordinate legislation within the meaning of Section 21(1) of the Interpretation Act 1978, bye-law, enforceable right within the meaning of Section 2 of the European Communities Act 1972, regulation, order, regulatory policy, mandatory guidance or code of practice, judgment of a relevant court of law, or directives or requirements with which the Supplier is bound to comply;

“Losses” means all losses, liabilities, damages, costs, expenses (including legal fees), disbursements, costs of investigation, litigation, settlement, judgment, interest and penalties whether arising in contract, tort (including negligence), breach of statutory duty, misrepresentation or otherwise and **“Loss”** shall be interpreted accordingly;

“New IPR” means :

- (a) IPR in items created by the Supplier (or by a third party on behalf of the Supplier) specifically for the purposes of the TQ Agreement and updates and amendments of these items including (but not limited to) database schema; and/or
- (b) IPR in or arising as a result of the performance of the Supplier's obligations under the TQ Agreement and all updates and amendments to the same,

but shall not include any IPR owned by the Supplier prior to the Effective Date;

“Operate” in relation to a qualification means to provide the Services or a material part of the Services, or services replacing the Services or a material part of the Services, or of an equivalent character to the Services or a material part of the Services in relation to any other qualification (whether a T Level technical education qualification or not); and **“Operation”** and other cognate terms shall have a corresponding meaning;

“Party” means the Authority or the Supplier and **“Parties”** means both of them where the context permits;

“Product” has the meaning given in the TQ Agreement;

“Provider” means an organisation that has a grant agreement and/or a contract in place with the ESFA to provide qualifications to Students;

“Replacement Services” means any services which are substantially similar to any of the Services (including the supply of any Products) and which the Authority receives in substitution for any of the Services, whether those services are provided by the Authority internally and/or by any third party;

“Replacement Supplier” has the meaning given in the TQ Agreement;

“Required Insurances” has the meaning given in the TQ Agreement;

“Services” means the services as described in Schedule 2 to the TQ Agreement (*Service Requirements*) including any Additional Services as defined in the TQ Agreement;

“Termination Notice” means a written notice of termination given by one Party to the other, notifying the Party receiving the notice of the intention of the Party giving the notice to terminate this Assignment and Licence on a specified date and setting out the grounds for termination;

“Third Party IPR” means Intellectual Property Rights owned by a third party which is or will be used by the Supplier for the purpose of providing the Services and/or supplying the Products;

“TQ Agreement” has the meaning given in recital A (above);

“Transparent” means that students and employers will regard the TQ delivered by a Future Supplier as materially the same as the TQ delivered and operated by the (existing) Supplier;

“Working Day” means any day other than a Saturday or Sunday or public holiday in England and Wales.

3 Assignment

3.1 Pursuant to and for the consideration set out in the TQ Agreement, the Supplier assigns to the Authority, absolutely with full title guarantee all its right, title and interest in and to all of the Intellectual Property Rights in the Key Materials (which, for the avoidance of doubt, includes the Guide Standard Exemplification Materials) including the right to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Assigned Rights on or after the date of this Assignment and Licence. Such assignment shall take place on the earlier of:

- 3.1.1 the creation of any relevant materials known to be Key Materials;
 - 3.1.2 the identification by the Supplier of the use of the relevant materials as part of the TQ; and
 - 3.1.3 delivery of the relevant Key Materials to the Authority, or Operation of the TQ by the Supplier.
- 3.2 With the exception of Guide Standard Exemplification Materials, all Key Materials are relevant course documents for the purposes of section A2D3(4) of the Apprenticeships, Skills, Children and Learning Act 2009, and on approval of the TQ at the Final Approval Milestone and on any subsequent Approval, to the extent that any copyright or any rights in copyright forming part of the Assigned Rights have not then been assigned to and vested absolutely in the Authority, they shall be transferred to the Authority by operation of statute in accordance with section A2IA of the Apprenticeships, Skills, Children and Learning Act 2009. Intellectual Property Rights in the Guide Standard Exemplification Materials is assigned to the Authority by virtue of 2.1 above.

4 Licences to the Authority

- 4.1 The Supplier hereby grants to the Authority (and the Authority shall have, in addition to any retained rights under clause 13.8 of the TQ Agreement) a non-exclusive, perpetual, royalty-free, irrevocable, transferable worldwide licence to use, exploit and sub-license the IPR in the Ancillary Materials and the Supplier's Background IPR and, in respect of any IPR in Key Materials, in each case to the extent that the same are not at the relevant time vested absolutely in the Authority, as necessary to enable the Authority (and its sub-licensees) to:
- 4.1.1 use the Key Materials and Ancillary Materials in its administration, approval and oversight of the TQ and other T Level technical education qualifications and to make the same available to others (such as Ofqual) to do the same; and
 - 4.1.2 to use the Key Materials and the Ancillary Materials, and for any Future Supplier or potential Future Supplier to use the Key Materials and the Ancillary Materials:
 - (i) for competing or tendering for the delivery and Operation of the TQ and/or any Replacement TQ, during any Transition Period and following expiry or termination of the TQ Agreement; and

(ii) to deliver and Operate the TQ and any Replacement TQ, during any Transition Period and following expiry or termination of the TQ Agreement; and

4.1.3 otherwise to receive and use the Services and the Deliverables and allow any Future Supplier to use the Deliverables; and

4.1.4 to sub-license others to exercise the rights set out in this clause 3.1.

4.2 The Authority agrees that it shall use any Ancillary Materials which fall solely within element (I) of the definition of Ancillary Materials (being “*lists, with contact details, of people contracted by the Supplier to perform or oversee activities which are necessary for the conduct and quality assurance of assessments for the TQ*”) only for the purposes of planning for or executing an Emergency Exit.

5 Licence to the Supplier

5.1 The Authority hereby grants to the Supplier, in respect of the Assigned Rights, a worldwide, royalty free, perpetual and irrevocable non-exclusive licence, with the right to sublicense, to use and exploit the IPR in the Key Materials during and after the Term, but not, save as provided in the TQ Agreement, to use the same as part of a T Level, such licence being subject to clauses 13.13 and 13.14 of the TQ Agreement (which for these purposes shall survive any termination or expiry of the TQ Agreement).

6 Warranties and representations

6.1 The Supplier warrants and represents (on the Effective Date and on any relevant assignment or grant of licence taking effect) that:

6.1.1 it is or will be the sole legal and beneficial owner of, and that it owns all the rights and interests in the Assigned Rights no later than the time for assignment specified in clause 2.1 or when they are assigned in accordance with clause 13.2.1 of the TQ Agreement, save for Assigned Rights other than New IPR, in respect of which it has previously notified the Authority and the Authority has agreed in writing that this warranty shall not apply;

6.1.2 where it is not the sole legal and beneficial owner of the Assigned Rights, including the Assigned Rights which are to be used or embodied in any Key Materials, it has

established that all owners of such rights consent to their assignment and transfer absolutely to the Authority;

- 6.1.3 it has all the necessary right and title to grant all the licences granted to the Authority under this Assignment and Licence and the TQ Agreement;
- 6.1.4 it has not licensed or assigned any of the Assigned Rights other than pursuant to this Assignment and Licence or the TQ Agreement;
- 6.1.5 the Assigned Rights are free from any security interest, option, mortgage, charge or lien;
- 6.1.6 it is unaware of any infringement or likely infringement of any of the Assigned Rights;
- 6.1.7 as far as it is aware, all the Assigned Rights are valid and subsisting and there are and have been no claims, challenges, disputes or proceedings, pending or threatened, in relation to the ownership, validity or use of any of the Assigned Rights;
- 6.1.8 the use of the Key Materials and Ancillary Materials, and exploitation of the Assigned Rights by the Supplier in the provision of the Services and Deliverables or by the Authority in receiving and using the Services and Deliverables or procuring any Replacement Services or by any Future Supplier in Operating any Replacement Services, will not infringe the rights of any third party; and
- 6.1.9 the Key Materials are its original work and have not been copied wholly or substantially from any other source.

7 Indemnity

- 7.1 Subject to clause 19, if there is an IPR Claim, the Supplier indemnifies the Authority against all losses, damages, costs or expenses (including professional fees and fines) incurred as a result.
- 7.2 If an IPR Claim is made or anticipated, the Supplier must at its own expense and the Authority's sole option, either:
 - 7.2.1 obtain for the Authority the rights in clause 2.1 and 3.1 without infringing any Third Party IPR; or

- 7.2.2 replace or modify the relevant item with substitutes that do not infringe IPR without adversely affecting the functionality or performance of the Deliverables.

8 Moral rights

- 8.1 The Supplier shall procure written absolute waivers from all authors of the Key Materials and Ancillary Materials in relation to all their moral rights arising under the Copyright, Designs and Patents Act 1988 in relation to the Key Materials and Ancillary Materials and, as far as is legally possible, any broadly equivalent rights such authors may have in any territory of the world.

9 Ending or extending the Assignment and Licence

- 9.1 This Assignment and Licence ends if terminated by the Authority for any reason set out in this Assignment and Licence.
- 9.2 If any of the following events happen, the Authority has the right to immediately terminate this Assignment and Licence or any of the licences granted under this Assignment and Licence by issuing a Termination Notice to the Supplier (in the latter case specifying the relevant licences):
- 9.2.1 a Default incapable of remedy;
- 9.2.2 a Default capable of remedy that is not corrected within 30 days; and
- 9.2.3 anything occurs which entitles the Authority to terminate the TQ Agreement.

10 Claims against third parties

- 10.1 The Supplier may take any action it considers appropriate or necessary, subject to the Authority's prior written consent, not to be unreasonably withheld or delayed, if there is a breach, other than in connection with the TQ, by a third party of the Authority's rights in any IPR licensed to the Supplier under clause 4, and the Authority agrees to provide all such assistance as the Supplier may reasonably require (subject to meeting the Authority's reasonably agreed costs and expenses and the Supplier hereby indemnifying the Authority in respect of any loss, damage or liability the Authority incurs by reason of any such action).

11 Further assurance

- 11.1 At the Authority's expense the Supplier shall, and shall use all reasonable endeavours to procure that any necessary third party shall, promptly execute and deliver such documents and perform

such acts as may reasonably be required for the purpose of giving full effect to this Assignment and Licence and the TQ Agreement, including:

- 11.1.1 registration of the Authority as applicant or (as applicable) proprietor of the Assigned Rights; and
 - 11.1.2 assisting the Authority in obtaining, defending and enforcing the Assigned Rights, and assisting with any other proceedings which may be brought by or against the Authority against or by any third party relating to the Assigned Rights.
- 11.2 The Supplier appoints the Authority to be its attorney in its name and on its behalf to execute documents, use the Supplier's name and do all things which are necessary or desirable for the Authority to obtain for itself or its nominee the full benefit of this Assignment and Licence.
- 11.3 This power of attorney is irrevocable and is given by way of security to secure the performance of the Supplier's obligations under this Assignment and Licence and the proprietary interest of the Authority in the Assigned Rights and so long as such obligations of the Supplier remain undischarged, or the Authority has such interest, the power may not be revoked by the Supplier, save with the consent of the Authority.
- 11.4 Without prejudice to clause 10.2, the Authority may, in any way it thinks fit and in the name and on behalf of the Supplier:
- 11.4.1 take any action that this Assignment and Licence requires the Supplier to take;
 - 11.4.2 exercise any rights which this Assignment and Licence gives to the Supplier; and
 - 11.4.3 appoint one or more persons to act as substitute attorney(s) for the Supplier and to exercise such of the powers conferred by this power of attorney as the Authority thinks fit and revoke such appointment.
- 11.5 The Supplier undertakes to ratify and confirm everything that the Authority and any substitute attorney does or arranges or purports to do or arrange in good faith in exercise of any power granted under this clause 10.

12 How much each Party can be held responsible for

- 12.1 Each Party's total aggregate liability under this Assignment and Licence (whether in tort, contract or otherwise) for each claim or series of connected claims is no more than £1 million.
- 12.2 No Party is liable to the other for:
 - 12.2.1 any indirect Losses; or
 - 12.2.2 loss of profits, turnover, savings, business opportunities or damage to goodwill (in each case whether direct or indirect).
- 12.3 The limitation of liability set out in clause 11.1 does not apply to either Party in relation to the following:
 - 12.3.1 its liability for death or personal injury caused by its negligence, or that of its employees, agents or subcontractors;
 - 12.3.2 bribery or fraud or fraudulent misrepresentation by it or its employees; or
 - 12.3.3 any liability that cannot be excluded or permitted by Law.
- 12.4 Each Party must use all reasonable endeavours to mitigate any Losses which it suffers under or in connection with this Assignment and Licence, including where any such Losses are covered by an indemnity.
- 12.5 When calculating the Supplier's liability under clause 11.1, Losses covered by Required Insurances will not be taken into consideration.

13 Invalid parts of this Assignment and Licence

- 13.1 If any part of this Assignment and Licence is prohibited by Law or judged by a court to be unlawful, void or unenforceable, it must be removed from this Assignment and Licence as much as required and rendered ineffective as far as possible without affecting the rest of the Assignment and Licence, or whether it is valid or enforceable.

14 No other terms apply

- 14.1 Except as otherwise expressly provided in this Assignment and Licence or in the TQ Agreement, the provisions incorporated into this Assignment and Licence are the entire agreement between the Parties. The Assignment and Licence replaces all previous statements and agreements whether written or oral. No other provisions apply.
- 14.2 Variation of this Assignment and Licence is only effective if agreed in writing and signed by both Parties.

15 Other people's rights in this Assignment and Licence

- 15.1 No third parties may use the Contracts (Rights of Third Parties) Act ("**CRTPA**") to enforce any term of this Assignment and Licence unless stated (referring to CRTPA) in this Assignment and Licence. This does not affect third party rights and remedies that exist independently from CRTPA.

16 Relationships created by this Assignment and Licence

- 16.1 This Assignment and Licence does not create a partnership, joint venture or employment relationship. The Supplier must represent themselves accordingly and ensure others do so.

17 Giving up contract rights

- 17.1 A partial or full waiver or relaxation of the terms of this Assignment and Licence is only valid if it is stated to be a waiver in writing to the other Party.

18 Transferring responsibilities

- 18.1 The Supplier must not assign this Assignment and Licence without Approval.
- 18.2 The Authority can assign, novate or transfer this Assignment and Licence or any part of it to any Crown Body, public or private sector body which performs the functions of the Authority.
- 18.3 The Supplier must enter into a novation agreement in the form that the Authority specifies in order to use its rights under clause 17.2.
- 18.4 The Supplier can terminate this Assignment and Licence if it is novated under clause 17.2 to a private sector body that is experiencing an Insolvency Event.

19 How to communicate about this Assignment and Licence

- 19.1 All notices under this Assignment and Licence must be in writing and are considered effective on the Working Day of delivery as long as delivered before 5:00 pm on a Working Day. Otherwise the notice is effective on the next Working Day. An email is effective when sent unless an error message is received.
- 19.2 Notices to the Authority must be sent to the Authority Authorised Representative's address and email address, and all notices must be copied to the Authority's Head of Commercial Delivery Management [REDACTED] and the Authority's Head of Legal [REDACTED]
- 19.3 This clause does not apply to the service of legal proceedings or any documents in any legal action, arbitration or dispute resolution.

20 Dealing with claims

- 20.1 If a Beneficiary is notified or otherwise becomes aware of a Claim then it must notify the Indemnifier as soon as reasonably practical and no later than 10 Working Days after such notification or date of first awareness.
- 20.2 At the Indemnifier's cost the Beneficiary must both:
- 20.2.1 allow the Indemnifier to conduct all negotiations and proceedings to do with a Claim;
and
 - 20.2.2 give the Indemnifier reasonable assistance with the Claim if requested.
- 20.3 The Beneficiary must not make admissions about the Claim without the prior written consent of the Indemnifier which cannot be unreasonably withheld or delayed.
- 20.4 The Indemnifier must consider and defend the Claim diligently using competent legal advisors and in a way that does not damage the Beneficiary's reputation.
- 20.5 The Indemnifier must not settle or compromise any Claim without the Beneficiary's prior written consent which it must not unreasonably withhold or delay.
- 20.6 Each Beneficiary must take all reasonable steps to minimise and mitigate any losses that it suffers because of the Claim.

20.7 If the Indemnifier pays the Beneficiary money under an indemnity and the Beneficiary later recovers money which is directly related to the Claim, the Beneficiary must immediately repay the Indemnifier the lesser of either:

20.7.1 the sum recovered minus any legitimate amount spent by the Beneficiary when recovering this money; or

20.7.2 the amount the Indemnifier paid the Beneficiary for the Claim.

21 Resolving disputes

21.1 If there is a Dispute, the senior representatives of the Parties who have authority to settle the Dispute will, within 28 days of a written request from the other Party, meet in good faith to resolve the Dispute.

21.2 If the Dispute is not resolved at that meeting, the Parties can attempt to settle it by mediation using the Centre for Effective Dispute Resolution (“CEDR”) Model Mediation Procedure current at the time of the Dispute. If the Parties cannot agree on a mediator, the mediator will be nominated by CEDR. If either Party does not wish to use, or continue to use mediation, or mediation does not resolve the Dispute, the Dispute must be resolved using clauses 20.3 to 20.5.

21.3 Unless the Authority refers the Dispute to arbitration using clause 20.4, the Parties irrevocably agree that the courts of England and Wales have the exclusive jurisdiction to:

21.3.1 determine the Dispute;

21.3.2 grant interim remedies, or any other provisional or protective relief.

21.4 The Supplier agrees that the Authority has the exclusive right to refer any Dispute to be finally resolved by arbitration under the London Court of International Arbitration Rules current at the time of the Dispute. There will be only one arbitrator. The seat or legal place of the arbitration will be London and the proceedings will be in English.

21.5 The Authority has the right to refer a Dispute to arbitration even if the Supplier has started or has attempted to start court proceedings under clause 20.4, unless the Authority has agreed to the court proceedings or participated in them. Even if court proceedings have started, the Parties must do everything necessary to ensure that the court proceedings are stayed in favour of any arbitration proceedings if they are started under clause 20.4.

21.6 The Supplier cannot suspend the performance of this Assignment and Licence during any Dispute.

22 Which law applies

22.1 This Assignment and Licence and any issues arising out of, or connected to it, are governed by English law.

ANNEX

IPR Assurance Certificate

This certificate is given pursuant to clause 13.9 of the agreement (“**Contract**”) between the Institute for Apprenticeships and Technical Education (“**Authority**”) and the supplier named below (“**Supplier**”), and the Intellectual Property Assignment and Licence between the Authority and the Supplier (which also forms Schedule 14 of the Contract) (“**Assignment and Licence**”).

Guidance:

When to complete this certificate: This certificate should be completed in respect of each Deliverable (as defined in the Contract) which is made available to the Authority under the Contract, and a completed certificate should be supplied to the Authority with that Deliverable. This includes updates to existing Deliverables.

Purpose of this certificate: This certificate is intended to confirm that the specific Deliverable fully complies with the intellectual property provisions of the Contract. A copy of the certificate will be retained by the Authority as evidence of the intellectual property position.

Supplier Declaration:

We (being the Supplier named below) confirm that the Deliverable(s) supplied together with (or shortly before or after) this certificate, all elements of which are listed in either Table 1 or Table 2 below⁴, comply with the intellectual property provisions in the Contract, in particular the applicable warranties set out in clause 5 of the Assignment and Licence.

We confirm that the Deliverable(s) either:

- (i) contain no third party intellectual property rights, or
- (ii) contain third party intellectual property rights and we have obtained the consent of the applicable third party:

- in the case of Key Materials, to their assignment and transfer to the Authority; and/or
- in the case of Ancillary Materials, to their licence to the Authority,

in each case on the terms and conditions of the Contract and Assignment and Licence.

We confirm that this certificate overrides any statement or copyright notice forming part of the Deliverable(s) which is in any way inconsistent with this certificate. We agree that this certificate does not detract in any way from the rights granted to the Authority in the Contract.

Key Materials

We confirm that the Deliverable(s) set out in Table 1 below, or the elements of the Deliverable(s) set out in Table 1 below, are Key Materials, as defined in the Contract:

⁴ If, by exception, the Supplier asserts that the Deliverable includes elements which are neither Key Materials nor Ancillary Materials, this should be notified in writing to the Authority prior to the relevant Deliverable being made available to the Authority.

Table 1

Deliverable	Key Materials
[Set out title / description of the Deliverable]	Set out elements which are Key Materials, or confirm "entire Deliverable"
[insert additional rows if required]	

All intellectual property rights in the Deliverable(s), or elements of the Deliverable(s) listed above in Table 1 as Key Materials, have vested or hereby vest in the Authority pursuant to the Assignment and Licence.

Ancillary Materials

We confirm that the Deliverable(s) set out in Table 2 below, or the elements of the Deliverable set out in Table 2 below are Ancillary Materials, as defined in the Contract:

Table 2

Deliverable	Ancillary Materials
[Set out title / description of the Deliverable]	Set out elements which are Ancillary Materials, or confirm "entire Deliverable"
[insert additional rows if required]	

All intellectual property rights in the Deliverable(s), or elements of the Deliverable(s) listed above in Table 2 as Ancillary Materials, are licensed to the Authority on the terms and conditions of and pursuant to the Assignment and Licence.

Signed for and on behalf of the Supplier:

Name

Position

Date

Signed by

Pearson Education Limited

[REDACTED]

[REDACTED]

Signed by

THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION

[REDACTED]

[REDACTED]