

Dated 28 March 2018

**TRANSPORT FOR LONDON** (1)

and

***DMA S.r.l*** (2)

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**CONTRACT number: TfL/CRL/IMV9**

**for the**

**Fit Out and System Integration**

**of the**

**Infrastructure Monitoring Vehicle**

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THIS CONTRACT is made the 28<sup>th</sup> day of March 2018  
BETWEEN:

- (1) **Transport for London**, a statutory corporation established under the Greater London Authority Act 1999 whose principal office is at 55 Broadway London SW1H 0BD (the "**Company**" which expression shall include its successors and assigns); and
- (2) **DMA S.r.l.**, a company registered in Italy under number IT-07376180019 and having its registered office at Via Bottego 8, Torino I-10129, Italy (the "**Supplier**").

## BACKGROUND

- (A) The Supplier carries on the business of providing the Services.
- (B) The Company wishes to buy and the Supplier wishes to provide the Services on the terms and conditions set out in the Contract.
- (C) This Contract may be utilised by the Company or any other member of the TfL Group.

**THIS DEED WITNESSES** as follows:

## 1 Definitions and Interpretation

1.1 In the Contract the following definitions shall have the following meanings:

"**Additional Services**" means services which are requested by the Company to be provided by the Supplier in addition to those set out in the Specification;

"**Agreement**" means this Agreement including the Schedules;

"**Applicable Laws**" means, depending on the context, all or any laws, statutes, proclamations, recommendations, codes of practice, by-laws, directives, Regulations, statutory instruments, rules, orders, rules of court, delegated or subordinate legislation, rules of common law or any European Union legislation (including any declarations of conformity), at any time or from time to time in force in the United Kingdom and which are or may become applicable to the Contract, any agreement or document referred to in the Contract, or for the performance of the Services.

"**ASITE**" means, the Contract Administration Management System provided by the Company;

"**Cessation Plan**" means a plan agreed between the parties or determined by the Company in accordance with Clause 49.1 to give effect to a Declaration of Ineffectiveness.

"**Commencement Date**" means the date specified as such in Schedule 1

**"Company Documents"** means any plans, drawings, documents, handbooks, codes of practice or other information provided by the Company to the Supplier in accordance with the Contract.

**"Company IPRs"** means the Intellectual Property Rights listed in Schedule 6 that the Company owns and/or has a licence in relation to.

**"Company's Representative"** means the person appointed by the Company and named as such in Schedule 1.

**"Competent Authority"** means any legislative, judicial, regulatory or administrative body or agency (or any subdivision of any of them) of the United Kingdom or of the European Union (while the directives, decisions, instructions rulings, law or regulations of such European Union bodies or agencies are enforceable in the United Kingdom) or any supranational body which has rulemaking power or whose directives, decisions, instructions, rulings, laws or regulations are directly enforceable against either of the parties in connection with the performance of the Contract.

**"Completion Date"** means the date specified as such in Schedule 1 or such other date as may be agreed between the parties in accordance with the terms of the Contract.

**"Confidential Information"** means any information given orally or in writing which is a trade or business secret or method; technical know how; personal data which relates to a living individual who can be identified from that information; information relating to any crime, breach of statutory duty or criminal investigations; information relating to the protection of prominent persons, national security, counter-terrorism or other information relating to the provision of police services for any national or international purpose; information relating to the Company's obligations in accordance with sections 118 to 121 of the Railways Act 1993; confidential financial information including but not limited to taxation information and returns to shareholders; and any other information that a party would reasonably expect to be able to protect by virtue of business confidentiality provisions.

**"Consequential Loss"** means in relation to a breach of this Contract or other circumstances in which a party is entitled to recover any costs, expenses or liabilities suffered or incurred, loss of profit, loss of revenue, loss of contract, loss of goodwill and/or other financial loss and whether or not the party who caused the loss knew, or ought to have known, that such loss would be likely to be suffered;

**"Contract"** means this contract made between the Company and the Supplier.

**"Contract Programme"** means the programme set out in Schedule 4 for the provision of the Services or, where no programme is so included or the included programme has subsequently

been revised (and such revisions have been accepted by the Company), the latest programme accepted by the Company pursuant to Clause 4.

**“Contractual Documentation”** means all documentation and information agreed to be delivered by the Supplier in accordance with the Contract including without limitation records, reports, documents, papers, unpatented designs, drawings, data specifications, manufacturing or work processes, the Manuals, testing procedures, relevant computer data and all other technical business and similar information originated by or on behalf of the Supplier in accordance with the Contract.

**“Contract Information”** means (i) the Contract in its entirety (including from time to time agreed changes to the Contract) and (ii) data extracted from the invoices submitted pursuant to Clause 9.1.

**“Contract Price”** means the price stated in Schedule 1.

**“Contract Variation Procedure”** means the procedure set out in Schedule 5.

**“Crossrail Infrastructure”** has the meaning given to that term in Schedule 3.

**“Declaration of Ineffectiveness”** means a declaration of ineffectiveness in relation to the Contract made by a court of competent jurisdiction in accordance with Regulation 99 of the Public Contracts Regulations 2015 (as amended) or Regulation 45(k) of the Utilities Contracts Regulations 2006 (as amended).

**“Defect”** means that the IMV or any item of Goods is defective, damaged, of unsatisfactory quality or not Fit for Purpose whether in consequence of:

- (a) Defective materials, workmanship or design;
- (b) Transit of the IMV or Goods from the Supplier to the Company; or
- (c) Any act or omission of the Supplier during the Defect Rectification Period, and is not principally caused by:
  - (i) Any failure by the Company or any third party appointed by the Company to use, operate or maintain the IMV or Goods in accordance with the Manuals and/or any Applicable Laws and applicable TfL Standards;
  - (ii) Fair wear and tear; or
  - (iii) Vandalism, collision or accidental damage caused by any person other than the Supplier, its Subcontractors or suppliers or the directors, agents, representatives or employees of any of them;

**“Defect Rectification Period”** means (without prejudice to the further provisions of clause 21.4), in relation to the IMV, the period commencing on the date that the IMV has been taken over and ending on the date twelve (12) months thereafter;

**“Delivery Location”** means the location specified in Schedule 1 or such other location as may be notified to the Supplier in writing by the Company’s Representative;

**“Dispute”** has the meaning given to that term in Clause 38.1.

**“Document Control Process”** means the process for formal transmittal of documentation, and including any document naming conventions and version control;

**“Documentation”** means all documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and/or other material produced or supplied by or on behalf of the Supplier in the performance of the Contract and whether in paper form or stored electronically.

**“Equipment Supplier”** means any suppliers with whom the Company has contracted in order to supply Goods.

**“Escrow Agent”** means NCC Group Escrow Limited (Company Number 3081952) or any successor or replacement to all or any of its functions, or any other reputable escrow agent agreed to by the Company;

**“Escrow Agreement”** means an agreement in the form or substantially in the form set out in Schedule 11 (*Form of Escrow Agreement*);

**“Escrow Materials”** means materials as defined in Appendix 1 of Schedule 11

**“Excepted Liabilities”** means the liability of the Supplier for:

- (a) death or personal injury;
- (b) any Liquidated Damages payable;
- (c) rectification of any defect, damage or failure pursuant to Clause 21.4;
- (d) Losses against which the Supplier is entitled to an indemnity under any policy of insurance (or would have been entitled but for any breach or failure to maintain such insurance);
- (e) Losses against which the Company is indemnified under Clause 22.10;
- (f) Losses caused by fraudulent acts or acts of a criminal nature; and
- (g) Losses caused by the Supplier committing a Prohibited Act or Safety Breach.

**“Excess Costs”** has the meaning given to that term in Clause 23.5.

**“Expected Delivery Date”** means the date(s) set out in Schedule 1 upon which the integrated Goods or any part of them are to be delivered by the Supplier to the Company, and which includes the Completion Date and any Key Dates;

**“Extended Term”** means the period specified as such in Schedule 1 to this Contract.

**“Existing Contracts”** means any and all contracts, whether current, expired or terminated, pursuant to which goods or services have been supplied or provided by the Supplier (in the capacity of contractor or subcontractor) to the Company or any member of the TfL Group.

**“Final Acceptance”** means that the IMV complies with the Final Acceptance Criteria as evidenced by and occurring upon the issue of a Final Acceptance Certificate for the IMV;

**“Final Acceptance Criteria”** means the criteria defined in clause 52.6.2;

**“Final Acceptance Certificate”** means a certificate in the form or substantially in the form set out in Schedule 12, Part C (*Form of Final Acceptance Certificate*);

**“Final Acceptance Longstop Date”** means the date specified in the Contract particulars;

**“Fit for Purpose”** means, in relation to the IMV or any item of Goods to be provided under this Agreement:

- (a) That it complies with all requirements and provisions of this Agreement including the Specification;
- (b) That it complies with all Applicable Laws, Relevant Consents and applicable TfL Standards and, to the extent that there is non-compliance with an applicable TfL Standard, that there is a valid derogation from that TfL Standard;

**“Force Majeure Event”** means any of the following (or any circumstances arising as a consequence of any of the following) if and only to the extent that such event or circumstances is or are not caused by, and their effects are beyond the reasonable control of, a party affected by such an event or circumstances and which have an adverse effect on the party affected by such an event or circumstances and such party's ability to perform its obligations under the Contract and is not an event or circumstances (i) whose effect the party affected by such an event is otherwise required to avoid or provide against (other than by way of insurance) under the Contract or (ii) which the party affected by such an event could reasonably have avoided or provided against:

- (a) war, invasions, acts of foreign enemies, hostilities (whether war be declared or undeclared), civil war, rebellion, revolutions, insurrection, military or usurped power, confiscation, or requisition by or under the order of any government or public or local authority;
- (b) civil unrest;

- (c) any act of terrorism or a specific threat of terrorism which results in the partial or total, temporary or long term closure of the Crossrail Infrastructure;
- (d) lightning, earthquake or subject to (f) below, extraordinary storm;
- (e) fire;
- (f) flooding, other than flooding caused by rising water table or by weather conditions (including extraordinary storm);
- (g) tunnel collapse;
- (h) compliance with the provision of sections 118 to 121 of the Railways Act 1993;
- (i) nuclear, chemical or biological contamination including ionizing radiation or contamination by radioactivity from any nuclear fuel or nuclear waste from the combustion of nuclear fuel or radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
- (j) the discovery of fossils, antiquities or other material which in each case is required to be exhumed or unexploded bombs; and
- (k) strikes, lock outs or other industrial action being in each case industry-wide.

**"Goods"** means the various pieces of equipment which shall be integrated and fitted to the Transport Wagon together with all required fittings, housings and systems so as to meet the requirements of the Specification.

**"Greater London"** has the meaning ascribed to it in the GLA Act.

**"Greater London Authority Act"** or **"GLA Act"** means the Greater London Authority Act 1999 relating to the formation of the Greater London Authority.

**"Infrastructure Manager"** has the meaning ascribed to it in the Railways Act 1993 and the Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016.

**"Infrastructure Monitoring Vehicle (IMV)"**: means the vehicle ("Transport Wagon"), modified by the Supplier in accordance with the Specification;

**"Infrastructure Tests"** means the infrastructure tests identified in the Specification to be carried out by the Supplier in accordance with the Technical Assurance Plan;

**"Infrastructure Testing Deliverables"** means the infrastructure testing deliverables specified in the Contract Particulars;

**"Insolvency Event"** in relation to any person means:

- (a) such person stopping or suspending or threatening to stop or suspend payment of all or a material part of its debts, or becoming unable to pay its debts, or being deemed unable to pay its debts under sections 123(1) or (2) of the Insolvency Act 1986;
- (b) any step being taken by any person with a view to the winding up of such person or any person presenting a winding-up petition in respect of such person which is not dismissed within seven (7) days;
- (c) any step being taken to enforce security over or a distress execution or other similar process being levied or served out against the whole or a substantial part of the assets or undertaking of such person;
- (d) a receiver, administrative receiver, administrator, compulsory manager or other similar officer being appointed in respect of such person;
- (e) such person ceasing or threatening to cease to carry on all or a material part of its business, except for the purpose of and followed by a reconstruction, amalgamation, reorganisation, merger or consolidation on terms approved by the Company (in its absolute discretion) before that step is taken;
- (f) the making by such person of a general assignment or an arrangement or composition with or for the benefit of creditors; or
- (g) any event occurring which, under the laws of any relevant jurisdiction other than England and Wales, has an analogous or equivalent effect to any of the events listed above.

**"Intellectual Property Rights"** means any intellectual property rights in any part of the world and includes but is not limited to all rights to, and interests in, any patents (including supplementary protection certificates), designs, trade-marks, service marks, trade and business names and get up, moral rights, domain names, copyright and neighbouring rights, databases, semi-conductors, know how, knowledge, trade secrets and any other proprietary rights or forms of intellectual property (protectable by registration or not) whether registered or not in respect of any technology, technique, concept, idea, style, scheme, formula, system, logo, mark or other matter or thing, existing or conceived, used, developed or produced by any person, together with all applications and rights to apply for registration or protection of such rights, Confidential Information relating to those rights, material embodying those rights and in each case rights of a similar or corresponding character.

**"Key Date"** means a date, stated as such in Schedule 1;

**"Key Personnel"** means Supplier Personnel identified as such in Schedule 1 and any changes to the same that are made in accordance with Clause 18.

"**Liability Cap**" has the meaning given to that term in Clause 25.9.

"**Liquidated Damages**" means the payments to be made by the Supplier to the Company in accordance with Clause 51.2.3 (Delivery) and Clause 10.1 (Performance).

"**London Living Wage**" means the basic hourly wage (before tax, other deduction and any increase for overtime) as may be revised from time to time by the Mayor or any other relevant Competent Authority.

"**Losses**" means any expense, liability, loss, claims, fines, damages, costs (including reasonable legal and other professional fees and disbursements), penalties, settlements and judgments incurred by the Company, its employees or agents (which, for the avoidance of doubt, shall include a Replacement Employer).

"**Manuals**" means documents which fully describe how (following the Supplier's performance of the Services) the integrated Goods should be operated, serviced, maintained, dismantled, reassembled, repaired and overhauled.

"**Mayor**" means the person from time to time holding the office of Mayor of London as established by the GLA Act.

"**Milestone**" means the achievement of each of the stages in the provision of the Services, in each case as more particular set out in the table at Schedule 2.

"**Milestone Payment**" has the meaning given to that term in Clause 9.2.

"**Nominated Representatives**" has the meaning given to that term in Clause 38.2.

"**Notice to Proceed**" has the meaning given to that term in Clause 23.7(b).

"**Notified National Technical Rules**" means those rules or standards notified by the Secretary of State for Transport to the European Commission in accordance with Directive 2008/57/EC on the interoperability of the rail system within the community.

"**Operator**" means a person with statutory duties to provide or secure the provision for Greater London of public passenger services by railway or a person who secures the provision of such services through appropriate contractual arrangements.

"**Payment Application**" has the meaning given to that term in Clause 9.1.

"**Performance Breach**" has the meaning given to that term in the Performance Management Regime.

**"Performance Management Regime"** means the performance management regime set out in Appendix 2.

**"Performance Period"** has the meaning given to that term in the Performance Management Regime.

**"Performance Period Targets"** means the targets specified in the Performance Management Regime.

**"Permitted Delay Event"** has the meaning given to that term in Clause 26.2.2.

**"Persistent Breach"** has the meaning given to that term in Clause 23.12.

**"Plasser"** means Plasser UK Limited (registered no: 652432) a company incorporated under the laws of England and Wales whose registered office is at Manor Road, London, W13 0PP, and which shall include any subcontractors or subsidiaries (and specifically Robel GmbH);

**"Prohibited Act"** means:

- (a) offering or agreeing to give to any servant, employee, officer or agent of the Company any gift or consideration of any kind as an inducement or reward:
  - (i) for doing or not doing (or having done or not having done) any act in relation to the obtaining or performance of the Contract or any other contract with the Company; or
  - (ii) for showing or not showing favour or disfavour to any person in relation to the Contract or any other contract with the Company; or
- (b) entering into the Contract or any other contract with the Company with which commission has been paid or has been agreed to be paid by the Supplier or on its behalf or to its knowledge unless, before the Contract is entered into, particulars of any such commission and of the terms and conditions of any such contract for the payment thereof have been disclosed in writing to the Company; or
- (c) committing an offence:
  - (iii) under the Bribery Act 2010;
  - (iv) under legislation creating offences in respect of fraudulent acts; or
  - (v) at common law in respect of fraudulent acts,in relation to the Contract or any other contract with the Company; or

(d) defrauding or attempting to defraud the Company.

**"Public Procurement Termination Event"** means:

- (a) this Contract has been subject to any substantial modification that would require a new procurement procedure in accordance with Regulation 72(9) of the Public Contracts Regulations 2015; or
- (b) the Company determines that this Contract should not have been awarded to the Supplier in view of a serious infringement of the obligations contained under the EU Treaties and Directive 2014/24/EU of the European Parliament Council dated 26 February 2014.

**"Qualified Take Over Certificate"** or **"QTOC"** means a certificate in the form or substantially in the form set out in Schedule 12, Part A (*Form of Qualified Takeover Certificate*);

**"Railway Group Standards"** means, to the extent applicable to the Services, those standards to which railway assets or equipment used on or as part of railway assets must conform, and operating procedures with which the purchasers of railway assets must comply, in each case as prepared and updated by the Rail Safety and Standards Board.

**"Recurrent Defect"** means any particular defect in the IMV that occurs more than twice in a consecutive 6 month period;

**"Regulations"** includes any regulation, rule, official directive, request or guideline (whether or not having the force of law) of any governmental, intergovernmental or supranational body, agency, department or regulatory, self-regulatory or other authority or organisation.

**"Relevant Consents"** has the meaning ascribed to it in clause 3.6;

**"Responsible Procurement Policy"** means the policy document entitled the "GLA Group Responsible Procurement Policy" dated March 2006, updated in January 2008 (see Appendix 1) and as may be amended.

**"Safety Breach"** means a material breach of any obligation under the Contract caused by the gross incompetence of or wilful default by the Supplier (or anyone employed by or acting on behalf of the Supplier) or any of its agents which has materially affected the safe operation of the Crossrail Infrastructure or the safety of the Company's customers, staff or any other person.

**"Service Cessation"** means the Completion Date or any other cessation of the Services or part thereof.

**"Services"** means the services stated in the Specification to be performed by the Supplier and any Additional Services.

**"Software"** means software used for the performance of the Services, as may be developed, enhanced, modified, adapted, altered or updated from time to time.

**"Source Code"** means the source code version of any Supplier-owned Software in a form capable of being read and interpreted by humans, together with related interpretative documentation and material.

**"Spares"** means any spare parts of any description including fluids, parts and assemblies required in connection with the Goods supplied or to be supplied by the Supplier or any Subcontractor under this Agreement;

**"Special Tools"** means any special tools required in connection with the Goods supplied or to be supplied by the Supplier or any Subcontractor under this Agreement;

**"Specification"** means the description of the services to be provided by the Supplier in accordance with the Contract, where the specification is located as defined in Schedule 1.

**"Standards"** means all the laws, rules, regulations, recommendations and instructions, including guidance, codes of practice and conduct which have the force of law or with which it is generally accepted within the United Kingdom rail industry that it is good practice to comply, relating to the performance of this Contract and/or applicable to the Services which are or have been issued by the Secretary of State for Transport, Network Rail, the Office of Rail and Road, the Rail Safety and Standards Board, or any other Competent Authority or other person from time to time legally authorised to set standards in respect of the rail industry including the European Railway Agency and shall include Railway Group Standards, Notified National Technical Rules and Technical Specifications for Interoperability.

**"Supplier Public Procurement Termination Event"** means the Supplier has, as at the Commencement Date, been in one of the situations referred to in Regulation 57(1) of the Public Contracts Regulations 2015 and should therefore have been excluded from the procurement procedure in accordance with those regulations.

**"Supplier's Representative"** means the person appointed by the Supplier and named as such in Schedule 1.

**"Take Over"** means:

- (a) In respect of the IMV, that the IMV complies fully with the Take Over Criteria as evidenced by and occurring upon the issue by the Company's Representative of a TOC for the IMV; and
- (b) In respect of any other item of Goods, that it has been delivered to the Company in accordance with the provisions of this Agreement;

**“Take Over Certificate” or “TOC”** means a certificate in the form or substantially in the form set out in Schedule 12, Part B (*Form of Take Over Certificate*);

**“Take Over Criteria”** has the meaning given in Clause 52.4.1;

**“Technical Assurance Plan” or “TAP”** means the plan as defined in Schedule 3A of the Specification;

**“Technical Specifications for Interoperability”** means the Technical Specifications for Interoperability adopted pursuant to EU Directive 2001/16/EC.

**“Term”** means the period specified as such in Schedule 1 to this Contract.

**“TfL Group”** means the Company and all of its subsidiaries and their subsidiaries (as defined in Section 1159 of the Companies Act 2006) from time to time, together with Crossrail Limited (company number 04212657) and reference to any **“member of the TfL Group”** refers to the Company or any such subsidiary.

**“Training Services”** means any training services stated in the Specification or elsewhere within this Agreement to be provided by the Supplier;

**“Transport Wagon”** means the rail wagon manufactured by Plasser;

**“Transparency Commitment”** means the transparency commitment stipulated by the UK government in May 2010 (including any subsequent legislation) in accordance with which the Company is committed to publishing its contracts, tender documents and data from invoices received.

**“VAT”** means value added tax as provided for in the Value Added Tax Act 1994 and legislation (whether delegated or otherwise) supplemental thereto, or in any primary or secondary legislation promulgated by the European Union or any official body or agency of the European Union (while such legislation is enforceable in the United Kingdom), and any similar sales, consumption or turnover tax replacing or introduced in addition to the foregoing.

**“Variation”** means any addition, omission or other change whatsoever to or in respect of this Agreement including to the Specification, the Contract Programme and/or any other technical requirement contained in this Agreement;

**“Variation Order”** means the written authorisation from the Company to a Variation Proposal in accordance with the Contract Variation Procedure.

**“Variation Proposal”** means the written proposal put by the Company or the Supplier to vary the Contract in accordance with the Contract Variation Procedure as set out in Schedule 5.

**“Working Day”** means any day of the week (other than Saturday or Sunday) which is not an English bank holiday, or public holiday.

- 1.2** The headings in the Contract are only for convenience and shall not affect its interpretation.
- 1.3** Where appropriate, the singular includes the plural and vice versa.
- 1.4** A reference to a Clause or a Schedule shall be to a Clause of or, as the case may be, a Schedule to, the Contract and references to the Contract include its recitals and Schedules.
- 1.5** References to (or to any specified provision of) the Contract or any other document shall be construed as references to the Contract, that provision or that document as in force for the time being and as from time to time amended in accordance with the terms of the Contract.
- 1.6** Reference to any Applicable Laws and Standards also includes a reference to the Applicable Laws and Standards as from time to time amended, extended or re-enacted.
- 1.7** References to the **“Company”** shall include its successors, transferees and assignees.
- 1.8** References to a person, firm or company shall include any individual company, unincorporated association or body (including a partnership or joint venture) or other entity whether or not having a separate legal personality.
- 1.9** References to "includes" or "including" shall mean "includes without limitation" or "including without limitation".
- 1.10** In the event that a conflict, ambiguity or inconsistency exists between the documents comprising the Contract, the order of priority for the purpose of construction in descending order shall be:
- (a) the Clauses of the Contract;
  - (b) the Schedules to the Contract (equal priority, but subject to Clause 1.11); and
  - (c) any other document referred to in, or incorporated by reference into, the Contract.
- 1.11** The documents that make up the Schedules shall be taken as being mutually explanatory of one another. In the event of any conflict between any provision of the Clauses of the Contract and a provision of any other Schedule then the Clauses of the Contract shall take precedence except where the conflicting part of the other Schedule is explicitly expressed to take precedence over any specific part of the Clauses of the Contract.
- 1.12** Communication
- The Company will use the ASITE Contract Administration Management System ("ASITE") in order to support the commercial administration of this Agreement.

- (a) the Parties shall use ASITE for all notices required to be issued under this Agreement, including Variation Quotes, Variation Valuations and payment applications made by the Supplier;
- (b) the Company shall provide the Supplier with access to ASITE at no cost to the Supplier; and
- (c) the Company shall provide the Supplier with training on how to use ASITE if required.

The Company may additionally use ASITE to support the technical, take-over and assurance processes; in this case the use of ASITE will be in addition to any Document Control Process that may need to be followed.

## **2 Duration**

- 2.1** The Contract shall commence on the Commencement Date and shall be performed by the Supplier in accordance with the terms of the Contract (save in the event of earlier termination) and shall continue for the Term, or for any Extended Term.
- 2.2** Not used.

## **3 Supplier's Primary Obligations**

- 3.1** The Supplier shall provide the Services to the Company in accordance with the terms of the Contract.
- 3.2** The Supplier shall ensure and warrants to the Company that the Services will:
  - (a) be performed by appropriately qualified and trained personnel exercising the highest standard of diligence, care and skill;
  - (b) be performed in accordance with the Contract Programme;
  - (c) conform to all Applicable Laws (including but not limited to any law and regulations applicable to the Company or the Crossrail Infrastructure);
  - (d) comply with all Standards and any additional standards listed in the Specification; and
  - (e) comply with the requirements of the Company set out in the Contract and all lawful and reasonable directions of the Company.
- 3.3** The Supplier warrants to the Company that it has entered into and executed the Contract by its duly authorised representatives in accordance with all procedures required by its governing laws and contractual documents.

- 3.4** The Supplier warrants to the Company that it has the right to grant to the Company and any member of the Tfl Group all licences (including without limitation all rights to sub-licence) of all and any Intellectual Property Rights as contemplated in this Contract.
- 3.5** The Supplier shall perform its obligations under the Contract in accordance with the requirements of the ISO 9000 and ISO 14000 series as appropriate to the provision of the Services, or any equivalent international quality assurance standards as may be accepted as an alternative in the absolute discretion of the Company.
- 3.6** It shall be the responsibility of the Supplier to obtain, at its cost, all necessary approvals, licences, permits and consents in relation to the performance of the Services, including, but not limited to, those required by any Applicable Laws and Standards.
- 3.7** Unless otherwise stated in the Contract, the Supplier shall provide all equipment, support services and other facilities necessary for the performance of its obligations under the Contract.
- 3.8** For the avoidance of doubt, neither a communication from the Company nor the review or acceptance of the Services waives, limits or amends in any way any warranties, liabilities or responsibilities of the Supplier under this Contract.
- 3.9** The Supplier shall be responsible for the accuracy of all Contractual Documentation and shall pay the Company any extra costs occasioned by any discrepancies, errors or omissions therein. The Supplier shall at its own expense carry out any alterations or remedial work necessitated by such errors, omissions or discrepancies and modify the relevant documents or information accordingly.

## **4 Contract Programme**

### **4.1 Contract Programme**

- 4.1.1** If a programme is not included in Schedule 4, the Supplier shall within the period stated in Schedule 1 submit a programme to the Company for acceptance showing:
- (a) the Commencement Date and the Completion Date;
  - (b) the sequence and timing of activities by which the Supplier proposes to carry out the Services (including integration, testing and delivery) and any Additional Services;
  - (c) the respective dates for submission by the Supplier of the Manuals and any other Contractual Documentation for approval thereof by the Company;
  - (d) the dates by which, in order to carry out the Services, the Supplier will need (to the extent provided for under this Contract):
    - (i) access to the Company's premises or access to Plasser's premises;

(ii) any materials, drawings, information or other things to be provided by the Company;  
and

(e) any other information which the Specification requires the Supplier to show on the Contract Programme, including any information set out in Schedule 1.

**4.1.2** The Supplier undertakes to carry out the Services in a regular and diligent manner and in accordance with the Contract Programme.

## **4.2 Form of Contract Programme**

**4.2.1** The Contract Programme shall be in such form as may be specified in Schedule 1 or, if not so specified, as may reasonably be required by the Company.

## **4.3 Acceptance of programme**

**4.3.1** The Company's Representative shall either accept a programme (or any revised programme submitted pursuant to Clause 4.5) or notify the Supplier of its reasons for not accepting the programme may include:

- (a) the Supplier's plans shown on it are not practicable;
- (b) it does not show the information that this Contract requires;
- (c) it does not represent the Supplier's plans realistically; or
- (d) it does not comply with the Specification.

**4.3.2** The Company's acceptance of the programme shall not relieve the Supplier of any of its obligations under this Contract.

## **4.4 Alterations to Contract Programme**

The Supplier must not without the Company's prior written consent make any alteration to the Contract Programme.

## **4.5 Revision of Contract Programme**

The Supplier must submit a revised programme to the Company for acceptance every four (4) weeks from the Commencement Date.

# **5 Records and Audit**

**5.1** The Supplier shall, and shall procure that its subcontractors shall, maintain a true and correct set of records including personnel records relating to all aspects of their performance of the Contract

and all transactions related to the Contract. For the avoidance of doubt, such records shall include but are not limited to:

- (a) all necessary information for the evaluation of claims or variations;
- (b) subcontract files (including proposals of successful and unsuccessful bidders, bids, rebids etc);
- (c) variation and claims files (including documentation covering negotiated settlements);
- (d) detailed inspection records; and
- (e) such materials prepared in relation to the invitation to tender and subsequent tendering process relating to cost breakdowns, reconciliations against final tender pricing and project plans, in each case which have not already been provided to the Company.

**5.2** The Supplier agrees, and shall procure that its subcontractors agree, to retain all such records in such a manner as the Company may reasonably instruct for a period of not less than twelve (12) years after completion of performance under the Contract. In the absence of specific instructions as to the method of storage, the Supplier shall retain his records in an orderly and logical fashion.

**5.3** Subject to reasonable notice including a written agenda of activities, the Company and its authorised representatives shall have the right to inspect and audit any of the records referred to in Clause 5.1 at any time during the period referred to in Clause 5.2.

**5.4** The Supplier shall promptly provide all reasonable co-operation in relation to any audit or check including, to the extent reasonably possible in each particular circumstance:

- (a) granting or procuring the grant of access to any premises used in performance of the Contract, whether the Supplier's own premises or otherwise;
- (b) granting or procuring the grant of access to any equipment (including all computer hardware, software and databases) used (whether exclusively or non-exclusively) in the performance of the Supplier's obligations under the Contract, wherever situated and whether the Supplier's own equipment or otherwise;
- (c) making any contracts and other documents and records required to be maintained under the Contract available for inspection;
- (d) providing a reasonable number of copies of any contracts and other documents or records reasonably required by the Company's auditor and/or granting copying facilities to the Company's auditor for the purposes of making such copies; and

- (e) complying with the Company's reasonable requests for access to senior personnel engaged in the Supplier's performance of the Contract.

- 5.5 The Supplier shall maintain an effective and economical programme for monitoring and maintaining product quality, planned and developed in conjunction with any other functions of the Supplier necessary to satisfy the Contract requirements.
- 5.6 The Supplier shall permit the Company's authorised representatives access and facilities (as required and when notified) for the purpose of systems and product quality audits including but not limited to access to documentation showing results of testing and inspection, certificates of conformance and safety-related documents. The Supplier shall provide the Company with a copy of any or all of the records listed in Clause 5.1, free of charge within thirty (30) days of the Company's request for the same.
- 5.7 The Supplier shall, and shall ensure that any subcontractor or sub-supplier shall ensure that appropriate security systems are in place to prevent unauthorised access to, extraction of, or alteration to, data during any audit undertaken pursuant to the Contract.

## **6 Company's Obligations**

- 6.1 The Company shall pay the Supplier the Contract Price for the Services in accordance with the terms of the Contract.
- 6.2 Payment of the Contract Price shall not affect any claims or rights which the Company may have against the Supplier and shall not be an admission by the Company that the Supplier has performed its obligations under the Contract properly.
- 6.3 The Company shall provide to the Supplier:
  - (a) the Goods; and
  - (b) the Transport Wagonto enable the Supplier to perform the Services.
- 6.4 The Contract is not an exclusive arrangement and nothing in the Contract operates to prevent the Company from engaging any other organisation or person to perform services similar to, or the same as, the Services.

## **7 Additional Services**

The Company may, at any time during the term of the Contract, request the Supplier to provide a quotation for the supply of Additional Services in accordance with the Contract Variation Procedure. If a Variation Order is made in respect of such Additional Services, then the price and

completion date will be amended accordingly, and which amendment will be done using the ASITE contract administration system.

## 8 Variation

- 8.1 Unless the parties agree otherwise in writing, any variation to the Contract shall be made under the Contract Variation Procedure.
- 8.2 The Supplier shall not proceed to implement any variation unless there has been a Variation Order which will be done using the ASITE contract administration system.

## 9 Price and Payment

- 9.1 Each Milestone Payment shall be sequential and no Milestone Payment shall be due to the Supplier unless and until:

- (a) if no programme is included in Schedule 4, the Supplier has submitted an initial programme to the Company's Representative showing the information required under Clause 4.1.1 and which is capable of acceptance in accordance with Clause 4.3.1; and
- (b) (if required under this Contract) a bond and/or parent company guarantee are in place in accordance with Clause 43.1.

- 9.2 On completion of each Milestone, the Supplier shall submit a payment application for:

- (a) the amount set out against the relevant Milestone, setting out in reasonable detail a description of the Milestone achieved; and
- (b) any amounts due in respect of any properly completed variation (or, where the parties have agreed that a variation shall be paid on a sectional basis, in respect of any properly completed section of the variation) provided that the Supplier's payment application sets out the details and value of any variation payment being sought,

to the Company's Representative (a "**Payment Application**"). Each Payment Application shall specify the sum that the Supplier considers will become due on the payment due date (the "**Milestone Payment**"). The Supplier shall submit any supporting documents that are reasonably necessary to enable the Company's Representative to check the Payment Application.

- 9.3 The Company's Representative shall assess and verify the Payment Application in a timely manner and shall notify the Supplier in writing not later than seven (7) days after the date of receiving the Payment Application of:

- (a) the Milestone Payment that the Company's Representative considers to be due at the payment due date; and

(b) details of how the Milestone Payment has been assessed.

(a "**Payment Certification**"). Where the Company fails to comply with its obligations under this Clause 9.3 and there is an undue delay in considering and verifying the Payment Application, the Payment Certification shall be regarded as issued for the purposes of Clause 9.4 after a reasonable time has passed.

The Company shall have the right to deduct any Liquidated Damages due, having notified the Supplier of the intention to deduct such Liquidated Damages and providing the Supplier with evidence for, and value of, the damages. Liquidated Damages shall be treated in compliance with current VAT tax legislation.

**9.4** Within seven (7) days of receipt of a Payment Certification the Supplier shall issue a VAT invoice for the amount of the relevant Milestone Payment, accompanied by a copy of the relevant Payment Certification to the Company. The final date for payment of such VAT invoice shall be ten (10) days after the date on which the Company's Representative received such VAT invoice.

**9.5** The Contract Price shall be fixed and inclusive of all expenses and disbursements.

**9.6** The Contract Price shall not include VAT and, to the extent that such VAT is properly chargeable, it shall be charged at the rate in force on the date of the Payment Application and will be shown as a separate item on all Payment Applications. The Contract Price for the Services shall only be changed in accordance with the Contract Variation Procedure.

**9.7** In addition to any other rights of the Company whether at law or equity under this Contract, whenever under or arising out of this Contract or any other contract between the Company and the Supplier:

(a) any sum of money is recoverable from or payable by the Supplier; or

(b) any Losses are reasonably and properly owed to, or incurred by, the Company or any member of the Tfl Group,

then the same may be set-off against and/or deducted and/or withheld from any sum then due or which at any time thereafter may become due to the Supplier under this Contract.

**9.8** All Payment Applications shall clearly show any associated Variation Order. Supporting documentary information shall be submitted to the Company's Representative for all Payment Applications submitted by the Supplier. The Company's Representative shall from time to time agree with the Supplier the detailed information required in relation to all such Payment Applications and the Supplier shall provide such information as is reasonably required.

**9.9** All sums payable to the Company by the Supplier under the Contract shall be paid in full, free of any present or future taxes, levies, duties, charges, fees or withholdings and without any

deduction, restriction, conditions, withholding, set-off or counterclaim whatsoever; and if the Supplier is compelled by law to make any deduction or withholding, the Supplier shall gross up the payment so that the net sum received by the Company will be equal to the full amount which the Company would have received had no such deduction or withholding been made.

## **10 Supplier Performance**

- 10.1** The Supplier shall provide the Services in accordance with the requirements of the Performance Management Regime.
- 10.2** If the Supplier fails to comply with its obligations under Clause 10.1 then:
- (a) the Supplier shall pay Liquidated Damages to the Company, calculated in accordance with the Performance Management Regime and payable in accordance with Clause 9; and
  - (b) Not Used.
- 10.3** The Company and the Supplier acknowledge and agree that the amount of Liquidated Damages under the Contract:
- (a) serves to protect the Company's legitimate business interests, including the need to have the Services performed on-time and to the correct standard; and
  - (b) constitutes a genuine pre-estimate of the loss that would be suffered by the Company as a result of the Supplier's failure to perform the Services in accordance with the Performance Management Regime.

## **11 Access and Time for Performance of the Services**

- 11.1** The Company shall give the Supplier access to the parts of the Crossrail Infrastructure required for the performance of the Services in accordance with the provisions of this Clause 11.
- 11.2** Subject to the provisions of Clause 11, the Company shall use reasonable endeavours to give access to such parts of the Crossrail Infrastructure to the Supplier on the dates and times on which it has stated that it requires such access in accordance with the Contract Programme.
- 11.3** The Supplier acknowledges that the Company does not guarantee uninterrupted or exclusive possession to any parts of the Crossrail Infrastructure and that its access to some parts of the Crossrail Infrastructure may be limited in accordance with the Contract.
- 11.4** Where the Supplier requires access to the Crossrail Infrastructure to carry out the Services, it shall:
- (a) apply for access at the earliest available opportunity; and

- (b) provide the Company's Representative without delay with such additional information as the Company's Representative may reasonably require in respect of the Supplier's access requests.

- 11.5** The Company shall confirm access bookings in accordance with this Clause 11. The Company does not warrant or guarantee to the Supplier that such access will be granted. If any request for access is rejected, the Company shall advise the Supplier and agree with the Supplier alternative dates for resubmission. The rejection of an access request shall not entitle the Supplier to an extension of time.
- 11.6** If the Supplier fails to apply for access in accordance with this Clause 11, the Company shall not be liable for any delays or costs arising and the Supplier shall be responsible for any failure to comply with the terms of the Contract.
- 11.7** The Supplier shall as soon as practicable, take all steps to avoid, overcome or minimise the cancellation or alteration of approved access.
- 11.8** If the Supplier fails to use any booked access, for whatever reason, it shall within twenty-four (24) hours report each instance to the Company's Representative setting out all details including the part of the Crossrail Infrastructure affected, the duration of any delay and the reasons for the delay or cancellation so far as the Supplier is aware.
- 11.9** The Supplier shall ensure that all booked access is used efficiently with minimal disruption and disturbance to others or damage to the Crossrail Infrastructure. The Supplier shall make good any such damage at its own cost at the earliest opportunity and to the reasonable satisfaction of the Company's Representative.
- 11.10** The Supplier shall indemnify and keep indemnified the Company in respect of any claims by third parties relating to the disruption, delay or cancellation of their access due to the actions or omissions of the Supplier.
- 11.11** Prior to returning any part of the Crossrail Infrastructure to the Company at the end of any period of booked access, the Supplier shall clear away and remove all of its facilities, plant, equipment, rubbish and surplus goods and materials and shall leave that part of the Crossrail Infrastructure in a clean and workmanlike condition to the satisfaction of the Company's Representative.
- 11.12** If the Supplier fails to comply with the requirements of Clause 11.11 within such reasonable time as may be allowed by the Company's Representative, then the Company may dispose of those items as the Company sees fit and at the Supplier's cost, which cost if met by the Company shall become a debt due from the Supplier to the Company and is deductible or recoverable by the Company from any monies due or which may become due to the Supplier under this Contract.

- 11.13** Where the Supplier is denied booked access to any part of the Crossrail Infrastructure, through no fault of the Supplier, this shall be considered a Permitted Delay Event per Clause 26.2.
- 11.14** Without limiting any other remedy, if the Services are not performed in accordance with this Contract then the Company shall be entitled to require the Supplier to re-perform the services in accordance with the Contract at no extra cost within five (5) Working Days.
- 11.15** The Supplier shall ensure that the Services are satisfactorily completed by the Completion Date. The time of the performance of the Services shall be of the essence of the Contract.

## **12 Work on Company's Sites**

- 12.1** During the term of the Contract, the Supplier shall:
- (a) ensure the personnel used in the provision of the Services are competent, properly trained and supervised and hold appropriate qualifications or certifications in accordance with any Applicable Laws and Standards;
  - (b) ensure that all employees and agents of the Supplier including any of the Supplier's subcontractors working on the Company's or third parties' sites comply with the sites' local safety arrangements and undergo any relevant induction or training necessary and comply with all reasonable instructions of the Company or third party;
  - (c) notwithstanding the terms of Clause 12.1(d), accept full responsibility for its subcontractors and ensure that such subcontractors adhere to the terms and conditions of the Contract;
  - (d) supply the Company with a list of all personnel working on the Company's or third parties' site and notify the Company in writing of any changes to the identity of such personnel within one (1) Working Day of such change taking place;
  - (e) ensure that no employees or agents of the Supplier including any of the Supplier's subcontractors use the Company's or a third parties' site equipment without the prior written consent of the Company or the relevant third party;
  - (f) carry out the Services in such a manner as not to endanger or interfere in any way with the railway, the Company or any railway operator. The Supplier shall strictly observe all rules and regulations set out or referred to in the Contract and any further instructions, rules and regulations which it may from time to time receive from the Company's Representative for the working, protection and return of the railway or for the protection of persons on or adjacent to the railway; and

- (g) attend the Company or any third party in order to advise on the effects of the Supplier's actions or proposed actions in respect to the Services on the integrity and/or functionality of any other aspect of the railway.

**12.2** Without prejudice to Clauses 12.1(a) to (g) the parties shall co-operate with one another and act reasonably and in good faith in and about the performance of their respective obligations and the exercise of their respective rights under the Contract.

**13 Not used**

**14 Not used**

**15 Safety**

**15.1** The Supplier shall not endanger in any manner the health and safety of, or unreasonably interfere with the proper performance of the duties of, the Company's employees or third parties or otherwise expose the Company to liability under any Applicable Laws and Standards, including (without limitation) the Health and Safety at Work etc. Act 1974, the Transport and Works Act 1992, or any statutory modifications or re-enactments thereof.

**15.2** The Supplier shall act in accordance with the health and safety regulations and requirements stated in the Specification, including the company's drug and alcohol principles as amended from time to time.

**15.3** Not used.

**15.4** The Company may at its discretion carry out on the Supplier's behalf any testing of the Supplier's employees, subcontractors or agents for drugs or alcohol which the Contract requires the Supplier to carry out. The reasonable cost to the Company of carrying out the testing shall be paid by the Supplier.

**16 Not used**

**17 Independent Supplier**

The Supplier is an independent supplier and is not and shall not hold itself out as, and shall procure that none of the Supplier's employees or subcontractors or their employees hold themselves out as, an agent of the Company. All personnel used by the Supplier in the performance of its obligations under the Contract shall be employees of the Supplier, or any subcontractor or agent of the Supplier.

## 18 Supplier Personnel

### Key Personnel

- 18.1** The Supplier shall ensure that each of the Key Personnel devotes substantially their whole time and effort to the performance of the Services. The Supplier shall take all reasonable steps to ensure it retains the services of the Key Personnel and shall not without the Company's prior written consent terminate their employment, remove or change Key Personnel or do any such thing which would cause any of the Key Personnel to resign.
- 18.2** The Supplier agrees to inform the Company of any changes to the Key Personnel where any relevant member of Key Personnel dies, suffers long term sickness or disability, is incapacitated by reason of ill health or accident from performing his or her duties for a period of or periods aggregating thirty (30) days in the preceding three (3) months, is guilty of gross or serious misconduct, goes on any period of statutory leave (other than holiday) or leaves the Supplier's employment.
- 18.3** The Supplier shall be responsible for the costs of replacing any member of Key Personnel with an appropriately qualified and competent replacement (including but not limited to, the cost of training any replacement to ensure that they can take over the vacated position efficiently and without disrupting the Services). The Supplier shall use all reasonable endeavours to ensure that any replacement for any member of Key Personnel is engaged and available to perform his or her role as soon as reasonably practicable and at least within seven (7) days of the expiry of the notice period of the relevant member of Key Personnel. Where termination of the relevant member of Key Personnel is due to gross or serious misconduct, a replacement shall be engaged and available to perform his/her role as soon as reasonably practicable and in any event within twenty-eight (28) days. Further, save where the relevant member of Key Personnel being replaced has vacated the position immediately due to death, illness, gross misconduct or some other similar reason, the Supplier shall, at its own cost, ensure that the member of Key Personnel being replaced works in parallel with his or her replacement to hand over to them for a period of seven (7) days or any shorter period agreed between the parties.
- 18.4** A reasonable period before an offer of engagement is made to a replacement member of Key Personnel, the Supplier shall provide such information about and access to the relevant individual as the Company may reasonably require. The Company shall notify the Supplier if it objects to the appointment of an individual as a member of Key Personnel, together with its reasons for such objection. The Supplier shall comply with any request by the Company that a particular person should not become a member of Key Personnel.
- 18.5** The Company may change the list of Key Personnel on reasonable notice and subject to the consent of the Supplier, such consent not to be unreasonably withheld or delayed.

## **19 London Living Wage**

- 19.1** The Supplier shall, to the extent the Contract is for the provision of Services to be undertaken within Greater London or on the Crossrail Infrastructure:
- (a) ensure that none of its employees engaged in the provision of services under the Contract is paid an hourly wage (or equivalent of an hourly wage) less than the London Living Wage;
  - (b) provide to the Company such information concerning the application of the London Living Wage as the Company or its nominees may reasonably require;
  - (c) disseminate on behalf of the Company to its employees who are paid no more than the London Living Wage such perception questionnaires in relation to the London Living Wage as the Company or its nominees may reasonably require and promptly collate and return to the Company responses to such questionnaires;
  - (d) co-operate and provide all reasonable assistance to the Company and its nominees in monitoring the effect of the London Living Wage; and
  - (e) procure that any subcontractor (of any tier) is required to comply with the provisions of this Clause 19 and the provisions of this Clause 19 are included in any subcontract (of any tier).
- 19.2** The Supplier shall not, and shall procure that any subcontractor shall not, without the prior written consent of the Company, vary or purport to vary the provisions contained in any contract or subcontract in accordance with the operation of this Clause 19.

## **20 Responsible Procurement**

- 20.1** The Supplier and the Company acknowledge and agree that the Mayor, in accordance with section 155 of the GLA Act has directed the Company and its subsidiaries (including the Company) to do all things reasonably necessary to comply with (inter alia) the Responsible Procurement Policy in its procurement activities.
- 20.2** The Supplier shall and shall procure that its subcontractors (of any tier) shall comply with, and shall provide such co-operation and assistance as may be reasonably requested by the Company to enable the Company to comply with, the Responsible Procurement Policy.
- 20.3** The Supplier acknowledges and agrees that the Company is required to develop a policy relating to the promotion of the procurement of goods and services in an ethical manner (the "Ethical Sourcing Policy") which shall reflect and be consistent with the relevant principles of the Responsible Procurement Policy and the Supplier shall and shall procure that all of its

subcontractors shall comply with such Ethical Sourcing Policy to the extent it does not conflict with the Responsible Procurement Policy.

- 20.4** The Supplier acknowledges and agrees that it (and its subcontractors) shall be required to comply with any changes to the Responsible Procurement Policy (and any adjustment or amendment to the Ethical Sourcing Policy as a result of such amendment or adjustment to the Responsible Procurement Policy).
- 20.5** The Supplier shall not be entitled to any addition to the Contract Price in the event of any change to the Responsible Procurement Policy (and any change to the Ethical Sourcing Policy as a result of such change to the Responsible Procurement Policy).
- 20.6** The Supplier shall procure that any subcontractor (of any tier) is required to comply with the provisions of this Clause 20 and the provisions of this Clause 20 are included in any subcontract (of any tier).
- 20.7** The Supplier shall not, and shall procure that any subcontractor shall not, without the prior written consent of the Company, vary or purport to vary the provisions contained in any contract or subcontract in accordance with the operation of this Clause 20.

## **21 Failure to Perform**

- 21.1** If the Supplier has not performed the Services in accordance with the terms of the Contract, without prejudice to any other rights the Company shall have under the Contract, the Company shall be entitled to require the Supplier to carry out such work as is necessary to rectify its non-performance which where necessary shall include re-performing the Services within the time period that the Company shall specify.
- 21.2** Without limiting any other remedy, if the Supplier fails to comply with the requirements of Clause 21.1, the Company shall be entitled to perform or procure the performance of the Services or part thereof itself or from a third party. Without prejudice to any other right or remedy of the Company hereunder or under the general law, all expenditure properly incurred by the Company exercising its rights under this Clause 21.2 is recoverable by the Company from the Supplier and the Company shall be entitled to deduct such amounts from any amount due or to become due to the Supplier under the Contract.
- 21.3** For the purposes of Clause 21.2 the Supplier hereby grants to the Company and any third party the right to use any Intellectual Property Rights, Documentation, goods, materials and spares belonging to the Supplier or used by the Supplier in connection with the Contract as may be required by the Company to exercise its rights under Clause 21.2 and the Supplier shall provide all such co-operation and assistance as may be required by the Company to enable the Company to exercise its rights under Clause 21.2.

## **21.4 Defect Rectification**

**21.4.1** Without prejudice to any rights or remedies the Company may have against the Supplier whether under the Contract or otherwise, if a defect, damage or failure arises in the integrated Goods and the Company determines (acting reasonably) that such defect, damage or failure results solely from the Supplier's performance of the Services, then, provided that such defect, damage or failure is not principally caused by:

- (a) a failure by the Company or any third party appointed by the company to use, operate or maintain the integrated Goods in accordance with the Manuals or any Applicable Laws or Standards;
- (b) vandalism, collision or accidental damage caused by any person other than the Supplier, its suppliers or the directors, agents, representatives or employees of any of them;

the Supplier will at its own cost and without delay rectify such defect, damage or failure. Where necessary, the Supplier will execute or procure the execution by the Equipment Supplier or any other third party of all rectification works.

**21.4.2** If the Company identifies a defect, damage or failure in the integrated Goods, the Company shall notify the Supplier of such defect, damage or failure within a reasonable time of its discovery. The Supplier shall, after consultation with the Company, determine how the defect, damage or failure is to be rectified.

**21.4.3** Where the Supplier is obliged to rectify a defect, damage or failure in the integrated Goods in accordance with this Clause 21 but has not, for any reason, responded and commenced any rectification work in relation to that defect, damage or failure within ten (10) Working Days of being notified of such defect, damage or failure by the Company, the Company may rectify that defect, damage or failure using its own or third party personnel or resources. All costs and expenses properly and reasonably incurred by the Company in undertaking any work pursuant to this Clause 21.4.3, together with VAT chargeable thereon shall be recoverable by the Company within ten (10) Working Days of demand from the Company as a debt due and owing from the Supplier.

## **22 Intellectual Property Rights**

### **22.1 Existing Contracts**

This Contract is entirely without prejudice to, and nothing in it is intended to, nor shall, in any way prejudice the rights of any member of the TfL Group in relation to intellectual property under or pursuant to Existing Contracts.

### **22.2 Not Used**

**22.3 Not Used**

**22.4 Not Used**

**22.5 Not Used**

**22.6 Not Used**

**22.7 Not Used**

**22.8 Escrow**

- (a) Within twenty (20) Working Days of the Commencement Date, the Supplier shall execute the Escrow Agreement. The Supplier shall place the Escrow Materials in escrow with the Escrow Agent on the terms set out in the Escrow Agreement as soon as reasonably possible after its completion and in any event within twenty (20) Working Days thereof and providing for the release of the Escrow Materials in the event of insolvency (or analogous events) of the Supplier or cessation of trade by the Supplier.
- (b) The Supplier shall pay all fees of the Escrow Agent in connection with the placement, storage and release of the Escrow Materials and shall provide evidence of the same to the Company on written request.
- (c) The Supplier shall at all times ensure that the Escrow Materials deposited with the Escrow Agent are capable of being used to generate and maintain and adapt the latest version of any Hardware or Software and the Supplier shall deliver to the Escrow Agent an updated copy of the Escrow Materials as and when necessary for this purpose and shall also inform the Company when any update is made.
- (d) This clause 22.8 shall terminate 104 weeks from the end of the Term or any Extended Term.

**22.9 Not Used**

**22.10 Supplier's Indemnity against Third Party Intellectual Property Rights Infringement**

- (a) The Supplier shall indemnify and hold harmless the Company and any member of the TfL Group against any actions, claims, losses, demands, costs, charges or expenses that arise from, or are incurred by reason of, any infringement or alleged infringement of any Intellectual Property Rights belonging to any subcontractor (of any tier) or other third party and against all costs and damages of any kind which the Company may incur in connection with any actual or threatened proceedings before any court or arbitrator or any other dispute resolution forum. If required by the Company the Supplier shall conduct

negotiations with any subcontractor (of any tier) or other third party and/or a defence in relation to any action, claim or demand referred to herein on behalf of the Company.

- (b) In the event of a claim of infringement of any Intellectual Property Rights the Supplier shall use all reasonable endeavours to make such alterations or adjustment to the method of providing the Services as may be necessary to ensure that the use and the provision of the Services continues in spite of such claim.

## **22.11 Ownership of the Company's Intellectual Property Rights**

Intellectual Property Rights in all Documentation and in all other material and items supplied by the Company to the Supplier in connection with the Contract shall remain vested in the Company or the person owning such rights at the time the Documentation, material or items were supplied. The Supplier shall, if so requested, at any time, execute such documents and perform such acts as may be required fully and effectively to assure to the Company the rights referred to in this Clause.

## **22.12 Company's Intellectual Property Rights**

- 22.12.1** The Company hereby grants to the Supplier (to the extent that the Company has such rights) a worldwide, royalty-free, perpetual, irrevocable, non-exclusive, non-transferable licence (with the right to sub-licence such rights to any third party) to use the Company IPRs for the duration of this Contract solely to enable the Supplier to carry out the scope of the Services.
- 22.12.2** Subject to the licence set out in Clause 22.12.1 above, the Supplier is not entitled to use in any manner whatsoever any Intellectual Property Rights belonging to the Company.

## **23 Termination and Suspension**

- 23.1** The Company may terminate the Contract immediately by notice in writing to the Supplier if:
- (a) the Supplier commits a material breach of the Contract which in the case of a breach capable of remedy has not been remedied within five (5) Working Days, or such other period as may be agreed between the Supplier and the Company, of the Company serving notice on the Supplier requiring such remedy;
  - (b) the Supplier or anyone employed by or acting on behalf of the Supplier (whether or not acting independently of the Supplier when committing any breach) commits a Safety Breach or Prohibited Act;
  - (c) the Supplier commits a Persistent Breach as provided for in Clause 23.12;
  - (d) any cap on the Supplier's liability under this Contract is reached or exceeded;

- (e) not used;
- (f) an Insolvency Event occurs in relation to the Supplier;
- (g) the Supplier breaches its obligations under Clause 44;
- (h) the Supplier fails to make payment of any sum (including any Liquidated Damages) not in dispute when due and payable to the Company in accordance with this Contract within thirty (30) days of a written demand for payment;
- (i) the Supplier fails to take out and/or maintain any of the insurance policies referred to in Clause 25.6;
- (j) the Supplier fails to provide (where Schedule 1 states it is required) a bond and/or parent company guarantee or any replacement thereof in accordance with Clause 44; or
- (k) a Supplier Public Procurement Termination Event occurs.

**23.2** Without prejudice to Clause 23.1, the Company shall have the right:

- (a) to terminate the Contract at any time by giving notice of not less than thirty (30) days to the Supplier in writing; or
- (b) at any time to require the Supplier to suspend provision of the Services by giving notice in writing (a "**Suspension Notice**") to the Supplier.

**23.3** In the event that the Company terminates the Contract for any reason under this Clause 23, the Supplier shall, without prejudice to any other rights or remedies which the Company may have under the Contract or under general law, at the Company's option:

- (a) permit the Company to enter the Supplier's premises and take possession of any equipment, goods or Documentation which are the property of the Company;
- (b) permit the Company to place an order for the remaining Services with any other person or persons or complete the provision of such Services by its own workmen; and
- (c) promptly return to the Company any equipment, goods or Documentation which are the property of the Company and of which the Supplier or any of its subcontractors have possession.

In either such case, the Company shall be entitled to retain the benefit of any part of the Services already provided by the Supplier in accordance with the Contract, at the material time.

- 23.4** In the event that the Contract is terminated, the liability of the Company shall be limited to payment to the Supplier for those Services provided in accordance with the Contract up until the date of such termination.
- 23.5** Following a termination in accordance with Clause 23.1 (but not a termination in accordance with Clause 23.2(a)), the Supplier shall be liable for:
- (a) any Losses of whatever nature arising out of or in connection with the relevant breach; and
  - (b) where the Company exercises its rights under Clause 23.3(b) and in doing so incurs costs which are in excess of those which would have been incurred in relation to the due provision of the Services under the Contract by the Supplier ("**Excess Costs**"), such Excess Costs.
- 23.6** The provisions of this Clause 23 shall be without prejudice to the Company's right of termination implied into this Contract by Regulation 73(3) of the Public Contracts Regulations 2015.
- 23.7** In the event that the Contract is suspended in accordance with Clause 23.2(b), the Supplier shall:
- (a) issue to the Company an application for payment in respect of those Services provided to the Company in accordance with the Contract up until the date of such suspension; and
  - (b) not carry out any further work in connection with the provision of the Services until such time as the Company issues a notice lifting the suspension (a "**Notice to Proceed**").
- 23.8** In the event that the Contract is suspended in accordance with Clause 23.2(b), and such suspension continues for a period of twenty-eight (28) days, the Supplier shall be entitled to request that the Company serve a Notice to Proceed. In the event that no Notice to Proceed is issued by the Company within a further fourteen (14) days from such request of the Supplier, the Supplier shall be entitled to approach the Company with a request for a variation, in accordance with the Contract Variation Procedure.
- 23.9** In the event that the parties are unable to agree upon the variation requested under Clause 23.8, then a Dispute shall be deemed to have arisen and the matter shall be referred for resolution in accordance with Clause 38.
- 23.10** Termination of the Contract for whatever reason shall not affect the accrued rights of the parties arising in any way out of the Contract as at the date of termination and in particular but without limitation the right to recover damages against the other party.
- 23.11** If anyone employed by the Supplier, acting independently of the Supplier, commits a Safety Breach or Prohibited Act, then the Company may require the Supplier to exclude that individual

from the Services with immediate effect and that individual may only resume the performance of the Services at the Company's absolute discretion.

## **23.12 Persistent breach**

**23.12.1** If the Supplier breaches any of its obligations (where those obligations are of the same type or nature) under this Contract, more than twice in any three (3) month period, then the Company may serve a notice on the Supplier:

- (a) specifying that it is a formal warning notice;
- (b) giving reasonable details of such breach; and
- (c) stating that such breach is a persistent breach that, if it continues unremedied or if a breach of the same type or nature occurs within three (3) months of the date of service of the notice, may result in a termination of this Contract in accordance with this Clause 23.12.

**23.12.2** If, following service of such a warning notice pursuant to Clause 23.12.1(a), the breach specified has continued unremedied or a breach of the same type or nature has occurred within the three (3) months following the date of service of such notice, then the Company may, no later than the date falling six (6) months following the date of service of the warning notice pursuant to Clause 23.12.1, serve another notice on the Supplier specifying that such breach constitutes a "**Persistent Breach**" for the purposes of Clause 23.12.1(c)

## **24 Co-operation in Handover**

**24.1** The Supplier shall provide at no cost such reasonable assistance to the Company and to any third party nominated by the Company as the Company may require during the last six (6) months of the Contract and in the three (3) months after the Completion Date (or, in the case of earlier termination for any reason, the period of three (3) months from the effective Contract termination date) to facilitate the engagement of a successor supplier and/or the resumption by the Company of the performance of the Services and in such a manner so as not to unduly disrupt or hinder the Company's business.

**24.2** Without prejudice to the generality of Clause 24.1 above, the Supplier shall on or prior to the Completion Date transfer to the Company such Documentation relating to the Services or full copies thereof as the Company may request.

## **25 Indemnity and Insurance**

**25.1** The Supplier shall be liable for, and shall indemnify the Company, including any of its employees, servants, agents, subcontractors, directors and officers and members of the TfL Group on an

after-tax basis against all Losses suffered or incurred by the Company or any relevant member of the TfL Group, arising from or in connection with the performance or non-performance of the Supplier under the Contract:

- (a) in respect of death or personal injury to any person;
- (b) in respect of loss of or damage to any property (including the Crossrail Infrastructure and any other property belonging to the Company or for which it is responsible);
- (c) arising out of or in the course of or by reason of any act, omission, negligence or breach of contract or breach of statutory duty, wilful misconduct of the Supplier, its employees, agents or subcontractors; and
- (d) arising under the Company's contracts with third parties.

and shall, at its own cost on the Company's request, defend the Company in any proceedings involving the same.

**25.2** The Supplier shall not be liable to indemnify the Company or any member of the TfL Group under the indemnity in Clause 25.1 to the extent Losses are solely due to the negligence, breach of duty or breach of contract of the Company.

**25.3** The Supplier's indemnity under Clause 25.1 and all other indemnities under the Contract shall remain in force for the duration of the Contract and for the period of two (2) years after the Completion Date, expiry of any Extended Term or earlier termination of the Contract.

**25.4** The Company may withhold from any sum due or which may become due to the Supplier any sum due to the Company as a result of the operation of Clause 25.1 provided that an appropriate notice to withhold payment has been served by the Company on the Supplier.

**25.5** Other than in respect of the Losses (i) described in Clauses 25.1(a) and 25.1(d) above and (ii) Excepted Liabilities, neither party shall have any liability to the other for any Consequential Loss arising out of the performance of its obligations under or in connection with the Contract. Each party respectively undertakes not to sue the other party or any member of the TfL Group in respect of Consequential Loss.

**25.6** Without prejudice to the obligation to indemnify the Company set out in Clauses 25.1, the Supplier undertakes to:

- (a) maintain at its own cost insurance which complies with the Employers' Liability (Compulsory Insurance) Act 1969 and any statutory orders made under such Act or any amendment or re-enactment thereof;

- (b) maintain at its own cost an adequate level of public liability insurance in respect of the Supplier's liability for death or injury to any person and loss of or damage to property and being not less than £5,000,000 (five million pounds) per occurrence;
- (c) maintain at its own cost an adequate level of professional indemnity insurance commensurate with the risk and, where appropriate, being not less than £2,000,000 (two million pounds) per occurrence and in the aggregate per annum;
- (d) ensure that the foregoing insurance policy or policies shall be or are effected with a reputable insurer. Such insurance shall be on terms approved by the Company (such approval not to be unreasonably withheld or delayed) and shall be maintained in force for a period not less than two (2) years after the completion of the Services;
- (e) ensure that any subcontractors also maintain adequate insurance having regard to the obligations under the contract which they are contracted to fulfil; and
- (f) produce within seven (7) days of any reasonable request by the Company and in any event before the commencement of any of the Services under the Contract satisfactory evidence in the form of a broker's letter or similar confirming the existence of insurance in accordance with the terms of this Clause 25.

**25.7** The Supplier's liabilities under the Contract shall not be deemed to be released or limited by the Supplier taking out the insurance policies referred to in Clause 25.6.

**25.8** If the Supplier fails to maintain the insurance policies as provided in this Clause 25, the Company may effect and keep in force any such insurance and pay such premium or premiums at commercially competitive rates as may be necessary for that purpose and from time to time deduct the amount so paid from any monies due or which become due to the Supplier or recover the same as a debt due from the Supplier.

**25.9** The Supplier's liability to the Company and members of the TfL Group under this Contract (whether arising in contract, tort (including negligence, breach of statutory duty or otherwise)) shall be limited to 100% of the Contract Price (the "**Liability Cap**"), provided that the Supplier's liability to the Company and members of the TfL Group under this Contract in respect of the Excepted Liabilities shall not be subject to the Liability Cap.

## **26 Force Majeure and Permitted Delay Events**

### **26.1 Force Majeure**

Neither party shall be in breach of its obligations under the Contract if there is any total or partial failure of performance by it of its duties and obligations under the Contract occasioned by any Force Majeure Event. If either party is unable to perform its duties and obligations under the

Contract as a direct result of a Force Majeure Event, that party shall within one (1) Working Day of such event taking place give written notice to the other party specifying the event and the steps taken by it to minimise or overcome the effects of such event. The operation of the Contract shall be suspended during the period (and only during the period) in which the Force Majeure Event continues. Without delay upon the Force Majeure Event ceasing to exist the party relying upon it shall give written notice to the other of this fact. If the Force Majeure Event continues for a period of more than sixty (60) days and substantially affects the abilities of the Supplier to perform its obligations under the Contract, the Company shall have the right to terminate the Contract immediately upon giving written notice of such termination to the Supplier.

## **26.2 Permitted Delay Events**

**26.2.1** If a delay is caused or either party can reasonably foresee delay occurring by reason of a Permitted Delay Event then the Supplier shall give notice to the Company's Representative of the same and any claim for an extension of time to the Completion Date, within seven (7) days after the cause of any delay has arisen.

**26.2.2** For the purposes of the Contract, the occurrence of one or more of the following shall constitute a "**Permitted Delay Event**":

- (a) any act of prevention, omission, default, neglect or breach by the Company of an express obligation under this Contract; or
- (b) a failure by the Company to comply with its obligations under Clause 6.3; or
- (c) any variation of the Contract under Clause 8; or
- (d) any denial of access under Clause 11.13; or
- (e) the suspension of the Contract in accordance with Clause 23 (other than where the suspension is necessary by reason of default of the Supplier).

**26.2.3** Where any delay in achieving the Completion Date arises, the Supplier shall be entitled to an extension to such Completion Date (either prospectively or retrospectively) and any such extension shall amend the Contract Programme but only to the extent that such delay is directly caused by a Permitted Delay Event that has a direct and material adverse effect on the Supplier's ability to perform the Services by the Completion Date and provided that the Supplier:

- (a) notifies the Company of the Permitted Delay Event in accordance with Clause 26.2.1 and subsequently provides such further information as the Company may reasonably require regarding the nature and likely duration of such event;
- (b) provides the Company with reasonable access to the Supplier's premises or of its subcontractors for investigating the validity of the potential Permitted Delay Event;

- (c) uses its reasonable endeavours to mitigate the delay to the Completion Date; and
- (d) shall not be entitled to an extension of time to the extent that the Permitted Delay Event was caused by or resulted from any act, omission, neglect, default or breach of the Contract by the Supplier, its subcontractors or employees.

## **27 Confidentiality**

- 27.1** The Supplier undertakes to keep confidential and not to disclose to any third party (without the prior written consent of the Company) any Confidential Information supplied by the Company to the Supplier and shall use such information only for the purpose of the performance of his obligations under the Contract.
- 27.2** On the Company's request, the Supplier shall, so far as is reasonably possible:
- (a) transfer onto hard copies or other media in industry standard format and programming languages and deliver to the Company any Confidential Information in its possession or control supplied by the Company to the Supplier;
  - (b) return to the Company all copies (whether hard copy or other media) of such Confidential Information; and
  - (c) destroy, erase or otherwise expunge from its records, systems, databases or other forms of archive all such Confidential Information save to the extent that information needs to be retained for statutory purposes or tax purposes.
- 27.3** The Supplier shall ensure that all his subcontractors, suppliers, employees and agents perform his obligations in Clauses 27.1 and 27.2 as if they were the Supplier, and the Supplier shall be responsible to the Company for any act or omission by his subcontractors, suppliers, employees and agents in breach of such obligations.
- 27.4** The Supplier shall notify the Company promptly if the Supplier becomes aware of any breach of confidence by a subcontractor, supplier, employee or agent and shall give the Company all assistance the Company reasonably requires in connection with any proceedings the Company brings, or other steps the Company takes, against that subcontractor, supplier, employee or agent for such breach of confidence.
- 27.5** The Supplier shall not, either alone or jointly with others, publish any material relating to the Company, the Company's Representative, the Contract or the Services without the prior written consent of the Company.

- 27.6** The Supplier shall not, either alone or jointly with others, make any press, television, radio or other media announcement in connection with the Contract or the Services, or any Dispute arising under or in connection with the Contract.
- 27.7** The provisions of Clauses 27.1 to 27.6 shall not apply:
- (a) to any information which is already in the public domain at the time of its disclosure other than by breach of the Contract; or
  - (b) to any information which is required to be disclosed to the extent required by any applicable law, the regulations of any recognised stock exchange, any taxation authorities or by order of a court or other tribunal of competent jurisdiction or any relevant regulatory body.
- 27.8** The Supplier acknowledges that damages would not be an adequate remedy for any breach of this Clause 27 by the Supplier and that (without prejudice to all other remedies to which the Company may be entitled as a matter of law) the Company shall be entitled to any form of equitable relief to enforce the provisions of this Clause.

## **28 Assignment and Subcontracting**

### **28.1 Subcontracting**

- 28.1.1** The Supplier may subcontract its obligations under this Contract either in whole or in part provided that:
- (a) the Supplier obtains the Company's prior written consent; and
  - (b) the Supplier notifies the Company in writing of the name, contact details and details of the legal representatives of any subcontractors.
- 28.1.2** Unless the Company agrees otherwise in writing, the Supplier shall procure that each subcontractor duly executes and deliver to the Company, within fifteen (15) Working Days of the date of the relevant subcontract, a deed of warranty in the form set out at Schedule 9.
- 28.1.3** The Supplier will be fully responsible for any act, neglect, default or breach of this Contract by any subcontractor or supplier or the directors, agents, representatives or employees of the Supplier or of any of its subcontractors or suppliers as if such act, neglect, default or breach and been carried out by the Supplier.
- 28.1.4** The Supplier will ensure that it includes in any subcontract provisions on substantially similar terms to Clause 10.

**28.1.5** The Company reserves the right to verify whether there are any grounds for excluding any subcontractor under Regulation 57 of the Public Contracts Regulations 2015. Where necessary for the purpose of the Company's exercise of its right under this Clause 28.1.5, the Company may request that the information provided by the Supplier under Clause 28.1.1 shall be accompanied by one or more European Single Procurement Document(s) (within the meaning of Regulation 59 of the Public Contracts Regulations 2015) in respect of the relevant subcontractor(s). Further, the Company:

- (a) shall require the Supplier to replace any subcontractor in respect of which the verification has shown that there are compulsory grounds for exclusion under Regulation 57 of the Public Contracts Regulations 2015; and
- (b) may require the Supplier to replace any subcontract in respect of which the verification has shown that there are non-compulsory grounds for exclusion under Regulation 57 of the Public Contracts Regulations 2015.

## **28.2 Assignment**

**28.2.1** Without prejudice to Clause 28.1, the Supplier shall not assign (whether absolutely or by way of security and whether in whole or in part), novate, transfer, mortgage, charge, declare itself a trustee for a third party of, or otherwise dispose of (in any manner whatsoever) its rights and/or obligations under this Contract without the prior written consent of the Company.

**28.2.2** The Company may novate, assign, transfer or subcontract the Contract or any part thereof to any person at any time without the consent of the Supplier, provided the Company has given prior written notice to the Supplier.

**28.2.3** Within seven (7) days of any written request by the Company to the Supplier, the Supplier shall execute a deed of novation in the form set out in Schedule 7 in favour of any person to whom the Contract is being novated.

## **29 Company's and Supplier's Representative**

Each party shall appoint one or more representatives to act on its behalf under the Contract. Each party shall advise the other party, in writing, of the names and contact details of its representatives and these shall be recorded in Schedule 1. The Supplier shall not appoint such a representative without the prior written consent of the Company (which consent shall not be unreasonably withheld). Any party may, on giving reasonable notice to the other party, appoint an additional representative or replace an existing representative but the Supplier may only do so with the prior written consent of the Company. Each party shall be responsible for the acts, omissions, neglects and defaults of its representatives as if such acts, omissions, neglects and

defaults were its own. Each party will be bound by any decision made or action taken by its representatives.

### **30 Costs**

Except as otherwise agreed each party shall bear its own costs incurred in connection with the negotiation, preparation and execution of the Contract.

### **31 Severance**

If a provision of the Contract is, or becomes, invalid, unenforceable or illegal, that will not affect the legality, validity or enforceability of any other provision of the Contract, provided that the operation of this Clause 31 would not negate the commercial interest and purpose of the parties under the Contract.

### **32 Publicity**

The text of any press release or other communication to be published by or in the media concerning the subject matter of the Contract shall require the prior written approval of the Company. No interviews concerning the same shall be given by the Supplier with the media without prior written approval from the Company of the content of such an interview.

### **33 Corrupt Gifts and Payments of Commission**

- 33.1** The Supplier undertakes that it shall not and procures that its subcontractors and suppliers shall not enter into or offer to enter into any business arrangement with any servant, employee, officer or agent of the Company other than as a representative of the Company without the Company's prior written approval.
- 33.2** The Supplier undertakes that it shall not, and uses reasonable endeavours to procure that its subcontractors and suppliers shall not commit any Prohibited Acts or cause the Company to commit any equivalent act.
- 33.3** The Company shall have the right to audit any and all records necessary to confirm compliance with this Clause 33 at any time during performance of this Contract and during the twelve (12) year period following completion of performance.

### **34 Criminal Record Declarations**

- 34.1** For the purposes of this Clause 34:

**“Relevant Individual”** means any servant, employee, officer, consultant or agent of either the Supplier or any subcontractor or supplier carrying out, or intended to carry out, any aspect of the Services; and

**“Relevant Conviction”** means any unspent criminal conviction relating to actual or potential acts of terrorism or acts which threaten national security.

- 34.2** The Supplier shall procure from each Relevant Individual (as the case may be) a declaration that he has no Relevant Convictions (**“Declaration”**) or disclosure of any Relevant Convictions. A Declaration shall be procured prior to a Relevant Individual carrying out any of the Services. The Supplier shall confirm to the Company in writing on request or in any event not less than once in every year that each Relevant Individual has provided a Declaration. The Supplier shall procure that a Relevant Individual notifies the Supplier immediately if he commits a Relevant Conviction and the Supplier shall notify the Company in writing immediately on becoming aware that a Relevant Individual has committed a Relevant Conviction.
- 34.3** The Supplier shall not engage or allow to act on behalf of the Supplier or any subcontractor in the performance of any aspect of the Services any Relevant Individual who has disclosed a Relevant Conviction.
- 34.4** The Company shall have the right in accordance with the audit rights set out in Clause 5 to audit and inspect the records of the Supplier and its subcontractors and its and their respective employees and agents in order to confirm and monitor compliance with this Clause 34 at any time during performance of this Contract.
- 34.5** If the Supplier fails to comply with the requirements under Clauses 34.2 and/or 34.3 the Company may, without prejudice to its rights under Clause 23.1, serve notice on the Supplier requiring the Supplier to remove or procure the removal of (as the case may be) any Relevant Individual who has not provided a Declaration from the Contract and/or Company’s site with immediate effect and take such steps as are necessary to ensure that such Relevant Individual has no further involvement with the carrying out of the Services unless (in the case of non-compliance with Clause 34.2) within seven (7) days of receipt of the notice the Supplier confirms to the Company that he has procured all of the relevant Declarations required under Clause 34.2.
- 34.6** A persistent breach of Clause 34.2 and/or Clause 34.3 by the Supplier shall entitle the Company to terminate the Contract in whole or in part with immediate effect in accordance with Clause 23.1(a).
- 34.7** In the event the Company becomes aware that a Relevant Individual has committed a Relevant Conviction, the Supplier shall remove or procure the removal (as the case may be) of such Relevant Individual from the Contract and/or the Company’s site with immediate effect and take

such steps as are necessary to ensure that such Relevant Individual has no further involvement with the carrying out of the Services.

- 34.8** Nothing in this Clause 34 shall in any way waive, limit or amend any obligation of the Supplier to the Company arising under the Contract and the Supplier's responsibilities in respect of performance of the Services remain in full force and effect and the Supplier cannot claim any extra costs or time as a result of any actions under this Clause 34.

## **35 No Waiver**

- 35.1** No failure or delay on the part of either party to exercise any right or remedy under the Contract shall be construed or operate as a waiver thereof nor shall any single or partial exercise of any right or remedy as the case may be. The rights and remedies provided in the Contract are cumulative and are not exclusive of any rights or remedies provided by law.
- 35.2** No payment made by the Company shall indicate or be taken to indicate the Company's acceptance or approval of any part of the Services or any act or omission of the Supplier from any obligation or liability imposed upon the Supplier by any provision of the Contract or otherwise.

## **36 Entire Contract**

The Contract embodies and sets forth the entire contract and understanding of the parties and shall supersede all prior oral or written contracts understandings or arrangements relating to the subject matter of the Contract. Except in the case of fraud, neither party shall be entitled to rely on any contract, understanding or arrangement which is not expressly set forth in the Contract.

## **37 Notices and Service of Process**

- 37.1** Any notice or other document given under, or in connection with, the Contract must be in English and in writing and sent by letter or fax or delivered by hand to the other party's representatives in each case to the address below. The notice or other document will be effective as follows:
- (a) if the notice or other document is sent by letter, it will be effective when it is delivered;
  - (b) if the notice or other document is sent by fax, it will be effective when it has been transmitted and the transmission report from the fax machine states that the entire fax has been sent successfully; and
  - (c) if the notice or other document is delivered by hand to the other party's representative, it will be effective immediately it is delivered.

The address and fax numbers of the Company and the Supplier are set out in Schedule 1.

If a party's details change, it must notify the other party promptly in writing of any such changes. The parties agree that proceedings arising out of or in connection with the Contract may be served in accordance with this Clause 37.1.

### **38 Dispute Resolution**

- 38.1** Any question, dispute, difference or claim (a "**Dispute**") shall be resolved in accordance with this Clause 38.
- 38.2** The parties shall use their reasonable endeavours to resolve any Dispute by a meeting between the Company's Representative and the Supplier's Representative (together the "**Nominated Representatives**") which shall be convened to discuss such Dispute within fourteen (14) days of notification in writing by one party to the other of a matter in dispute.
- 38.3** If the Dispute has not been resolved within twenty-eight (28) days after the date of a meeting between the Nominated Representatives in accordance with Clause 38.2 (or if no such meeting was convened within twenty-eight (28) days after the date on which notification was served by one party on the other), the Dispute shall be referred as soon as practicable to the Company's Contracts and Procurement Manager and the Supplier's Managing Director or in the absence or unavailability of these personnel, persons of similar status deputised to resolve disputes on behalf of their respective companies.
- 38.4** If the Dispute has not been resolved within twenty-one (21) days of it being referred to the Company's Contracts and Procurement Manager and the Supplier's Managing Director or their deputies in accordance with Clause 38.3 either party may refer the matter for resolution in accordance with the provisions of Clause 41.

### **39 Counterparts**

- 39.1** This Contract may be executed in several counterparts each of which shall be deemed an original and all of which shall constitute one and the same document.

### **40 Not Used**

### **41 Governing Law and Jurisdiction**

- 41.1** This Contract and any dispute or claim arising out of or in connection with it or its subject matter shall be governed by and construed in accordance with the law of England and Wales.
- 41.2** The Company and the Supplier submit, subject to the provisions of this Contract, to the exclusive jurisdiction of the courts of England and Wales provided that the Company has the right in its absolute discretion to enforce a judgement and/or to take proceedings in any other jurisdiction in which the Supplier is incorporated or in which any asset of the Supplier may be situated.

## **42 Contracts (Rights of Third Parties) Act 1999**

- 42.1** No person except any member of the Tfl Group may enforce the Contract by virtue of the Contracts (Rights of Third Parties) Act 1999, but this does not affect any other right or remedy of a third party arising at law.
- 42.2** Notwithstanding those rights referred to in Clause 42.1, the Company and the Supplier may agree to vary or rescind the Contract without the consent of any third party.

## **43 Bonds, Warranties and Guarantees**

- 43.1** Where stated in Schedule 1, the Supplier shall at its own expense provide within seven (7) days of the Company's request the following:
- (a) an executed bond issued by a financial institution whose long term debt obligations are rated not less than A- by Standard & Poor's and/or A3 by Moody's in the form set out in Schedule 8 in favour of the Company;
  - (b) an executed parent company guarantee from the ultimate holding company or other parent company of the Supplier (provided that such company's long-term debt obligations are rated not less than A- by Standard & Poor's and/or A3 by Moody's) in the form set out in Schedule 8 in favour of the Company.
- 43.2** The Supplier shall ensure that any bond required under Clause 43.1:
- (a) provides, in aggregate, credit protection for the Company in an amount of not less than the amount specified in Schedule 1; and
  - (b) is renewed every twelve (12) months until the Completion Date (or date of termination if earlier).
- 43.3** If at any time the existing bond and/or parent company guarantee cease(s) to meet the requirements of Clauses 43.1 and 43.2 then the Supplier shall replace such bond and/or parent company guarantee with a bond and/or parent company guarantee (as the case may be) that meets the requirements within seven (7) days.
- 43.4** If requested by the Company, the Supplier shall provide an accompanying legal opinion to the bond and/or parent company guarantee supplied under Clause 43.1 completed and signed by a qualified lawyer from the country in which the guarantor and/or parent company is resident in the form specified by the Company.
- 43.5** Not used.

**43.6** If required by the Company, the Supplier shall procure that the terms of any subcontract require the subcontractor, within seven (7) days of a written request by the Company to the subcontractor, to enter into:

- (a) a collateral warranty in the form set out in Schedule 9 in favour of the Company and if requested by the Company, the Supplier shall require the subcontractor to provide an accompanying legal opinion completed and signed by a qualified lawyer from the country in which the subcontractor is resident in the form specified by the Company; and
- (b) a parent company guarantee in the form provided by the Company from the ultimate holding company of the subcontractor in respect of any of the subcontractor's obligations under any collateral warranty required under this Clause 43.6.

**43.7** If any warranty (including any accompanying parent company guarantee) required under Clause 43.6 is not delivered to the Company in accordance with Clause 43.6 one quarter of the Contract Price relative to the Services supplied by the relevant subcontractor shall be retained in assessments of the amount due and is not payable until such warranty has been delivered.

#### **44 Change of Control**

The Supplier shall notify the Company within 30 days of any change of ownership of the Supplier where such change relates to fifty per cent (50%) or more of the issued share capital of the Supplier.

#### **45 Interest**

**45.1** If either party fails to pay to the other any amount payable in connection with the Contract on or before the due date for payment, interest shall accrue on the overdue amount from the due date for payment until the date of actual payment (whether before or after judgment) at the interest rate specified in the Late Payment of Commercial Debts (Interest) Act 1998. Any interest accruing under this Clause 45.1 shall be immediately payable by the paying party on demand.

**45.2** Interest (if unpaid) arising on an overdue amount will be compounded monthly with the overdue amount but will remain immediately due and payable.

#### **46 Freedom of Information**

**46.1** For the purposes of this Clause 46:

**"FOI Legislation"** means the Freedom of Information Act 2000, all regulations made under it and the Environmental Information Regulations 2004 and any amendment or re-enactment of any of them; and any guidance issued by the Information Commissioner, the

Department for Constitutional Affairs, or the Department for Environment Food and Rural Affairs (including in each case its successors or assigns) in relation to such legislation;

“**Information**” means information recorded in any form held by the Company or by the Supplier on behalf of the Company; and

“**Information Request**” means a request for any Information under the FOI Legislation.

**46.2** The Supplier acknowledges that the Company:

- (a) is subject to the FOI Legislation and agrees to assist and co-operate with the Company to enable the Company to comply with its obligations under the FOI Legislation; and
- (b) may be obliged under the FOI Legislation to disclose Information without consulting or obtaining consent from the Supplier.

**46.3** Without prejudice to the generality of Clause 46.2 the Supplier shall and shall procure that its subcontractors (if any) shall:

- (a) transfer to the Company’s Representative (or such other person as may be notified by the Company to the Supplier) each Information Request relevant to the Contract, the Services or any member of the TfL Group that it or they (as the case may be) receive as soon as practicable and in any event within two (2) Working Days of receiving such Information Request; and
- (b) in relation to Information held by the Supplier on behalf of the Company, provide the Company with details about and/or copies of all such Information that the Company requests and such details and/or copies shall be provided within five (5) Working Days of a request from the Company (or such other period as the Company may reasonably specify), and in such forms as the Company may reasonably specify.

**46.4** The Company shall be responsible for determining whether Information is exempt information under the FOI Legislation and for determining what Information will be disclosed in response to an Information Request in accordance with the FOI Legislation. The Supplier shall not itself respond to any person making an Information Request, save to acknowledge receipt, unless expressly authorised to do so by the Company.

## **47 Data Transparency**

**47.1** The Supplier acknowledges that the Company is subject to the Transparency Commitment. Accordingly, notwithstanding Clause 27 and Clause 46, the Supplier hereby gives its consent for the Company to publish the Contract Information to the general public.

**47.2** The Company may in its absolute discretion redact all or part of the Contract Information prior to its publication. In so doing and in its absolute discretion the Company may take account of the exemptions/exceptions that would be available in relation to information requested under the FOI Legislation. The Company may in its absolute discretion consult with the Supplier regarding any redactions to the Contract Information to be published pursuant to Clause 47.1. The Company shall make the final decision regarding publication and/or redaction of the Contract Information.

## **48 Survival**

**48.1** The provisions of Clauses 1 (Definitions and Interpretation), 5 (Records and Audit), 9.7 (Set-Off), 18 (Supplier Personnel), 20 (Responsible Procurement), 21 (Failure to Perform), 22 (Intellectual Property Rights), 23 (Termination and Suspension), 25 (Indemnity and Insurance), 27 (Confidentiality), 31 (Severance), 32 (Publicity), 33 (Corrupt Gifts and Payments of Commission), 35 (No Waiver), 36 (Entire Contract), 37 (Notices and Service of Process), 38 (Dispute Resolution), 41 (Governing Law and Jurisdiction), 42 (Contracts (Rights of Third Parties) Act 1999), 46 (Freedom of Information), 47 (Data Transparency), 48 (Survival), 49.1 and 49.5 (Transport for London Group) will survive the termination or expiry of this Contract and continue in full force and effect, along with any other Clauses or Schedules of this Contract necessary to give effect to them. In addition, any other provision of this Contract which by its nature or implication (including in respect of any accrued rights and liabilities) is required to survive the termination will survive such termination as aforesaid.

## **49 Transport for London Group**

### **49.1 Declaration of Ineffectiveness**

(a) Without prejudice to the Company's right to terminate the Contract under Clause 23.1, Clause 23.2(a) or at common law, the Company may terminate the Contract at any time in the event that:

(i) there is a Declaration of Ineffectiveness; or

(ii) a Public Procurement Termination Event occurs (without prejudice to the Company's rights of termination implied into this Contract by Regulations 73(3) of the Public Contracts Regulations 2015).

in accordance with the provisions of this Clause 49.1.

(b) In the event that any court makes a Declaration of Ineffectiveness or a Public Procurement Termination Event occurs, the Company shall notify the Supplier. The parties agree that the provisions of this Clause 49.1 shall apply as from the date of receipt by the Supplier of the notification of a Declaration of Ineffectiveness. Where there is any

conflict or discrepancy between the provisions of Clause 23.1 and this Clause 49.1 or the Cessation Plan, the provisions of this Clause 49.1 and the Cessation Plan prevail.

- (c) The Declaration of Ineffectiveness or Public Procurement Termination Event (as applicable) shall not prejudice or affect any right, liability or remedy which has accrued or which shall accrue to either party prior to or after such Declaration of Ineffectiveness or Public Procurement Termination Event (as applicable).
- (d) As from the date of receipt by the Supplier of the notification of the Declaration of Ineffectiveness or Public Procurement Termination Event (as applicable), the parties (acting reasonably and in good faith) shall agree or, in the absence of such agreement, the Company shall reasonably determine an appropriate Cessation Plan with the object of achieving:
  - (i) an orderly and efficient cessation of the Services or (at the Company's request) a transition of the Services to the Company or such other entity as the Company may specify; and
  - (ii) minimal disruption or inconvenience to the Company or to public passenger transport services or facilities, in accordance with the provisions of this Clause 49.1 and to give effect to the terms of the Declaration of Ineffectiveness.
- (e) Upon agreement, or determination by the Company of the Cessation Plan the parties shall comply with their respective obligations under the Cessation Plan.
- (f) The Company shall pay the Supplier's reasonable costs in assisting the Company in preparing, agreeing and complying with the Cessation Plan. Such costs shall be based on any comparable costs or charges agreed as part of the Contract or as otherwise reasonably determined by the Company. Provided that the Company shall not be liable to the Supplier for any loss of profit, revenue goodwill or loss of opportunity as a result of the early termination of the Contract in accordance with this Clause 49.1.

#### **49.2 Crime and Disorder Act 1998**

The Supplier acknowledges that the Company is under a duty under Section 17 of the Crime and Disorder Act 1998 (as amended by the Police and Justice Act 2006 and the Policing and Crime Act 2009) to:

- (a) have due regard to the impact of crime, disorder and community safety in the exercise of the Company's duties;
- (b) where appropriate, identify actions to reduce levels of crime and disorder; and

- (c) without prejudice to any other obligation imposed on the Company, exercise its functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent, in its area,:
- (i) crime and disorder (including anti-social and other behaviour adversely affecting the local environment);
  - (ii) the misuse of drugs, alcohol and other substances; and
  - (iii) re-offending,

and in the performance of the Contract, the Supplier shall assist and co-operate with the Company and relevant members of the TfL Group and shall use reasonable endeavours to procure that its subcontractors assist and co-operate, with the Company and relevant members of the TfL Group to enable the Company to satisfy its duty.

#### **49.3 The Company's business**

The Supplier acknowledges that it:

- (a) has sufficient information about the Company and the Services;
- (b) is aware of the Company's processes and business;
- (c) has made all appropriate and necessary enquiries to enable it to carry out the Services in accordance with the Contract;
- (d) is aware of the purposes for which the Services are required; and
- (e) shall neither be entitled to any additional payment nor excused from any obligation or liability under the Contract due to any misinterpretation or misunderstanding by it of any fact relating to the Services.

#### **49.4 Best value**

The Supplier acknowledges that the Company is a best value authority for the purposes of the Local Government Act 1999 and as such the Company is required to make arrangements to secure continuous improvement in the way it exercises its functions, having regard to a combination of economy, efficiency and effectiveness. The Supplier shall assist the Company to discharge the Company's duty where possible, and in doing so, shall carry out any review of Services reasonably requested by the Company from time to time. The Supplier shall negotiate in good faith (acting reasonably) with the Company any changes to the Contract in order for the Company to achieve best value.

#### **49.5 Data Protection**

- (a) The Supplier shall comply with all of its obligations under the Data Protection Act 1998 and if processing personal data (as such terms are defined in section 1(1) of that Act) on behalf of the Company ("**Company Personal Data**"), the Supplier shall only carry out such processing in order to carry out the Services and at all times in accordance with any instructions from the Company.
- (b) When the Supplier receives a written request from the Company for information about, or a copy of, Company Personal Data, the Supplier shall supply such information or data to the Company within such time and in such a form as is specified in the request (such time to be reasonable) or if no period of time is specified in the request, then the Company shall supply the information or data within fourteen (14) days from the date of the request.
- (c) The Company shall remain solely responsible for determining the purposes and manner in which Company Personal Data is to be processed. The Supplier shall not share any Company Personal Data with any subcontractor or third party unless there is a written agreement in place which requires the subcontractor or third party to:
  - (i) only process Company Personal Data in accordance with the Company's instructions to the Supplier; and
  - (ii) comply with the same data protection requirements that the Supplier is required to comply with under the Contract.

#### **49.6 Conflict of Interest**

- (a) The Supplier acknowledges and agrees that it does not have any interest in any matter where there is or is reasonably likely to be a conflict of interest with the carrying out of the Services or with any member of the TfL Group, save to the extent fully disclosed to and approved in writing by the Company.
- (b) The Supplier shall undertake ongoing and regular checks for any conflict of interest throughout the duration of the Contract and in any event not less than once in every six (6) months and shall notify the Company in writing immediately on becoming aware of any actual or potential conflict of interest with the carrying out of the Services under the Contract or with any member of the TfL Group and shall work with the Company to do whatever is necessary (including the separation of staff working on, and data relating to, the Services from the matter in question) to manage such conflict to the Company's satisfaction, provided that, where the Company is not so satisfied (in its absolute discretion) it shall be entitled to terminate the Contract.

#### **49.7 Equality and Diversity**

**49.7.1** Without limiting the generality of any other provision of the Contract, the Supplier:

- (a) shall not unlawfully discriminate;
- (b) shall procure that its employees and agents do not unlawfully discriminate; and
- (c) shall use reasonable endeavours to procure that its subcontractors do not unlawfully discriminate when providing the Services,

within the meaning and scope of the Equality Act 2006, the Equality Act 2010 and any other relevant enactments in force from time to time in relation to discrimination in employment.

**49.7.2** The Supplier acknowledges that the Company is under a duty under section 149 of the Equality Act 2010 to have due regard to the need to:

- (a) eliminate unlawful discrimination on the grounds of age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation (all "**Protected Characteristics**") and marriage and civil partnership;
- (b) advance equality of opportunity between persons who share a Protected Characteristic and persons who do not share it; and
- (c) foster good relations between persons who share a Protected Characteristic and persons who do not.

In performing the Contract the Supplier shall assist and cooperate with the Company where possible in satisfying this duty.

**49.7.3** The Supplier shall ensure that its staff, and those of its subcontractors who are engaged in the performance of the Contract comply with the Company's policies in relation to equal opportunities and diversity, workplace harassment and drugs and alcohol as may be updated from time to time. Copies of these policies are available from the Company at any time on request.

**49.7.4** To the extent that the Company is required to assist or co-operate with the Company in compliance with its duties under the Equality Act 2010 (Specific Duties) Regulations 2011, the Supplier shall assist and co-operate with the Company where possible.

## **49.8 Work Related Road Risk**

**49.8.1** For the purposes of Clauses 49.8.2 to 49.8.9 (inclusive) of this Contract, the following expressions shall have the following meanings:

<b>“Bronze Accreditation”</b>	the minimum level of accreditation within the FORS Standard, the requirements of which are more particularly described at: <a href="http://www.fors-online.org.uk">www.fors-online.org.uk</a>
<b>“Car-derived Vans”</b>	a vehicle based on a car, but with an interior that has been altered for the purpose of carrying larger amounts of goods and/or equipment;
<b>“Collision Report”</b>	a report detailing all collisions during the previous 12 months involving injuries to persons or fatalities;
<b>“Delivery and Servicing Vehicle”</b>	a Lorry, a Van or a Car-derived Van;
<b>“Driver”</b>	any employee of the Supplier (including an agency driver), who operates Delivery and Servicing Vehicles on behalf of the Supplier while providing the Services;
<b>“DVLA”</b>	Driver and Vehicle Licensing Agency;
<b>“FORS”</b>	the Fleet Operator Recognition Scheme, which is an accreditation scheme for businesses operating van and lorry fleets. It offers impartial, independent advice and guidance to motivate companies to improve their compliance with relevant laws and their environmental, social and economic performance;
<b>“FORS Standard”</b>	the standard setting out the accreditation requirements for the Fleet Operator Recognition Scheme, a copy of which can be found at: <a href="http://www.fors-online.org.uk">www.fors-online.org.uk</a>
<b>“Gold Accreditation”</b>	the highest level of accreditation within the FORS Standard, the requirements of which are more particularly described at:  <a href="http://www.fors-online.org.uk">www.fors-online.org.uk</a>

<b>“Lorry”</b>	a vehicle with an MAM exceeding 3,500 kilograms;
<b>“MAM”</b>	the maximum authorised mass of a vehicle or trailer including the maximum load that can be carried safely while used on the road;
<b>“Side Guards”</b>	guards that are fitted between the front and rear axles of a Lorry and that comply with EC Directive 89/297/EEC and the Road Vehicles (Construction and Use) Regulations 1986;
<b>“Silver Accreditation”</b>	the intermediate level of accreditation within the FORS Standard, the requirements of which are more particularly described at: <a href="http://www.fors-online.org.uk">www.fors-online.org.uk</a>
<b>“Van”</b>	a vehicle with a MAM not exceeding 3,500 kilograms.

#### **Fleet Operator Recognition Scheme Accreditation**

**49.8.2** Where the Supplier operates Delivery and Servicing Vehicles to provide the Services, it shall within 90 days of the Commencement Date:

- (a) (unless already registered) register for FORS or a scheme, which in the reasonable opinion of the Company, is an acceptable substitute to FORS (the “Alternative Scheme”); and
- (b) (unless already accredited) have attained the standard of Bronze Accreditation (or higher) or the equivalent within the Alternative Scheme and shall maintain the standard of Bronze Accreditation (or equivalent standard within the Alternative Scheme) by way of an annual independent assessment in accordance with the FORS Standard or take such steps as may be required to maintain the equivalent standard within the Alternative Scheme. Alternatively, where the Supplier has attained Silver or Gold Accreditation, the maintenance requirements shall be undertaken in accordance with the periods set out in the FORS Standard.

#### **Safety Equipment on Vehicles**

**49.8.3** The Supplier shall ensure that every Lorry, which it uses to provide the Services, shall:

- (a) have Side Guards, unless the Supplier can demonstrate to the reasonable satisfaction of the Company that the Lorry will not perform the function for which it was built if Side Guards are fitted;
- (b) have front, side and rear blind spots completely eliminated or minimised as far as practical and possible, through the use of fully operational direct and indirect vision aids and driver audible alerts;
- (c) have equipment fitted with an audible means of warning other road users of the Lorry's left manoeuvre; and
- (d) have prominent signage on the Lorry to warn cyclists and other road users of the dangers of passing the Lorry on the inside and of getting too close to the Lorry.

### **Driver Licence Checks**

**49.8.4** Where the Supplier operates Delivery and Servicing Vehicles to provide the Services the Supplier shall ensure that:

- (a) it has a system in place to ensure all its Drivers hold a valid driving licence for the category of vehicle that they are tasked to drive, along with recording any endorsements, or restrictions on the Drivers licence; and
- (b) each of its Drivers engaged in the provision of the Services has a driving licence check with the DVLA or such equivalent before that Driver commences delivery of the Services and that the driving licence check with the DVLA or equivalent authority is repeated in accordance with either the following risk scale (in the case of the DVLA issued licences only), or the Supplier's risk scale, provided that the Supplier's risk scale has been Approved in writing by the Company within the last 12 months:
  - (i) 0 – 3 points on the driving licence – annual checks;
  - (ii) 4 – 8 points on the driving licence – six monthly checks;
  - (iii) 9 – 11 points on the driving licence – quarterly checks; or
  - (iv) 12 or more points on the driving licence – monthly checks.

### **Driver Training**

**49.8.5** Where the Supplier operates Delivery and Servicing Vehicles to provide the Services the Supplier shall ensure that each of its Drivers undergo approved progressive training (to include a mix of theoretical, e-learning, practical and on the job training) and continued professional

development to include training covering the safety of vulnerable road users and on-cycle hazard awareness, throughout the term of the Contract.

### **Collision Reporting**

**49.8.6** Where the Supplier operates Delivery and Servicing Vehicles to provide the Services, the Supplier shall:

- (a) ensure that it has a system in place to capture, investigate and analyse road traffic collisions that results in fatalities, injury or damage to vehicles, persons or property and for generating Collision Reports; and
- (b) within 15 days of the Commencement Date, provide to the Company a Collision Report. The Supplier shall provide to the Company an updated Collision Report within five working days of a written request from the Company.

### **Self Certification of Compliance**

**49.8.7** Where the Supplier operates Delivery and Servicing Vehicles to provide the Services, within 90 days of the Commencement Date, the Supplier shall make a written report to the Company detailing its compliance with Clauses 49.8.3, 49.8.4 and 49.8.5 of this Contract (the "WRRR Self-certification Report"). The Supplier shall provide updates of the WRRR Self-certification Report to the Company on each three month anniversary of its submission of the initial WRRR Self-certification Report.

### **Obligations of the Supplier Regarding Subcontractors**

**49.8.8** The Supplier shall ensure that those of its subcontractors who operate Delivery and Servicing Vehicles to provide the Services shall:

- (a) comply with Clause 49.8.2; and
- (b) where its subcontractors operate the following vehicles to provide the Services shall comply with the corresponding provisions of this Contract:
  - (i) For Lorries – Clauses 49.8.3, 49.8.4, 49.8.5 and 49.8.6; and
  - (ii) For Vans – Clauses 49.8.4, 49.8.5, and 49.8.6,

as if those subcontractors were a party to this Contract.

### **Failure to Comply with Work Related Road Risk Obligations**

**49.8.9** Without limiting the effect of any other clause of this Contract relating to termination, if the Supplier fails to comply with any of Clauses 49.8.2, 49.8.3, 49.8.4, 49.8.5, 49.8.6, 49.8.7 and/or 49.8.8:

- (a) the Supplier has committed a material breach of this Contract; and
- (b) the Company may refuse the Supplier, its employees, agents and Delivery and Servicing Vehicles entry onto any property that is owned, occupied or managed by the Company for any purpose (including but not limited to deliveries).

## 50 CompeteFor

- 50.1** Without prejudice to Clause 28, the Supplier will, on a non-exclusive basis, use the CompeteFor electronic brokerage service (or such alternative web-based tool as the Company may direct from time to time) ("**CompeteFor**") to make available to other suppliers all appropriate opportunities, arising in connection with the Contract, to supply goods, works or services to the Supplier.
- 50.2** The Supplier will use all reasonable endeavours to ensure that its subcontractors (for the purposes of this Clause, the "**Supplier's Subcontractors**") use CompeteFor, on a non-exclusive basis, to make available to other subcontractors all appropriate opportunities, arising in connection with the Contract, to supply goods, works and services to the Supplier's Subcontractors.
- 50.3** The Supplier will monitor (and maintain a record of) the number, type and value of opportunities, arising in connection with the Contract, made available to other suppliers via CompeteFor, whether by the Supplier or the Supplier's Subcontractors, as required by this Clause 50.3, and will report this information on a quarterly basis by way of email to the Company's Representative.

## 51 Delivery of Goods

### 51.1 Storage

- 51.1.1** Prior to the Expected Delivery Date(s) of the integrated Goods, the Supplier shall place and maintain the integrated Goods in storage in a location approved by the Company ("Storage") until delivery of the integrated Goods is made to the Delivery Location. The Supplier shall safeguard the integrated Goods and take all reasonable steps to prevent deterioration of the integrated Goods while they are in Storage.
- 51.1.2** If for any reason the Company does not wish to accept delivery of the integrated Goods on their Expected Delivery Date(s), the Company may require the Supplier by way of the Contract Variation Procedure to continue to store and maintain the integrated Goods in Storage in a manner that enables the integrated Goods to be delivered to the Delivery Location on a revised delivery date (the "Extended Storage Option"). If the Company exercises the Extended Storage Option:
- (a) the Supplier shall be entitled to submit a Payment Application in respect of the integrated Goods that are subject to the Extended Storage Option and the provisions of Clause 9 shall apply; and

- (b) upon the Company paying the relevant portion of the Contract Price in respect of the integrated Goods that are subject to the Extended Storage Option, title to such integrated Goods shall pass with full title guarantee to the Company.

## **51.2 Delivery**

- 51.2.1** Subject to Clause 51.1, the integrated Goods and any other Contractual Documentation shall be delivered by the Supplier to the Company on the Expected Delivery Date(s) at the Delivery Location and in accordance with the Contract Programme. The Supplier shall be responsible for, and shall comply with all reasonable instructions of the Company with regard to, the unloading of the integrated Goods. The Company shall be under no obligation to accept partial delivery of an order.
- 51.2.2** The time of delivery of the integrated Goods and other Contractual Documentation shall be of the essence of the Contract.
- 51.2.3** If the integrated Goods and other Contractual Documentation are not supplied on the Expected Delivery Date(s) then, without limiting any other remedy, the Company shall be entitled to deduct from the price payable for such integrated Goods and Contractual Documentation or to claim from the Supplier by way of Liquidated Damages for delay the amount stated in Schedule 1 for the period of delay stated in Schedule 1. The Company shall not be entitled to deduct such amount from the price payable for such integrated Goods and Contractual Documentation or to claim such amount from the Supplier by way of Liquidated Damages for delay to the extent that the delay is due to (i) a default or other act of prevention of the Company, its agents, employees or contractors (other than the Supplier) or (ii) a Force Majeure Event, or (iii) a Permitted Delay Event.
- 51.2.4** The parties acknowledge and agree that the amount of Liquidated Damages under the Contract:
  - (a) serves to protect the Company's legitimate business interests, including the need to have the integrated Goods delivered on-time so that they are ready for use when required by the Company; and
  - (b) constitutes a genuine pre-estimate of the additional cost that would be incurred by the Company as a result of the Supplier's failure to achieve the Expected Delivery Date.
- 51.2.5** The integrated Goods shall be properly packed and secured in such a manner as to reach the Delivery Location in good condition and otherwise in a condition which fully complies with the requirements of the Contract.

**51.2.6** Not Used.

**51.2.7** In the event that all or any of the obligations of the Supplier under the Contract to pay Liquidated Damages are held to be unenforceable, the Supplier agrees to pay the Company damages in respect of all actual Losses suffered by the Company due to the circumstances in respect of which Liquidated Damages would have been payable if the relevant obligation had been enforceable including, without limitation, loss of profit, loss of use, loss of revenues, loss of production and loss of savings. The damages payable by the Supplier in accordance with this Clause 51 shall not exceed the amounts which would have been payable if the relevant obligation(s) to pay Liquidated Damages had been enforceable save where such obligation(s) are held to be unenforceable as a result of any argument or proceedings raised or brought by the Supplier that such obligation(s) are unenforceable, in which case the amount of such damages shall be unlimited.

**51.2.8** The Supplier will not, and will ensure that neither its subcontractors, suppliers nor any other person will have, a lien, charge or encumbrance on or over any of the integrated Goods or Contractual Documentation which are vested in the Company for any sum due to the Supplier or its subcontractors, suppliers or other persons and the Supplier shall take all reasonable steps as may be necessary to ensure that the title of the Company and the exclusion of any such lien charge or encumbrance are brought to the notice of subcontractors and other persons dealing with any such integrated Goods or Contractual Documentation.

**51.2.9** Not Used.

**51.2.10** Not Used.

## **52 Testing, Take Over and Delivery Procedure**

### **52.1 Compliance with the Programmes and Procedures**

The Supplier shall ensure that:

**52.1.1** the IMV and other items of integrated Goods are delivered, tested and made ready for Take Over and Final Acceptance by the Company's Representative on the relevant dates in accordance with the Specification and the other provisions of this Agreement; and

**52.1.2** The IMV or other item of integrated Goods is not delivered to the Company for Take Over prior to the relevant dates unless otherwise agreed by the Company's Representative in its absolute discretion.

## **52.2 Right to attend, cost of testing etc.**

**52.2.1** The Company's Representative shall be entitled to attend any Static Tests or Infrastructure Tests together with such other representatives of the Company as the Company's Representative may nominate, and the Supplier shall be responsible for procuring such access. The Supplier shall provide the Company's Representative with not less than 15 (fifteen) Working Days' notice of the time, location and subject matter of any such Static Tests and/or Infrastructure Tests.

**52.2.2** The Supplier shall be responsible for all costs and expenses associated with the Static Tests.

**52.2.3** Any repetition or prolongation of the Static Tests and/or the Infrastructure Tests which is necessary by reason of a failure of the IMV to meet the requirements of the Tests shall be at the Supplier's cost. The Supplier shall not be entitled to any additional costs, any extension of time or any other relief in connection with such failure.

## **52.3 Completion of Tests**

**52.3.1** Following completion of all Static Tests pursuant to clause 52.2, the Supplier shall (at its own expense) deliver the IMV to the Delivery Location, together with such evidence as the Company's Representative may reasonably require that the IMV has passed all of the Static Tests.

**52.3.2** Following delivery of the IMV under Clause 52.3.1, the Infrastructure Tests shall be conducted by the Supplier at its own expense subject to Clause 52.3.3 and notwithstanding Clause 52.3.4, the Infrastructure Tests in accordance with the Technical Assurance Plan. In conducting the Infrastructure Tests:

- (a) the Supplier shall comply with its obligations under Clause 11 (Access and Time for Performance of the Services); and
- (b) the Company's Representative shall be given reasonable notice (such notice to be consistent with the Supplier's requirements for infrastructure access as set out in the Technical Assurance Plan) by the Supplier of all on-track testing or commissioning to be carried out by or on behalf of the Supplier so that the Company's Representative can make the arrangements referred to in Clause 52.3.3. The Supplier acknowledges that, if it does not provide the notice required by this Clause 52.3.2(b) the Company's Representative may not be able to secure the required track access and the Supplier shall not be entitled to any additional costs, any extension of time or any other relief in connection with any resulting delay.

**52.3.3** The Supplier shall be responsible for all costs and expenses associated with the Infrastructure Tests, save for the Infrastructure Testing Deliverables, which shall be provided by the Company at the Company's expense.

**52.3.4** In the event that the IMV does not pass any Infrastructure Test, the Supplier shall be responsible at its own expense for:

- (a) carrying out the works required to ensure that the failed Infrastructure Test(s) can be passed (the "**Rectification Works**");
- (b) (if required by the Company's Representative) removing the IMV from the Delivery Location;
- (c) re-delivering the IMV to the Delivery Location once the Rectification Works are complete on a date to be arranged with the Company's Representative; and
- (d) the repetition and/or prolongation of the Infrastructure Test(s) necessary by reason of the failure of the IMV to meet the requirements of the Infrastructure Test(s);

and, for the avoidance of doubt, the Supplier shall not be entitled to any additional costs, any extension of time or any other relief in connection with such failure.

## **52.4 Take Over**

**52.4.1** Where, in relation to the IMV:

- (a) the Supplier has provided evidence acceptable to the Company's Representative (the Take Over Criteria), including all relevant supporting documentation, that the IMV has passed all Tests required by the Technical Assurance Plan to be performed prior to Take Over;
- (b) The IMV meets in all material respects the Specification;
- (c) The IMV is Fit for Purpose and has no defects, or items missing from it;
- (d) the Supplier has provided to the Company's Representative the Manuals and any other documentation reasonably necessary to enable operation and maintenance of the IMV;
- (e) the Supplier has complied with its obligations under this Agreement with respect to the provision of any Training Services;

- (f) the Company has received any Spares and Special Tools in accordance with the provisions of this Agreement;
- (g) The IMV complies with Applicable Laws, TfL Standards; and
- (h) The IMV has achieved all Relevant Consents,

(together the “**Take Over Criteria**”) the Supplier shall be entitled to request Take Over in accordance with Clause 52.4.2.

**52.4.2** Where the Take Over Criteria are satisfied in respect of the IMV, the Supplier shall be entitled to submit to the Company’s Representative a Take Over Certificate signed by a duly authorised representative of the Supplier certifying that the Take Over Criteria have been satisfied. Following receipt of a Take Over Certificate from the Supplier in accordance with this Clause 52.4.2, the Company’s Representative shall within the period stated in the Contract Particulars counter-sign and date the Take Over Certificate in which case Take Over shall occur, or may refuse to do so under Clause 52.4.3.

**52.4.3** The Company’s Representative may refuse to sign the Take Over Certificate if it, acting reasonably, believes the Take Over Criteria have not been satisfied in full in which case it shall either (in its absolute discretion) (i) within twenty (20) Working Days of such refusal, notify the Supplier in writing setting out which of the Take Over Criteria have not been satisfied or (ii) issue a QTOC in accordance with Clause 52.5. In the event the Company issues a QTOC, any relevant Milestone Payment for Qualified Take Over shall become payable.

**52.4.4** If the Supplier, acting reasonably, disputes any of the reasons set out in the notice issued by the Company’s Representative pursuant to Clause 52.4.3, it shall notify the Company’s Representative of this in writing within five (5) Working Days of receipt of such notice and the Parties shall resolve the matter in accordance with the Dispute resolution procedure (being Clause 38).

**52.4.5** Where the IMV has not completed Take Over by the Completion Date stated in Schedule 1, liquidated damages specified in Schedule 1 shall be payable in accordance with Clause 51.2.3.

## **52.5 Qualified Take Over**

**52.5.1** If the Company’s Representative, acting reasonably, believes that one or more of the Take Over Criteria, other than those set out in Clauses 52.4.1(a) and 52.4.1(g), has not been satisfied, and provided that the IMV can nevertheless be operated safely and in accordance with all Applicable Laws and the terms of all Relevant Consents, the

Company's Representative shall be entitled, at its absolute discretion, to issue a QTOC in respect of the IMV, in which case the Company's Representative shall list in detail in the QTOC the outstanding conditions to be satisfied and tasks to be performed by the Supplier in order for full Take Over of the IMV to occur (the "**Preconditions**"), and require the Supplier to satisfy the Preconditions in accordance with an agreed timetable set out in the relevant QTOC, which timetable shall state that all Preconditions must be completed on or before the date on which Final Acceptance of the IMV is scheduled to occur pursuant to the Contract Programme.

- 52.5.2** Upon the Company's Representative confirming in writing that such Preconditions have been satisfied, the IMV shall be Taken Over and the Company's Representative shall issue a Take Over Certificate in respect of the IMV.
- 52.5.3** Final Acceptance of the IMV shall not occur until all the Preconditions have been satisfied.
- 52.5.4** Any Milestone Payment for Take Over shall not become payable in respect of the IMV for which a Qualified Take Over Certificate has been issued until the Preconditions in respect of the IMV have been satisfied.

## **52.6 FINAL Acceptance**

- 52.6.1** The Supplier shall use all reasonable endeavours to achieve Final Acceptance of the IMV by the Final Acceptance Longstop Date.
- 52.6.2** The Supplier shall make a submission for Final Acceptance to the Company's Representative once the Final Acceptance Criteria have been satisfied. The Final Acceptance Criteria are:
- (a) Not used.
  - (b) Not used.
  - (c) the Preconditions set out in any QTOC under Clause 52.5.1 have been satisfied to the satisfaction of the Company's Representative in respect of the IMV;
  - (d) the IMV has no defects for the 12 weeks prior to the submission for Final Acceptance;
  - (e) there are no Recurrent Defects or, in the event there is a Recurrent Defect, the Supplier has either:
    - (i) provided to the Company's satisfaction a programme for rectification works in respect of such Recurrent Defects; or

(ii) not used;

(f) not used; and

(g) Take Over of the IMV has been completed.

**52.6.3** Upon the Final Acceptance Criteria having been satisfied in accordance with Clause 52.6.2, the Supplier shall be entitled to submit a Final Acceptance Certificate for the IMV signed by a duly authorised representative of the Supplier to the Company's Representative, and the Company's Representative shall counter-sign and date that Final Acceptance Certificate and Final Acceptance shall occur. Subject to Clause 52.6.4 and for the avoidance of doubt, any Milestone Payment for Final Acceptance shall not become payable until (i) the requirements of this Clause 52.6.3 have been satisfied in full in respect of the IMV and (ii) the Final Acceptance Certificate has been counter-signed and dated by the Company's Representative.

**52.6.4** Not used.

## **Appendix 1: GLA Group Responsible Procurement Policy**

**Dated March 2006 and Updated January 2008**

The following document is provided on the CD-Rom that forms parts of the contract agreement:

1. Document: GLA Group Responsible Procurement Policy Mar2006 updated Jan2008

## **Appendix 2: Performance Management Regime**

Where any Additional Services are provided by the Supplier to the Company, then a performance management regime shall be agreed between the Company and the Supplier in respect of the Additional Services. The performance management regime shall include the following:

### **Performance Period**

To be defined for any Additional Services.

### **Performance Period Targets**

To be defined for any Additional Services.

### **Performance Breach**

To be defined for any Additional Services.

### **Liquidated Damages**

To be defined for any Additional Services.

## Schedule 1

### Contract Particulars

Commencement Date	Date of this Contract (being the date entered on the Front Page of this contract Agreement)
Completion Date:	Take Over: ██████████
Final Acceptance Longstop Date	██████████
Supplier's Representative: Address for service of notices: Telephone: Email:	<i>Attention:</i> ██████████ <i>Email</i> ██████████  <i>Address:</i> DMA S.r.l Via Andorno 22, Torino I-10153 Italy
Company's Representative: Address for service of notices: Telephone: Email	<i>Attention:</i> ██████████ <i>Email:</i> ██████████  <i>Address:</i> 29 <sup>th</sup> Floor - Crossrail Ltd 25 Canada Square Canary Wharf London E14 5LQ

Contract Programme	See Schedule 4. If a programme is not included in Schedule 4, the Supplier must submit the programme under Clause 4.1.1 within two (2) weeks from the Commencement Date.
The other information that the Specification requires the Supplier to show on the Contract Programme is:	Such information detailed in Appendix 1 to this Schedule 1.
Under Clause 4.2. the programme must be in the following form:	Primavera P6 (version 6.2.1 or later) or MS Project (2010 onwards), or such other form as may be reasonably required by the Company.  The programme must also be provided in Pdf format.
Specification:	See Schedule 3
Additional applicable standards	ASSURANCE SCHEDULE 3A of Specification
Technical Assurance Plan:	Plan to be delivered per date in Schedule 3A of the Specification
Description of Interfaces:	Document to be delivered per date in Schedule 3A of the Specification
Infrastructure Testing Deliverables:	<i>[To be agreed]</i>
Delivery Location:	Plumstead Depot, or any alternative location to be advised by the Company
Contract Price:	See Schedule 2



## Appendix 1: Contract Programme information requirements

The programme must:

- Show a robust, identifiable and deliverable critical path, with logical sequencing covering the full specification. It must be in logic linked CPM network format showing the critical path(s), early start and finish dates, late start and finish dates and total float. Submissions must be made in both hardcopy and electronic XER formats or MS Project (2010 onwards) file formats. A Pdf version must also be submitted.
- Not have activities that last longer than 60 working days with the exception of submission review/acceptance, material fabrication/procurement activities.
- Show achievable activity durations aligned to the productivity assumptions stated;
- Include but not be limited to the following activities and milestones:
  - Mobilisation.
  - Design Requirement Affirmation.
  - Preliminary Unit Design Commencement & Completion.
  - Preliminary Unit Design Approval.
  - Design Integration with signalling systems of each unit.
  - Detail Design submitted to the Purchaser
  - Technical Assurance Plan (to include all Test Plans).
  - Components testing of each unit.
  - Build commence
  - Build complete
  - Completion of Factory Acceptance Tests.
  - Pre-delivery Acceptance Test (fault free operation) of each unit.
  - Available for delivery to allow commencement of Infrastructure Testing.
  - Delivery including delivery methods to Purchaser's specified site.
  - The production of training documentation, training of staff in the use & maintenance of the IMV.
  - Submission of Operations & Maintenance manual.
  - Completion of Dynamic Testing & Infrastructure Testing on Crossrail infrastructure of unit.
  - Authorisation to Place into Service (APIS) - Approved by ORR for unit.
  - Acceptance Certificate.

## Schedule 2

### Prices

#### Part A

**Contract Price = £1,026,400**

For breakdown of Contract Price see Part B.



**Part C – Payment Milestones**

The following payment milestones apply to the elements of the Fixed Price contract.

The payment profile for any items ordered by means of the variation procedure (Schedule 5) shall be agreed as part of the specific variation.

#	Payment Milestones	Payment proportion	Milestone amount	Payment date	Evidence Supporting Milestone Attainment
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total Milestone Payments</b>		<b>100%</b>	<b>£1,026,400</b>		

## Part D – Schedule of Rates

The following rates shall be applicable to any items ordered by means of the variation procedure (Schedule 5):

<b>Staff Grade</b>	<b>Rate</b>
Engineer	
Senior Engineer	
Production	
Developer	
Software Architect	
Field Engineer	
Technician	

### **Schedule 3 Specification**

The Specification consists of the following documents:

1. TECHNICAL REQUIREMENTS SPECIFICATION

Monitoring Systems Integration

Document Number: CRL1-RFL-O8-RSP-CR001-50006 v1.0 dated 07 February 2018

2. TRANSPORT WAGON

Robel GmbH Drawing: 7579900006

3. ASSURANCE SCHEDULE 3A



# TECHNICAL REQUIREMENTS SPECIFICATION

## Monitoring Systems Integration

**Document Number: CRL1-RFL-08-RSP-CR001-50006**

### Document History:

Version:	0.1	1.0	
Date	01 Sep 2017	07 Feb 2018	
Reason for Revision:	First draft	First Issue	
Prepared by:	██████████		
Checked by:	██████████		
Approved by:	██████████		
Authorised by:	██████████		

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# 1 INTRODUCTION

This Technical Requirements Specification (TRS) has been developed to define the scope required to integrate all the inspection equipment to be installed on the Crossrail Engineering Trains "Transport Wagon".

## 1.1 Purpose

The purpose of the TRS is to transform stakeholder requirements and interface constraints and combine them into functional and performance requirements against which the systems must be designed and built.

Technical requirements define what the system must do in order to meet the capability and functionality required by the user(s) and business, but not the exact solution. The TRS defines the benchmark against which the solution will be verified.

The primary sources of requirements for the systems requirements are:

- User requirements from the Purchaser's Operational Concept for Works Trains;
- Interfaces to other Crossrail systems such as signalling, track and civils;
- Maintenance plans for infrastructure systems;
- Specialist domain knowledge (RAM, system safety, HF, EMC, fire protection, etc.).

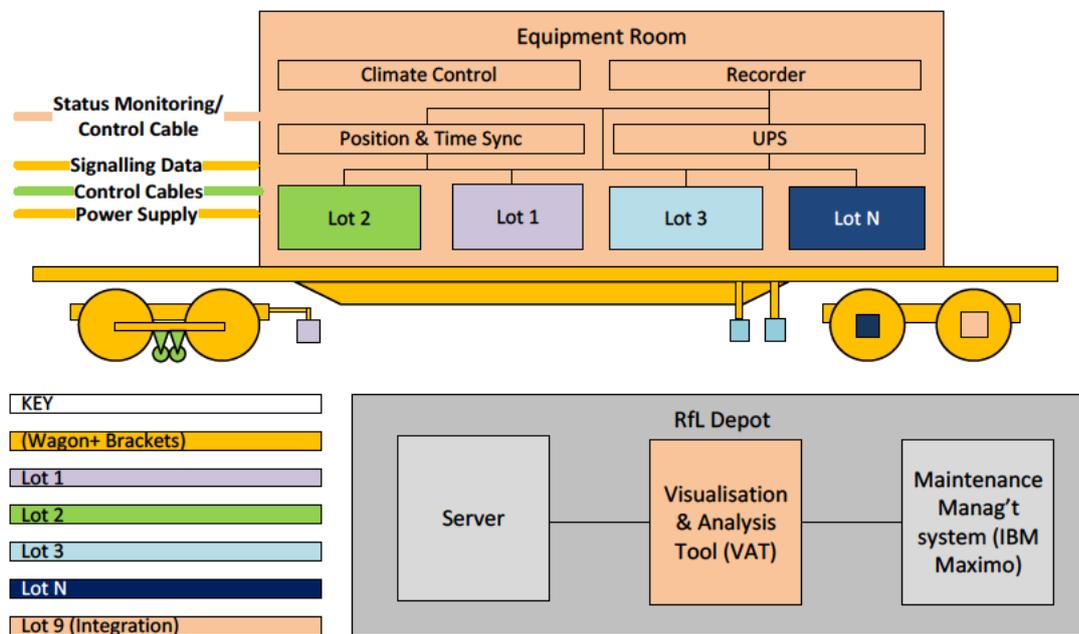
## 1.2 Scope

The scope of this TRS is limited to the Track Inspection System and associated equipment. The equipment is likely to consist of a track geometry measurement system, rail profile measurement and image recording and defect recognition software.

## 1.3 Definitions

Abbreviation/Acronym	Definition
Central Operating Section (COS)	The railway under management of Rail for London between Westbourne park in west London and Stratford and Abbey Wood in the east.
EMC	Electromagnetic Compatibility
RAM	Reliability, Availability, Maintainability
RfL	Rail for London (Infrastructure Manager for Crossrail)
RIS	Rail Industry Standard
TRS	Technical Requirements Specification

## 2 Interfacing Projects and Systems



There are multiple complex interfaces involved with infrastructure monitoring equipment. A description of the major interfaces is below.

The scope of this TRS is roughly indicated in pink in the diagram above.

### 2.1.1 Engineering Trains

The equipment will be installed on the "Transport Wagon on the Crossrail engineering trains. The vehicle has been designed to allow for loads to be installed on the axle boxes, bogies and underframe in the areas that are required for track monitoring equipment. Some of that space has been reserved for rail flaw detection. The physical space and weight constraints that have been reserved are listed in the requirements.

### 2.1.2 Civils

The only interface to civil infrastructure is to maintain passing clearance by staying within the W6a and Crossrail gauge profiles.

### 2.1.3 Ventilation & Fire

Operating primarily in a tunnel environment, fire risks must be controlled. As a minimum, materials used must comply with the Euro Norm for fire materials, EN 45545-2. Fire alarm systems may be required to be integrated into the train's system.

### 2.1.4 Communications

The system must record time accurately, to an agreed time source to enable the train's location to be determined.

### 2.1.5 Power

The power system will be required to interface to the power system on the train, and also to the individual pieces of equipment. Some supplies will require UPS back-up.

## 2.1.6 Equipment

There is a detailed interface to each piece of recording equipment. Each piece of equipment requires information from the integration system to operate, including:

- Synchronisation information
- Tachometer information
- Control information

A container must be provided for trainborne equipment to be located, to be kept in optimal operational conditions.

Additionally, the output of each system must be imported into a central recording system.

The suppliers contracted to deliver the monitoring equipment are listed below

### 2.1.6.1 Lot 1: Track Geometry and Rail Profile Monitoring System

Supplier: DMA S.r.l  
Via Andorno 22, Torino I-10153, Italy

### 2.1.6.2 Lot 2: Track Visual Defect Detection System

Supplier: DMA S.r.l  
Via Andorno 22, Torino I-10153, Italy

### 2.1.6.3 Lot 3: Rail Defect Detection System

Supplier: Sperry Rail International Ltd  
Derwent House, RTC Business Park, London Road, Derby DE24 8UP UK

### 2.1.6.4 Lot 4: Rail Roughness Measurement System

Supplier:  
RailMeasurement Ltd  
79 River Lane, CAMBRIDGE, CB5 8HP UK

### 2.1.6.5 Lot 5: Surface Mapping and Difference Detection System

Supplier: To be advised by the Company

### 2.1.6.6 Lot 6: Removed from Scope

### 2.1.6.7 Lot 7: Removed from Scope

### 2.1.6.8 Lot 8: Switches and Crossings Monitoring System

Supplier: To be advised by the Company  
System will not be installed on the vehicle

### 3 REQUIREMENTS

ID	Requirement	Supporting Information	Rationale
TRS-INT-2	<b>3.1 Synchronisation</b>		
TRS-INT-34	An optical synchronisation pulse/signal network shall be provided to synchronise all monitoring equipment to within +/-0.02m of each other at an operating speed of 80km/h..	Compliance with lots 1-4 already submitted	To enable synchronisation of data.
TRS-INT-40	The synchronisation system shall be expandable to allow installation of future additional equipment.		
TRS-INT-139	The integration system must transmit time to all required systems using NTP		
TRS-INT-22	The network time for the recording system shall be synchronised to the central Crossrail clock.	Synchronisation must be undertaken wirelessly or undertaken manually during preparation.	Necessary to determine the train location
TRS-INT-143	The time network system shall be expandable to allow installation of future additional equipment		

ID	Requirement	Supporting Information	Rationale
TRS-INT-170	<b>3.2 Communications Network</b>		
TRS-INT-172	The integrator must communicate with attached monitoring equipment via TCP networking		
TRS-INT-181	The integrator shall be responsible for managing TCP network traffic		
TRS-INT-44	<b>3.3 Tachometer System</b>		
TRS-INT-141	A tachometer system shall be provided on the vehicle.	<p>Additional probes can be added to the existing WSP system, see figure 141A. Alternatively, if the proposed system is not compatible with this installation, the free end cap can be used, but may require relocation or removal of the load-weigh valve for the braking system. Note, the free end caps on the bogie fitted with the ultrasonic system cannot be used.</p> <p>For details of the axle end see drawing in figure 141C below.</p>	

ID	Requirement	Supporting Information	Rationale
TRS-INT-207	The tachometer system shall provide a 3600 (or more) pulse per revolution and be dual redundant, suitable for use with safety critical systems (such as low speed cut-off for lasers).		
TRS-INT-45	Where required by the monitoring systems ,the tachometer system shall have the ability to provide a scaled down output of the tachometer if monitoring equipment requires it (e.g. 1 pulse sent for every 4 pulses from the tachometer, providing 900 pulses per revolution)		
TRS-INT-188	The Tachometer system shall provide signals to the monitoring equipment when certain target speeds are reached on the vehicle.	This ensures that certain safe modes of operation can be achieved. One example will be use of lasers, which should not be enabled below a certain vehicle speed	
TRS-INT-205	<b>3.4 Compressed Air</b>		
TRS-INT-206	A compressed air system shall be installed to provide compressed air to monitoring systems that require it.	A flow rate of 300NI/min, at 5 bar pressure should be sufficient fr the onboard systems.	
TRS-INT-43	<b>3.5 Positioning</b>		

ID	Requirement	Supporting Information	Rationale
TRS-INT-21	A balise reader, capable of reading CBTC signalling balises shall be provided to, in combination with the tachometer system, locate the vehicle to within +/-0.25m of the actual location.	<p>In the central operating section, CBTC balises are positioned around points and at platforms, and a maximum separation of 800m of plain line.</p> <p>The manufacturer of the signaling system is Siemens. The balises are Siemens S21/S22s. The data sheet can be found here: <a href="https://www.mobility.siemens.com/mobility/global/SiteCollectionDocuments/en/rail-solutions/rail-automation/train-control-systems/trainquard-eurobalise-s21-s22-b-en.pdf">https://www.mobility.siemens.com/mobility/global/SiteCollectionDocuments/en/rail-solutions/rail-automation/train-control-systems/trainquard-eurobalise-s21-s22-b-en.pdf</a></p> <p>The balises are a standard Euro Balise. The balise data has a standard header, including sufficient information to determine the location and unique ID, as described in the ETCS subset-036 <a href="http://www.era.europa.eu/Document-Register/Documents/Set-1-Index009-SUBSET-036%20v241.pdf">http://www.era.europa.eu/Document-Register/Documents/Set-1-Index009-SUBSET-036%20v241.pdf</a></p>	
TRS-INT-189	A secondary positioning system shall be provided to locate the vehicle to within +/-0.25m of the actual location.	<p>This is for areas that may not have balise systems installed. Note that all tunnel areas are CBTC fitted.</p> <p>Additional RFID tags or similar should not be considered as a solution to this requirement.</p>	
TRS-INT-42	<b>3.6 System Control</b>		

ID	Requirement	Supporting Information	Rationale
TRS-INT-50	3.6.1 Startup and Shutdown		
TRS-INT-208	A central control system shall be provided for monitoring and controlling the monitoring equipment.		
TRS-INT-147	Startup and shutdown of the central control system shall be initiated manually by an operator.	The monitoring equipment is to be powered on and set up by an operator	
TRS-INT-155	The central control system shall enable the operator to select which monitoring equipment is to be enabled for recording.		
TRS-INT-165	The central control system shall allow the operator to enable/disable selection of recording channels/monitoring equipment during operation of the IMV.		
TRS-INT-182	The central control system shall be able to send an enable signal on the communications network to power up/down monitoring equipment		
TRS-INT-150	The central control system shall ensure safe shutdown of monitoring equipment when a shutdown operation has been given by the operator.		

ID	Requirement	Supporting Information	Rationale
TRS-INT-151	A visual status indication must be given to an operator about current functional status of all monitoring equipment.		
TRS-INT-156	Visual status indications and control of monitoring equipment must be made available to the operator at all times during operation		
TRS-INT-157	Visual status indications and control of systems must be made available on the Controller's laptop on the adjacent vehicle.	There will be an umbilical cord to the cab	
TRS-INT-158	Visual indications must include the current status of monitoring equipment (e.g. On / Off)		
TRS-INT-159	For calibration of equipment, the integrator must allow the operator the ability to search and filter data stored on the vehicle	This is specifically relating to calibration work on Rail Ultrasonic equipment	
TRS-INT-152	Data transfer between vehicle and trackside should be possible when no external power is supplied to the vehicle and when the vehicle is currently in shutdown mode		
TRS-INT-51	3.6.2 Health Monitoring		

ID	Requirement	Supporting Information	Rationale
TRS-INT-123	The central control system shall be able to handle error messages from monitoring equipment, ensuring the operator is informed of the error and the error message recorded in a log file for later analysis.	Failure mode: Monitoring Equipment has failed and is communicating failure of device over the TCP network	
TRS-INT-125	A visual and audible alert shall be provided to the IMV operator when any onboard system has a functional problem.	An operator will be located in the welfare module of the towing vehicle. The information could be provided wirelessly or through a second umbilical cord (the first umbilical is provided to control the ultrasonic/eddy current system provided under Lot 3).	
TRS-INT-178	A method of integrity checking should be provided to ensure that files sent from the vehicle are not corrupted on transfer to servers at Plumstead depot		
TRS-INT-47	3.6.3 Emergency Stop		
TRS-INT-185	The central control system shall distribute emergency stop signals to all monitoring equipment in the event an emergency stop plunger is pressed on the vehicle or the towing car	This should be a hardwire signal that requires no software	
TRS-INT-179	The central control system shall ensure that all equipment on the vehicle is safely discharged in the event of an emergency stop command being issued by the operator.		

ID	Requirement	Supporting Information	Rationale
TRS-INT-3	<b>3.7 Recording</b>		
TRS-INT-209	A central recording system shall be provided to record all data sent from the monitoring equipment and other systems onboard the vehicle.		
TRS-INT-11	The recording system shall be calibrated to take into account the physical locations of sensors on the IMV to ensure all sensor data is correct to a singular relative point		
TRS-INT-129	The central recording system shall allow the physical locations of monitoring equipment (sensors) stored on the vehicle, relative to central point on the vehicle	This ensures that equipment which is physically moved can still record to the same relative point on the train	
TRS-INT-191	The integrator must allow for physical components to be moved around the enclosure if required in a future modification		
TRS-INT-12	The central recording system shall record the time, position and vehicle speed associated with all measurements.		
TRS-INT-192	The recording system must store all data from enabled channels/monitoring equipment		

ID	Requirement	Supporting Information	Rationale
TRS-INT-27	Data recording must have redundancy designed in to the system to avoid a single point of failure resulting in stored data being unreadable/corrupt		To minimise potential losses from corrupted data or other failures.
TRS-INT-31	The central recording system shall be capable of recording up to 8 hours of data from all sources.	The IMV will primarily be used to record the central section of Infrastructure. With a designed speed of 50km/h (based on operational specifications of measuring equipment), the requirement calls for a maximum of 400Km of data to be stored from all sources.	
TRS-INT-33	The central recording system shall be expandable to allow further monitoring systems to be integrated at a later date.	Additional systems may be installed to monitor the evacuation walkway and/or OLE assets.	
TRS-INT-131	<b>3.8 Data</b>		

ID	Requirement	Supporting Information	Rationale
TRS-INT-28	All data shall be recorded in a centralised location on removable cartridges to enable physical removal of data.	<p>The Company is responsible for providing a PC link at the depot to receive data from the Infrastructure Monitoring Vehicle. The Supplier is responsible for ensuring that the Infrastructure Monitoring Vehicle can communicate with the PC for the purposes of transferring data.</p> <p>In the case of a cartridge based system, the Supplier is required to provide a connection to the computer which can read/write from/to the cartridge and copy/move files from the cartridge to the Company's infrastructure.</p>	
TRS-INT-29	Data shall be capable of being transmitted via wifi or 4G to the home server.		
TRS-INT-130	Data shall be capable of being transmitted via a wired connection between vehicle and LAN at depot		
TRS-INT-138	Data shall be stored in an open format, capable of being interpreted and analysed by third party software including datamap.	Datamap has been acquired by Crossrail through the acquisition of passenger rolling stock. This will be used to verify the accuracy of data coming from the IMV and being displayed in the VAT	
TRS-INT-190	Data storage must ensure there is a form of on-board backup in case the primary recording and retrieval storage becomes corrupted.		

ID	Requirement	Supporting Information	Rationale
TRS-INT-5	<b>3.9 Equipment Room</b>		
TRS-INT-19	A physical enclosure/equipment room, not longer than 40', shall be installed on the transport wagon to house control equipment.	It is not expected that the enclosure will be staffed during operation. Activities requiring human input should be undertaken from the power car.	
TRS-INT-210	The equipment room shall be mounted to the vehicle using standard ISO container fixings.		
TRS-INT-20	The equipment room, when installed on the wagon shall not infringe the W6a gauge described in GE/GN8573	A standard shipping container installed on the carrier vehicle will cause an infringement in the upper sector. Modifications to a standard container, or a purpose built enclosure will be required. A diagram of the wagon is shown in drawing EDV7579900006, and in figure 20 below.	

ID	Requirement	Supporting Information	Rationale
TRS-INT-8	<p>The equipment room shall provide sufficient space to install all Monitoring Equipment of 19" rack space for the following equipment, plus 25% additional space for expansion:</p> <ul style="list-style-type: none"> <li>- Track Geometry and Rail Profile System</li> <li>- Track visual defect detection system</li> <li>- Rail defect detection system</li> <li>- Wheel/Rail roughness monitoring system</li> <li>- Surface mapping and difference detection system</li> <li>- Balise monitoring system</li> <li>- Radio System Monitoring</li> </ul>		
TRS-INT-9	HVAC systems shall be provided within the equipment room sufficient to maintain an adequate operational environment for all systems within the room.	Solar gain, equipment heat radiation assumptions.	
TRS-INT-217	Lighting shall be provided within the equipment room for operations and maintenance purposes.		
TRS-INT-218	Access to operations and maintenance staff shall be provided to all equipment within the equipment room.		
TRS-INT-18	The equipment room shall be rated to sufficient Ingress Protection IP to maintain an operational environment for all systems within the enclosure.		

ID	Requirement	Supporting Information	Rationale
TRS-INT-6	<b>3.10 Power</b>		
TRS-INT-56	A UPS shall be provided for all equipment requiring a reliable supply, capable of meeting the requirements of the monitoring equipment.	The system is expected to require no more than 5kW continuous power. The Supplier will be responsible for liaising with suppliers for all other Infrastructure Monitoring Equipment lots to ascertain the total power consumption. The Supplier shall include a provision for additional power in respect of future expansion/inclusion of additional systems to the Infrastructure Monitoring Vehicle.	
TRS-INT-153	The UPS sizing should be adequate to ensure safe shutdown of all recording and monitoring systems in the event of sudden and prolonged power use.	The time for this shutdown is assumed to be no longer than 10 minutes	
TRS-INT-132	Power shall be distributed around the vehicle to all systems as required, including the monitoring equipment and equipment room.		

ID	Requirement	Supporting Information	Rationale
TRS-INT-168	The power distribution to the monitoring equipment (inclusive of the integrator) must be filtered to ensure a smooth, noise reduced, uninterrupted power supply	<p>The characteristics of the power supply is as follows:</p> <p>The original supply will be 400V. A 64A connector will be installed on the buffer plate of power car A. I'm asking Robel whether it's 380V or 415. Both are called 400 apparently.</p> <p>230 / 400 V system:</p> <p>The 230/400 V system is fed either via the generator or via a separate external supply. Changeover is done automatically. All circuits are protected with circuit breakers of the appropriate value.</p> <p>230 V sockets are located in the driving cab and also in the welfare module.</p> <p>A 230/110 V transformer is fitted to each vehicle of type A, B and E</p> <p>External 400 V sockets are fitted in the loading area for powering hand tools and other equipment.</p>	
TRS-INT-211	Power shall be provided in the format required by the monitoring equipment	The exact details of the power solution for the various pieces of monitoring equipment is to be determined through the Supplier's discussion with the providers of the various Infrastructure Monitoring Equipment.	

ID	Requirement	Supporting Information	Rationale
TRS-INT-193	There must be a facility to allow a connection to an onboard generator for power distribution.	<p>For clarity, provision of the generator is not within scope, only the capability to provide in future - wither for use with different towing vehicles or if it is determined that the power cars do not have sufficient power available.</p> <p>Location of on-board Generator:</p> <p>The flatbed wagon drawing EDV7579900006 shows the wagon design. The Supplier will be providing an equipment room on the deck. The generator could be located somewhere of Supplier's choosing in the remaining space.</p>	
TRS-INT-194	A connection point shall be provided to allow shore supply power connection to keep the vehicle powered when the power car is not coupled.		
TRS-INT-23	<b>3.11 Cable Routing</b>		
TRS-INT-24	A cable routing system shall be provided throughout the vehicle as necessary to connect the monitoring equipment to the central control system located within the equipment room.		
TRS-INT-35	Cable routes to bogies and other detachable components should be routed through a single umbilical/disconnection box where possible to enable equipment or the equipment room to be removed.	Removal is not expected to be undertaken regularly, but may be required for maintenance purposes.	

ID	Requirement	Supporting Information	Rationale
TRS-INT-57	The supplier is responsible for designing and installing cable routes between the equipment room and the coupling unit/umbilical cord	The vehicle welfare unit will be available as a temporary onboard work station.	
TRS-INT-4	<b>3.12 Fire and Materials</b>		
TRS-INT-13	All materials used on the vehicle shall comply with EN45545.		
TRS-INT-14	A fire detection system shall be fitted within the equipment room, alerting the operator when fire is detected.		
TRS-INT-216	The equipment room shall be fire rated to prevent spread of any internal fire.	Any ventilation openings must be closed in the event of fire detection.	
TRS-INT-146	Where possible, fire suppression systems should not damage stored data or installed monitoring equipment		
TRS-INT-41	<b>3.13 EMC</b>		
TRS-INT-49	Electromagnetic Compatibility between the Infrastructure Monitoring Vehicle, Crossrail and neighbouring railways shall be demonstrated.		

ID	Requirement	Supporting Information	Rationale
TRS-INT-36	<b>3.14 Assurance</b>		
TRS-INT-53	Approvals to operate vehicle in service with systems operational shall be obtained.	The original vehicle will be approved to carry the monitoring instruments as isolated 'dead weights'. Information required for approvals of the monitoring equipment will be provided by the equipment suppliers. This evidence must be added to that required for the subsequent changes to install everything within the scope of this specification to form one engineering change. The processes defined in RIS-2700-RST and the requirements of schedule 3A must be followed in developing the engineering change submissions.	
TRS-INT-133	<b>3.15 Internal Equipment</b>		
TRS-INT-134	The supplier must allow for expansion of 25% on all assets and distributions for additional sensing/monitoring equipment		
TRS-INT-186	The equipment installed must be resilient to frequent, varying degrees of vibration and movement associated with the operational environment		

ID	Requirement	Supporting Information	Rationale
TRS-INT-196	<b>3.16 Reliability, Availability and Maintainability</b>		
TRS-INT-144	Integration equipment must be designed and installed with modularity in mind (i.e. replacement equipment should not require the removal and reinstallation of other, unassociated equipment)		
TRS-INT-212	Line replaceable units shall be capable of being replaced at the Plumstead maintenance facility.		
TRS-INT-213	The supplier shall provide an obsolescence management service and document this in a Post-manufacture support plan.		
TRS-INT-214	The supplier shall minimise the need for special tools and equipment, and shall provide any necessary for maintenance or operation.		
TRS-INT-215	Systems shall be designed to use commonly available (COTS) parts where practicable.		
TRS-INT-162	<b>3.17 Training</b>		

ID	Requirement	Supporting Information	Rationale
TRS-INT-163	The supplier must provide training for operators to use the IMV	Training should be provided for up to 10 operators.	
TRS-INT-164	The supplier must provide training to demonstrate how data is extracted from the vehicle to a server in Plumstead Depot		
TRS-INT-7	<b>3.18 Visualisation Tool</b>		
TRS-INT-198	Visualisation and Analysis software, which can be used to view all the recorded data from the IMV shall be supplied.	This requirement refers to software which will be used by back office engineers to review data recorded by the IMV. It would allow all data recorded to be reviewed by an engineer on a PC, including the ability to compare data collected from different recording runs.	

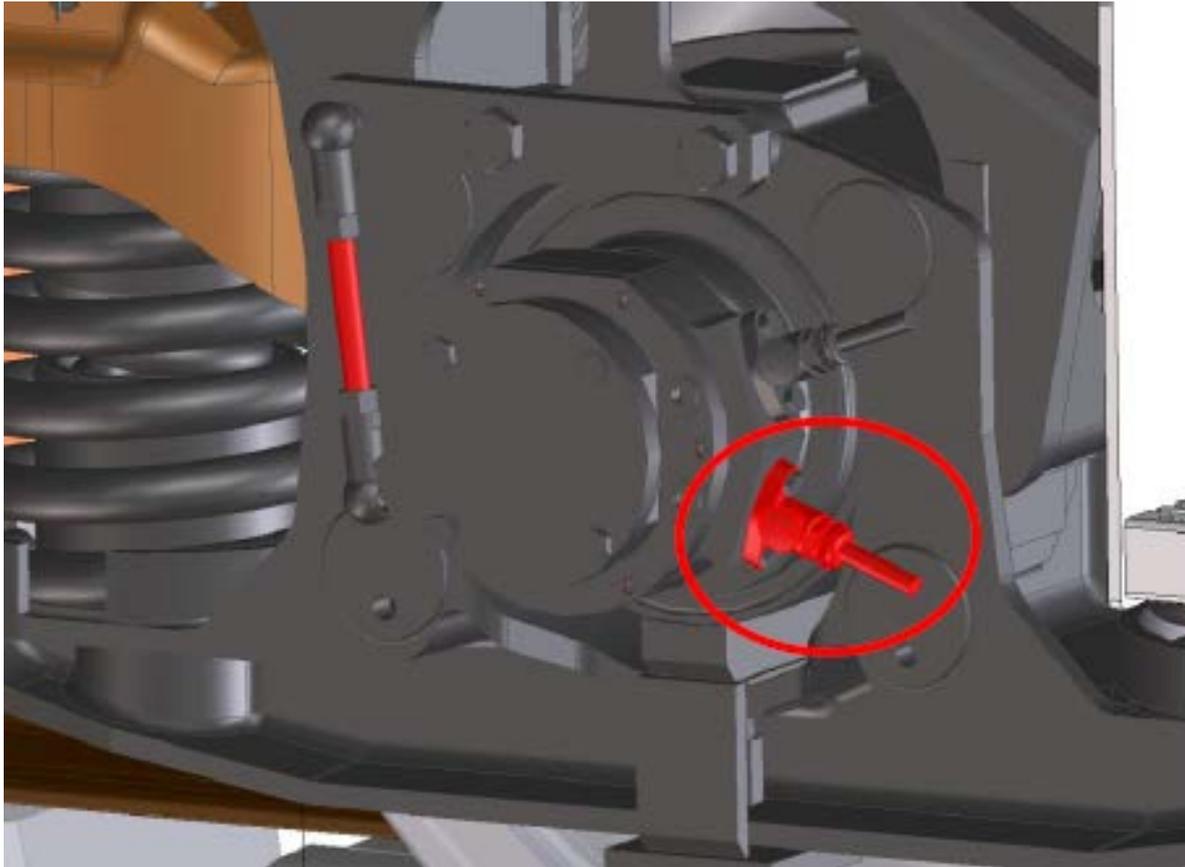


Figure 141A – Tachometer mounting location on WSP

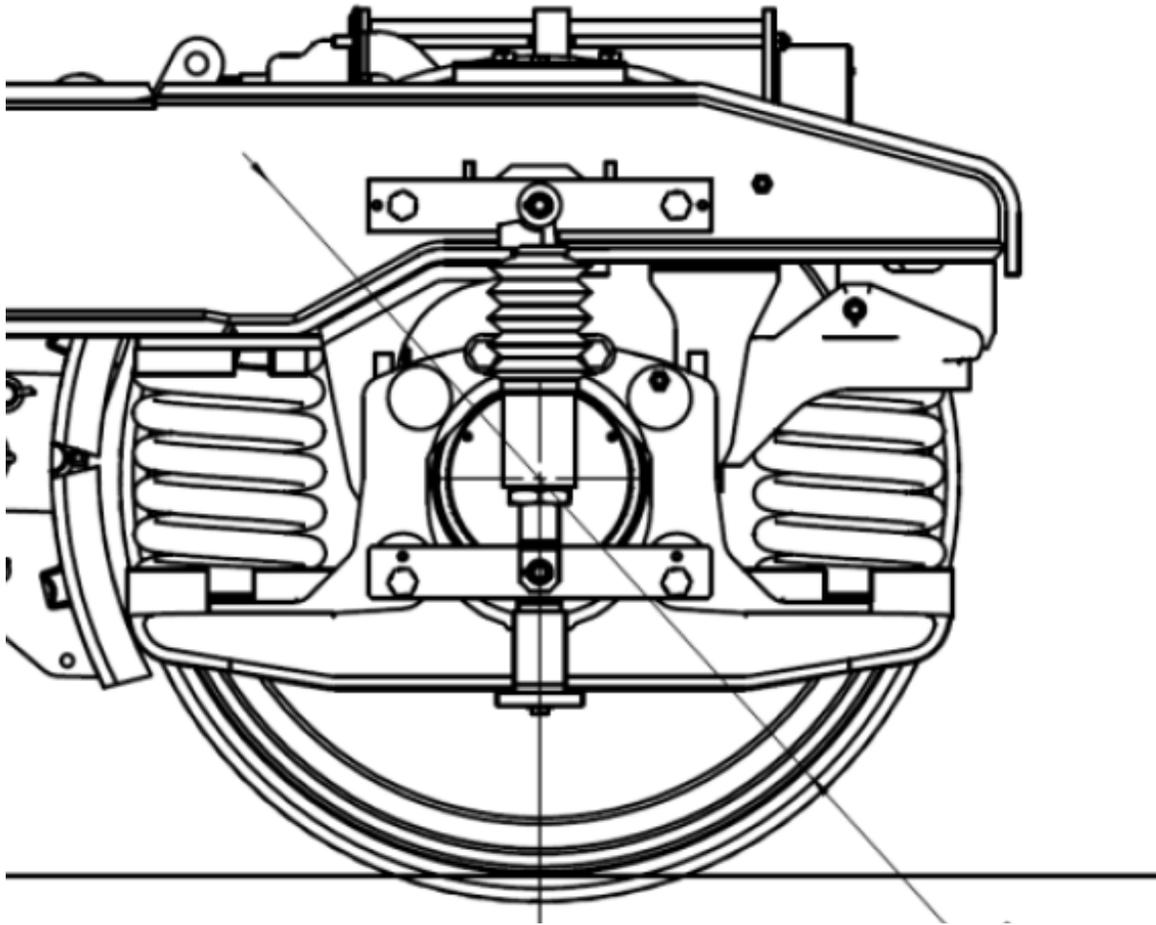


Figure 141B – Load-Weigh valve

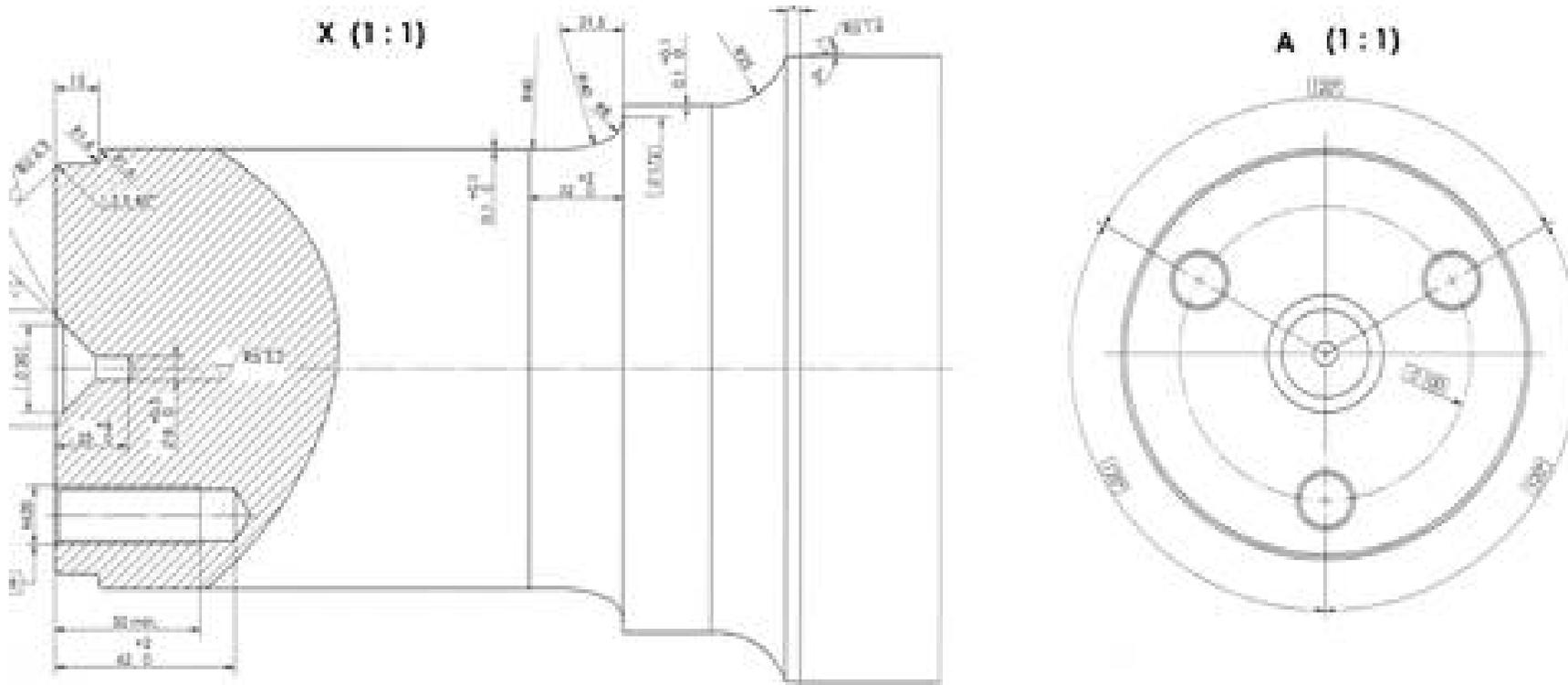


Figure 141C – Axle end

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**Proprietary detailed drawing of flatbed wagon.**

**SCHEDULE 3A: Assurance**

## **Definitions**

For the purposes of this Schedule 3A, the following words and expressions shall have the following meanings:

**"Agreement"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"ALARP"** means "As Low as Reasonably Practicable" as described in the Health and Safety at Work etc. Act 1974;

**"Applicable Laws"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Assessment Body"** means a competent external or internal individual, organisation or entity, separate and independent from the "design, risk assessment, risk management, manufacture, supply, installation, operation/use, servicing and maintenance" of the system under assessment, to check the application of the CSM risk management process by the proposer and the risk assessment results in order to form a judgement on whether the change management process and the safety requirements resulting from this process are appropriate and adequate for the planned significant change so that the system can satisfy those safety requirements as defined in "Regulation (EU) No 402/2013(1) on the common safety method for risk evaluation and assessment" or in the equivalent OTIF UTP GEN-G of 1.1.2014;

**"Assurance Acceptance"** means the review and approval given by the Company in accordance with the procedure described in paragraph 1 of this Schedule 3A and **"Assurance Accept"** and **"Assurance Accepted"** shall be construed accordingly;

**"Assurance Period"** means the period commencing from the date on which the Company receives the submission of certain information, drawings and/or documents from the Supplier for Assurance Acceptance pursuant to paragraph 1.5 of this Schedule 3A, until such date that the Company notifies the Supplier conclusively that such information, drawings and/or documents have been Assurance Accepted;

**"Central Operating Section"** means the Crossrail central operating section, being the railway infrastructure between Royal Oak Boundary in the west of London and Pudding Mill Lane in the east of London and Abbey Wood sidings in the south east of London;

**"Commencement Date"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Company's Representative"** means the "Company's Representative" as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Contract Programme"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Crossrail Infrastructure"** means that part of the Railway Infrastructure managed by Rail for London consisting of the Central Operating Section;

**"DeBo"** or **"Designated Bodies"** means independent third parties appointed by the Secretary of State to assess and verify conformity of projects with Notified National Technical Rules (NNTRs) in the United Kingdom.

**"Design"** means the design of the IMV and the production of each of the items described in paragraph 16.6.a of this schedule undertaken by the Supplier pursuant to this Agreement;

**"Design Area Breakdown Structure"** means a hierarchical and incremental decomposition of the Train Works into deliverables and work packages;

**"Design Submissions"** has the meaning given to such term in paragraph 9.4(A) of this Schedule 3A;

**"Document Control Process"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"EMC"** means electromagnetic compatibility;

**"EMC Management Plan"** has the meaning given in paragraph 4 of this Schedule 3A;

**"EMI"** means electromagnetic interference;

**"ESM"** means engineering safety management;

**"Goods"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Hazard Log"** has the meaning given to such term in paragraph 3.9(A);

**"IHA"** means interface hazard analysis;

**"Key Date"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Manuals"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"NoBo"** or **"Notified Bodies"** means independent third parties appointed by the Department for Transport, the Secretary of State or another European Union Member State which meet the criteria of competence, integrity and independence set out in Annex VIII of Directive 2008/57/EC;

**"Parties"** means the **"Company"** and the **"Supplier"** as defined at the head of this contract agreement;

**"Plasser"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"PWHR"** means Project Wide Hazard Record as described in paragraph 3.9(C);

**"Request for Review"** means a request (in the form agreed between the Parties from time to time) by the Supplier for the Company to review certain documents for Assurance Acceptance;

**"Relevant Consents"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"RIR"** means The Railways (Interoperability) Regulations 2011

**"ROGS"** means the Railway and Other Guided Transport Systems (Safety) Regulations 2006;

**"Safety Authorisation"** has the meaning given to such term in ROGS;

**"Services"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Spares"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Special Tools"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Static Tests"** means the static tests identified in the Specification to be carried out by the Supplier in accordance with the Technical Assurance Plan;

**"Technical Assurance Plan"** or **"TAP"** is as defined in the Definitions and Interpretation (clause 1) of this contract agreement;

**"Technical Requirements Specification"** or **"TRS"** means the Crossrail technical requirements specification relating to Integration of the Infrastructure Monitoring Vehicle as set out in the document entitled "Technical Requirements Specification" with document number CRL1-RFL-O8-RSP-CR001-50006 and which forms part of this contract agreement;

**"Train Works"** means all design, manufacture, supply, assembly, testing, commissioning activities required in order to deliver the Services defined in this Agreement;

**"TSI"** means Technical Specification for Interoperability;

**"Vehicle"** means the original transport wagon provided by Plasser, unmodified by the Supplier.

#### **Dates of Deliverables**

<b>Deliverable</b>	<b>Date Required</b>	<b>See Paragraph</b>	<b>Notes</b>
Technical Assurance Plan	Within one month of the Commencement Date	2.1(B)	
Description of interfaces	No later than two months after the Commencement Date	3.12(A)	

## 1. ASSURANCE ACCEPTANCE PROCESS

- 1.1. Where the Supplier is required to submit information, drawings and/or documents to the Company for Assurance Acceptance, the Supplier shall comply with the requirements described in this paragraph 1. Any plan, programme, strategy or other document of the Supplier that is included in any Schedule to this Agreement as at the Commencement Date shall be deemed to have been Assurance Accepted in the form included in this Agreement but without prejudice to (i) the obligations of the Supplier to revise and/or resubmit such document for Assurance Acceptance as required by this Agreement; and (ii) the requirements of this Agreement generally.
- 1.2. The Supplier shall ensure that each drawing, document, report and/or other information submitted to the Company for Assurance Acceptance shall be in accordance with the Document Control Process and is accompanied by a Request for Review.
- 1.3. The Supplier shall ensure that each Request for Review contains, to the extent applicable, the following information:
- (A) the submission number (which shall be independent of any drawing number);
  - (B) the drawing and/or document number, including where relevant the revision letter or number;
  - (C) the drawing title and/or title of the document;
  - (D) the date of submission; and
  - (E) any supplementary information which is reasonably necessary to enable the Company to make a decision in accordance with paragraph 1.6 below (including, where relevant, a description of the latest revision).
- 1.4. Where the Company has received drawings, documents and/or information that have been submitted for Assurance Acceptance in accordance with the requirements of this paragraph 1, the Company shall promptly acknowledge receipt of such submission by signing, dating and returning to the Supplier a copy of the Request for Review for that submission.
- 1.5. The Supplier shall be responsible for ensuring that the Company receives each submission made by the Supplier for Assurance Acceptance (as evidenced by the Supplier receiving a copy of the Request for Review countersigned by the Company) and the date on which the Company signs a copy of the Request for Review shall be the date on which, for the purposes of this paragraph 1, the Company shall be deemed to have received the submission for Assurance Acceptance.
- 1.6. Within 10 Working Days of the date the Company receives a submission from the Supplier for Assurance Acceptance (or such later date as notified to the Supplier in accordance with paragraph 1.7 below), the Company shall review and comment on the information, drawing and/or document that has been submitted (or re-submitted) by the Supplier and return one copy of the Request for Review stamped or marked with one of the following:
- "Category I — No Assurance Acceptance";
  - "Category II — Assurance Acceptance granted with comments"; or
  - "Category III — Assurance Acceptance granted".
- 1.7. Where the Company, acting reasonably, considers that the complexity, detail, scope and/or nature of the drawings, documents and/or information submitted by the Supplier for Assurance Acceptance means that it may not be able to respond to the Supplier within 20 Working Days of receipt by the Company of such submission, the Company shall be entitled to an additional period of time to consider the submission, provided that the Company notifies the Supplier in writing within seven Working Days of the date the Company received

the submission that the Company is exercising its rights under this paragraph 1.7 to extend the period of time to consider such submission. Each notice served by the Company pursuant to this paragraph 1.7 shall specify:

- (A) the details of the relevant submission;
  - (B) the additional period of time required by the Company ; and
  - (C) a description in reasonable detail as to the reasons why the additional time is required.
- 1.8. The Supplier shall undertake the following actions in relation to the information, drawing and/or document (as the case may be) that has been returned to it by the Company in accordance with paragraph 1.6 and subject to the provisions of paragraph 1.13:
- (A) if such information has been stamped "Category I — No Assurance Acceptance", the Supplier shall immediately review and revise the relevant drawing, documents and/or information, taking into account and incorporating the comments made by the Company pursuant to paragraph 1.6 and shall re-submit such information for Assurance Acceptance by the Company in accordance with this paragraph 1;
  - (B) if such information has been stamped "Category II — Assurance Acceptance granted with comments", the Supplier shall be entitled to proceed on the basis of that drawing, documents and/or information as amended to incorporate the comments made by the Company. The Supplier shall re-submit the amended drawing, documents and/or information to the Company for Assurance Acceptance pursuant to paragraph 1.6; and
  - (C) if such information has been stamped "Category III — Assurance Acceptance granted", the Supplier shall be entitled to proceed on the basis of drawings, documents and/or information submitted to the Company.
- 1.9. If the Company does not respond within the timeframe set out in paragraph 1.6, the Supplier shall be entitled to treat the information submitted to the Company as "Category III – Assurance Acceptance granted" provided that the Company has signed and returned a copy of the Request for Review to acknowledge receipt under paragraph 1.3 in respect of that submission for Assurance Acceptance.
- 1.10. Unless otherwise required by the Company, the Supplier shall only be required to submit one example of any sample, pattern or model in any request for Assurance Acceptance.
- 1.11. The Company shall be entitled, at any time and on reasonable notice (and in any event not less than two (2) Working Days from the date of such notice) to:
- (A) request the Supplier to submit any further document, information, design, drawing, calculation, schedule, sample, pattern or model necessary to clarify, support and/or justify any submission for Assurance Acceptance; and/or
  - (B) (acting reasonably) require the Supplier and/or any of its key Sub-Contractors to attend a meeting to discuss any aspect of the drawings, documents and/or information submitted for Assurance Acceptance,
- and the Supplier shall comply with any such request.
- 1.12. When considering which category of response to give to any submission by the Supplier for Assurance Acceptance, the Company shall not comment adversely on such submission if and to the extent the content of such submission is in accordance with the Technical Requirements Specification, Applicable Laws, Industry and TFL Standards, good industry practice and the provisions of this Agreement. Where the content of any submission is not in accordance with the TRS, Applicable Laws, Industry Standards or TFL Standards, good industry practice and/or the provisions of this Agreement, the Supplier agrees to incorporate all comments made by the Company before re-submitting any drawing, document or information for Assurance Acceptance.

- 1.13. Where indicated in this Agreement, the Supplier shall not proceed with such part of the project relating to the Assurance Acceptance without Assurance Acceptance having first been obtained. Where it is not stated that Assurance Acceptance must be obtained before action may be taken, the Supplier may proceed without Assurance Acceptance being granted, but it shall do so at its own risk.
- 1.14. No comment, stamping, marking or categorisation of any information, drawing or document shall diminish or relieve the Supplier from any of its obligations under this Agreement, nor shall such comment, stamping, marking or categorisation be a Variation nor shall it permit the Supplier to any costs, relief or compensation of any kind.
- 1.15. Unless expressly stated otherwise the Supplier shall not be entitled to amend any Assurance Accepted document in any manner or form without first obtaining Assurance Acceptance to such amendment.

## 2. TECHNICAL ASSURANCE PLAN

### 2.1. General

- (A) During the Assurance Period, the Supplier shall in performing its obligations under this Agreement implement and manage a process of progressive assurance in order to demonstrate to the Company that the Supplier is complying with the requirements of the TRS in respect of design, manufacture, testing, commissioning and supply of the IMV.
- (B) The Supplier shall provide to the Company for Assurance Acceptance, within one month of the Commencement Date, a technical assurance plan in respect of the design, manufacture, testing, commissioning and supply of the IMV containing the information set out in paragraph 2.3 of this Schedule 3A.

- 2.2. Once the technical assurance plan referred to in paragraph 2.1(B) has received Assurance Acceptance, it shall be the "**TAP**" for the purposes of this Agreement.

### 2.3. Technical Assurance Plan

- (A) The Supplier shall ensure that the TAP consists of, describes or includes the following:
- i. Verification and Validation Strategies;
  - ii. a programme for the submission by the Supplier of the information and/or documentation that will be submitted to the Company for Assurance Acceptance (described in paragraph 2.3.b below) The Supplier shall ensure that, to the fullest extent possible, the programme is structured to:
    - A. allow regular intervals between the submission of information and/or documents to the Company;
    - B. take into account any timeframes and/or approval periods specified in any Applicable Laws and TfL Standards; and
    - C. be consistent with the Contract Programme; and
  - iii. an organisation chart setting out details of each key staff member of the Supplier who will be responsible for technical assurance, including, for each key staff member, their CV and details of qualifications and explanations as to how their experience is adequate for the competency requirements of the proposed role; and
- b. The information and/or documentation mentioned above shall include, or reference, as a minimum in paragraph 2.4.b(iii):
- i. Engineering Safety Management (as described in paragraph 3);

- ii. Electromagnetic Compatibility (as described in paragraph 4);
  - iii. Technical Change Control (as described in paragraph 5);
  - iv. Testing and Commissioning (as described in paragraph 6);
  - v. Interoperability (as described in paragraph 7)
  - vi. Compatibility (as described in paragraph 8); and
  - vii. Design Assurance (as described in paragraph 9)
- c. The Supplier shall ensure that the TAP is consistent and complies with all railway approval processes, all Applicable Laws, Industry Standards and TfL Standards and any Relevant Consents.
- d. The Supplier shall audit its own internal engineering safety management activities and those of any Sub-Contractors or suppliers, as appropriate. The Supplier shall integrate such engineering safety management auditing within the overall quality management system for the works and the results of such audits shall be submitted to the Company for Assurance Acceptance.

### 3. ENGINEERING SAFETY MANAGEMENT ("ESM")

3.1. The Supplier shall submit to the Company for approval the System Safety Plan (SSP) which must detail the application of the ESM principles throughout the programme. The SSP shall, as a minimum, meet the requirements of this paragraph 3.

#### 3.2. General Engineering Safety Management Requirements

(A) The Supplier is responsible for ensuring the adequacy and safety of the IMV, having regard to:

(B) normal, degraded and emergency operating modes;

(C) maintenance of the systems; and

(D) the conditions and environment of the Crossrail railway.

3.3. The Supplier shall provide all necessary evidence of safety adequacy to the Company or to others who reasonably require such evidence to secure Safety Authorisation to operate the railway in accordance with all railway safety legislation and Applicable Laws in the form of an Engineering Safety Justification.

#### 3.4. Engineering Safety Competency

The Supplier shall demonstrate, to the Company's satisfaction, that the individuals involved in the demonstration of the safety adequacy of the elementary systems are suitably qualified and experienced.

#### 3.5. Engineering Safety Manager

The Supplier shall appoint an appropriately experienced and competent engineering safety manager who shall be responsible for the management, coordination, quality control and assurance of the Supplier's engineering safety management activities (the "**Engineering Safety Manager**"). Prior to appointing the Engineering Safety Manager, the Supplier shall submit the CV of the Engineering Safety Manager to the Company for the Company's review, and, subject to the Company's satisfaction, acceptance. The accepted Engineering Safety Manager will serve as the primary interface with the Company on engineering safety matters.

#### 3.6. Competency of Engineering Safety Assessors:

(A) The Supplier shall ensure that only qualified and competent professional assessors undertake engineering safety assessment activities. The Supplier shall ensure that the Supplier's engineering safety organisation is explained in sufficient detail in the Supplier's SSP. The Supplier shall ensure that the SSP is sufficiently independent from the design and commercial delivery activities.

(B) The Supplier shall maintain an engineering safety staff competency matrix indicating the roles, responsibilities and records of competencies of each individual. Such matrix shall be made available by the Supplier for review by the Company upon request.

#### 3.7. Application of Common Safety Method Regulation ("**CSM Regulation**")

(A) The Supplier shall demonstrate that the safety and adequacy of all systems, subsystems, etc shall be carried out in compliance with the CSM Regulation and the Office of Rail and Road Guidance on the Application of the Common Safety Method on Risk Evaluation and Assessment (September 2010) as the same may be updated from time to time.

(B) For the majority of systems the risk estimation and "**ALARP**" justification shall be applied, following a recognised risk matrix approach. However, for high risk (e.g. where the unavailability of the system safety function is judged to be [potentially or]

immediately life threatening), new/novel, complex or bespoke designs, the Supplier may be required by the CSM Regulation to undertake a full, in- depth, quantitative safety analysis.

### 3.8. Safety Authority

The role of "**Safety Authority**" shall be filled by the Railway Approvals Board – Crossrail ("**RABC**"). The terms of reference with which RABC shall be managed can be found in CRL1-RFL-O-GPD-CR001-50001.

### 3.9. Hazard Management

- (A) The Supplier shall establish and keep updated a hazard log which shall record and manage all hazards and safety risks arising throughout the duration of this Agreement (the "**Hazard Log**").
- (B) The Supplier shall use the Hazard Log in accordance with the Crossrail Hazard Management Procedure (CRL1-XRL-O8-GPD-CR001-50002) to track and manage those hazards which have been identified.
- (C) The identified hazards shall be recorded in the Project Wide Hazard Record ("**PWHR**") which shall be provided by the Company to the Supplier. The Supplier shall adopt and develop the PWHR as its principal engineering safety hazard management tool for the works.
- (D) The preliminary Crossrail PWHR is supported on the IBM DOORS database which is managed by the web-based software platform named "Comply Serve" on behalf of Crossrail. On the Supplier's request, the Company will provide the Supplier with the necessary process, procedure, access and training in order to use the "Comply Serve" platform.

### 3.10. Hazard allocation and the ALARP principle

- a. Where a hazard has been identified as the responsibility of the Supplier, the Supplier shall, in accordance with the terms of this Agreement, demonstrate that it has managed the risks associated with the hazard such that those risks are ALARP.
- b. Where a hazard has been identified as being the responsibility of a future duty holder, the Supplier shall reach agreement, acting reasonably, with that future duty holder to agree an appropriate strategy for managing the risks associated with the hazard such that those risks are ALARP. In the event that the Supplier identifies a hazard or hazard mitigation should be transferred to a future duty holder, these will be submitted to the Rolling Stock Hazard Review Panel managed by the Company, for review and acceptance of transfer in accordance with the Rolling Stock Hazard Review Panel Terms of Reference (CR-MS-102-02-0002).

### 3.11. Product Safety Cases

- (A) Where any system or sub-system cannot be demonstrated to be ALARP by the application of a recognised applicable standard, the Supplier shall develop a product safety case which the Supplier shall submit to RABC for acceptance in accordance with the Company's Product Acceptance Process (CR-MS-103-02-0046).

### 3.12. Management of interfaces

- (A) The Supplier acknowledges and agrees that the management of interfaces is a particular issue affecting the safety of the rail industry. The Supplier shall therefore produce a description of each of the interfaces, including, where appropriate, those with the suppliers of the IMV equipment, infrastructure managers, other users of the Crossrail Infrastructure, neighbours of the Crossrail Infrastructure, neighbouring Railway

Infrastructure and other delivery partners, and submit the same to the Company for Assurance Acceptance by no later than two months after the Commencement Date.

- (B) The Supplier shall demonstrate to the Company that all the risks associated with the interfaces have been reduced to a level that is ALARP. The Supplier will perform and report on an interface hazard analysis ("**IHA**") to set out how the engineering safety implications at internal and external interfaces will be adequately addressed and managed. The IHA will involve all relevant interfacing contractors, third parties and the Company.
- (C) In each safety analysis and assessment conducted by the Supplier, the Supplier shall consider the interface between the design of the IMV and the Crossrail Infrastructure. In particular the Supplier shall ensure that the design of the IMV shall not adversely affect the ability of (i) the railway undertaking to obtain a safety certificate in relation to operating the on the Crossrail Infrastructure or (ii) the Infrastructure Manager of the Central Operating Section to obtain safety authorisation for the operation of the Central Operating Section.
- (D) The Supplier shall provide to the Company all necessary evidence of safety adequacy to assist the Company or their nominated railway undertaking to secure authorisation to operate the railway in accordance with all Applicable Laws and TfL Standards. To facilitate this, the Supplier shall make presentations to the Company and secure acceptance of the evidence of engineering safety from the Company and the appropriate approvals bodies.

### 3.13. Independent safety auditing and assessment

- (A) The Supplier shall, at its own cost, establish and implement independent safety auditing and assessments to ensure that its work and practices are in accordance with all Applicable Laws, Industry Standards and TfL Standards.
- (B) The Supplier shall, where modifications affect the original vehicle authorisation, appoint a Notified Body ("**NoBo**") and Designated Body ("**DeBo**") to assess conformity of the systems and subsystems etc. with the applicable TSIs and NNTRs, and to prepare the necessary technical files to evidence this.
- (C) The Supplier shall comply with the CSM Regulation for Risk Evaluation and Assessment to demonstrate the safety adequacy of the systems and subsystems etc. delivered as part of the scope.
- (D) The Supplier shall, as required by the CSM Regulation for Risk Evaluation and Assessment, appoint an Assessment Body ("**AsBo**") to confirm whether the engineering safety assurance of the systems, subsystems etc. conforms and complies with the principles of the CSM Regulation.
- (E) The Supplier shall make available to the Company on a progressive basis, evidence of conformity with the TSIs and NNTRs to support safety assurance activities under the CSM Regulation.
- (F) The Supplier will fully cooperate with the Assessment Body and provide the engineering safety evidence necessary to carry out any assessment and comply with any improvements to assure the Supplier's compliance with the CSM Regulation.
- (G) The Supplier shall prepare and submit to the Company an independent review relating to design and final engineering safety justification(s). The Supplier shall ensure that these design and final engineering safety arrangements are described in the Supplier's SSP.
- (H) The Supplier shall formally report the findings of all reviews to the Company within 30 days of any such review being completed.

#### 4. ELECTROMAGNETIC COMPATIBILITY

4.1. The Supplier shall prepare an EMC management plan (the "**EMC Management Plan**") which shall describe the Supplier's approach to EMC and shall provide evidence to assure the Company that:

- (A) the IMV comply with all Applicable Laws and Industry Standards relating to EMC;
- (B) compatibility is achieved with Crossrail Infrastructure and neighbouring Railway Infrastructure (namely Docklands Light Railway, London Underground, Heathrow Express and Network Rail); and
- (C) the IMV is not adversely impacted by the external EMC environment.

4.2. The Supplier shall ensure that the EMC Management Plan includes (without limitation) the following:

- (A) the Industry Standards to be adopted;
  - b. organisation of the EMC team including the position within the Supplier's organisation;
  - c. the arrangements for EMC surveys and coupling studies;
  - d. the proposals for an EMI hazard analysis and EMI hazard log addressing, as a minimum;
    - i. all Plant/Materials/Equipment/Systems, including that of others, that are susceptible to or are a source of EMI;
    - ii. the likely interference mechanisms;
    - iii. the likely consequences if interference takes place;
    - iv. the proposed EMI mitigation measures if required;
    - v. threats not covered by standards requiring additional tests;
  - e. details of the degraded modes and fault conditions to be assessed within the overall EMC strategy;
  - f. an EMC test plan to validate the EMC performance;
  - g. arrangements for liaison and exchange of information with the Company and its nominees, delivery partners and contractors developing the Crossrail Infrastructure;
  - h. support & collaboration with the signalling equipment supplier, as required, to achieve the overall plant EMC design and acceptance, including, the supply of data & information, cable routing, power quality requirements, earthing and bonding, equipment & antenna positioning, hazard identification & EMI suppression; and
  - i. arrangements for obtaining acceptance/approval from neighbouring Railway Infrastructure (namely, Docklands Light Railway, London Underground and Network Rail).

4.3. The Supplier shall submit an EMC technical file upon completion of all testing documenting the above activities and confirming EMC with the Company and the infrastructure managers of neighbouring Railway Infrastructure.

## 5. TECHNICAL CHANGE CONTROL

- 5.1. For the duration of this Agreement, the Supplier shall establish and implement a process ("**Technical Change Control Process**") that shall enable the Supplier to manage, in a structured manner, any change to the design solution, function and/or any technical aspect of the IMV or any item of Goods as a result of a Variation or otherwise. The TAP shall describe the Technical Change Control Process to be implemented by the Supplier.
- 5.2. The Supplier shall ensure that the Technical Change Control Process includes a process for the categorisation of technical changes which is consistent with the IMV Design Area Breakdown Structure.
- 5.3. Where a document, drawing and/or other information that has been granted Assurance Acceptance by the Company requires amendment in connection with a Variation, a permitted Design change or other requirement of this Agreement, the Supplier shall make such amendments as it considers necessary and submit the amended drawing, document and/or information to the Company for Assurance Acceptance.

## 6. TESTING AND COMMISSIONING

- 6.1. The Supplier shall submit to the Company for Assurance Acceptance a testing and commissioning strategy (the "**Test Plan**") that, as a minimum, shall detail the following:
- (A) the overall plan for testing and commissioning leading to Take Over;
  - (B) the various phases of testing as further detailed in paragraphs 6.2 and 6.3;
  - (C) the testing sequence and logic, including the interface with others;
  - (D) the processes for the management of the testing and commissioning activities.
- 6.2. The Test Plan submitted for Assurance Acceptance pursuant to paragraph 6.1 above shall include, in relation to the Static Tests, as a minimum the following detail
- (A) the proposed systems and subsystems tests required;
  - (B) the pass/fail criteria;
  - (C) any proposed cross-acceptance from previous test results; and
  - (D) the testing programme.
- 6.3. The Test Plan submitted for Assurance Acceptance pursuant to paragraph 6.1 above shall include, in relation to the Infrastructure Tests, as a minimum the following detail:
- (A) the commissioning testing required (e.g. signalling integration testing, gauging);
  - (B) the pass/fail criteria;
  - (C) any proposed cross-acceptance from previous testing; and
  - (D) the test programme.

## 7. INTEROPERABILITY

- 7.1. The Supplier shall assess the modifications undertaken to the Vehicle and declare whether the modifications require re-Authorisation to Place Into Service ("**APIS**") is required
- 7.2. Where re-Authorisation to Place Into Service (APIS) is required the Supplier shall be the contracting entity under the Railways (Interoperability) Regulations 2011 and be responsible for demonstrating compliance with these regulations and any applicable technical standards

for interoperability. The Supplier shall be responsible for gaining Authorisation to Place into Service (APIS) from the Office of Rail and Road by submitting a statement of compliance supported by a technical file which is signed by their appointed NoBo and DeBo and which is supported by a safety report from an Assessment Body in accordance with Railways (Interoperability) Regulations 2011 ("**RIR**").

## 8. COMPATIBILITY

The Supplier shall comply with Railway Group Standard GE/RT8270 and CRL1-RFL-O8-GPS-CR001-50002 in demonstrating compatibility with the Crossrail routes of Network Rail infrastructure and the Crossrail Infrastructure (as defined in CRL1-RFL-O8-LST-CR001-50001) for all modifications made to the vehicle. In accordance with this standard the Supplier shall be the "Proposer" for the introduction of the IMV and shall be responsible for gaining any effected parties to buy-in to the proposed change.

## 9. DESIGN ASSURANCE

9.1. The Supplier shall, throughout the Design phase, demonstrate to the reasonable satisfaction of the Company that the proposed design of the IMV satisfies the requirements specified in the Specification.

9.2. Design Management

The Supplier shall prepare a IMV design management process which shall, as a minimum, contain:

- a. the Design strategy, which will describe how the Supplier will produce an integrated, assured, certified design;
- b. the design organisation the Supplier plans to put in place to undertake the Design;
- c. the Design Area Breakdown Structure;
- d. the design Submission programme; and
- e. the Design review and verification procedures .

9.3. Design Phases

- (A) In order to ensure that the design of the IMV meets the Company's requirements, the Supplier shall submit certain design information to the Company in a Design Submission
- (B) The detailed scope of the Design Phase is described below.

9.4. Design Phase

- (A) During the Design Phase, the Supplier shall submit the relevant submissions ("**Design Submissions**") to the Company for Assurance Acceptance in accordance with the design submission programme. The Design Submissions shall include, as a minimum:
  - i. a list of the requirements to be adopted by the Supplier in undertaking the design of the IMV;
  - ii. a justification that the requirements specified in sub-paragraph i above are consistent with the TRS and all Applicable Laws, Industry Standards and TfL Standards that the Supplier proposes to comply with in designing, manufacturing, commissioning and testing the IMV;
  - iii. a description of the overall concept of the design together with evidence that it satisfies the requirements specified in sub-paragraph i above;

- iv. the manner in which the requirements specified in sub-paragraph i above will be verified;
  - v. an up-to-date list of the major equipment Subcontractors and any other important subcontractors or suppliers that will be involved in the design, manufacture, commissioning, testing and supply of the IMV;
  - vi. a summary of any new or novel technology to be utilised in the IMV and evidence that such technology does not materially affect the risk of the Supplier being unable to perform its obligations under this Agreement; and
  - vii. a list of the principal interfaces with the IMV design.
- (B) When the Design Submissions have each been granted Assurance Acceptance by the Company, the Parties shall hold a close-out meeting. Unless agreed by the Parties at the close-out meeting held pursuant to this paragraph 9.4, the Company shall, no later than five Working Days after the completion of the close-out meeting, notify the Supplier in writing that the Design Phase has been completed, together with any outstanding Company comments to be addressed by the Supplier pursuant to the Assurance Acceptance process.

## Referenced Documents

The following documents are provided on the CD-Rom that forms part of the contract agreement:

Crossrail Hazard Management Procedure  
CRL1-XRL-O8-GPD-CR001-50002

Product Acceptance Procedure  
CR-MS-103-02-0046

Rolling Stock Hazard Review Panel  
CR-MS-102-02-0002

Crossrail Routes for Engineering Trains  
CRL1-RFL-O8-LST-CR001-50001

Compatibility between Crossrail Central Section Infrastructure and Engineering Trains  
CRL1-RFL-O8-GPS-CR001-50002

Terms of Reference for Railway Approvals Board - Crossrail  
CRL1-RFL-O-GPD-CR001-50001

Railways Group Standard (Compatibility of Rolling Stock and Infrastructure)  
GE/RT8270

Note that this document is currently available on-line here:

<https://www.rssb.co.uk/rgs/standards/GERT8270%20Iss%202.pdf>

## **Schedule 4**

### **Contract Programme**

Within the period stated in Schedule 1 the Supplier shall, in accordance with Clause 4.1. submit a programme to the Company for the Company's acceptance.

The programme shall be revised in accordance with Clause 4.5

## **Schedule 5**

### **Contract Variation Procedure**

- 1 The cost of any Variation Order shall be agreed between the parties taking account of the reasons why the Variation Order was required.
- 2 The Company may propose a variation by completing and issuing the relevant Variation form using ASITE (or when ASITE is not used, by completing Part A of the Variation Proposal in Appendix 1 and supplying three (3) copies of it to the Supplier). Within five (5) Working Days of receipt, or such other time as may be agreed by the Company, the Supplier shall respond to the Variation by using ASITE (or when ASITE is not used, by completing Part B of the Variation Proposal and shall supply two (2) copies of the Variation Proposal to the Company). The Company shall be entitled, at any time within thirty (30) days of receipt, to instruct and authorise the Supplier to proceed with the variation on the terms so set out by each party by using ASITE (or when ASITE is not used, by completing and signing Part C of one copy of the Variation Proposal (which, following such signature, will be referred to as a "Variation Order") and supplying such Variation Order to the Supplier). The relevant part(s) of the Contract shall thereupon be varied accordingly.
- 3 The Supplier may propose a variation, by means of the relevant form in ASITE (or when ASITE is not used, after requesting the issue by the Company of a Variation Proposal variation number, by completing Parts A and B of a Variation Proposal and supplying two (2) copies of it to the Company). The Company shall be entitled, at any time within thirty (30) days of receipt, to instruct the Supplier to proceed with the variation on the terms so set out by the Supplier by issuing an instruction via ASITE (or when ASITE is not used, by completing and signing Part C of one copy of the Variation Proposal (which, following such signature, will be referred to as a "Variation Order") and supplying such Variation Order to the Supplier). The relevant part(s) of the Contract shall thereupon be varied accordingly.
- 4 The Supplier may indicate in a Variation Proposal that the price is an estimated price but, if it does so, it shall supply a firm price to the Company in writing (via ASITE when used) at least seven (7) days before the expiry of the time within which the Company is entitled to instruct the Supplier to proceed with the variation.
- 5 The price indicated by the Supplier must be the full price and shall cover all costs associated with the variation. If appropriate a range of prices may be shown corresponding to the extent of the Services to be carried out.
- 6 Any quotation shall be submitted in Excel format (via ASITE where used) and shall provide a sufficient breakdown of the price into labour, materials, plant and any subcontracts, and

including any applicable rates, quantities and mark-ups, this to enable the Company to perform its commercial due diligence.

- 7 Any quotation shall state the impact on the Completion Date and any Key Dates. Where there are changes to the Completion Date or any Key Dates, then a programme shall be submitted as part of the quotation and which shall make clear the reasons for the changes.
- 8 In an emergency, both parties shall use their reasonable endeavours to expedite the actions permitted or required under the Contract Variation Procedure.
- 9 The Company will not accept any retrospective claims for additional work caused by a variation which has not been approved by the Company in accordance with the Contract Variation Procedure before the commencement of such additional work.
- 10 All authorised additional work resulting from any Variation Proposal shall be priced in accordance with any applicable rates set out in Schedule 2.
- 11 The Supplier shall at all times act reasonably and shall price each Variation Proposal at the least possible additional cost to the Company that it is reasonably and economically practicable for the Supplier to offer and which has the least possible impact on the terms of the Contract, including but not limited to, the Specification and the Contract Programme.
- 12 Strict adherence to the procedure described in this Schedule 5 shall be a condition precedent to any addition to the Contract Price for the Services. If the Supplier does not adhere to each paragraph in this Schedule 5 then the Supplier shall not be entitled to any addition to the Contract Price notwithstanding that the Supplier may have supplied additional or varied Services.
- 13 The Supplier shall agree with the Company suitable payment milestones applicable to the Variation.

**Appendix 1**

**Form of Variation Proposal/Variation Order (where ASITE not used)**

<b>To:</b>	<b>From:</b>
------------	--------------

**Contract Reference:**  
**Variation Number:**  
**Variation Title:**

<b>PART A (TO BE COMPLETED BY THE ORIGINATOR OF THE VARIATION ORDER)</b>	
<b>Description of change:</b>	
<b>Reason for changes and impact (if any) on Contract:</b>	
NOTE:	
<b>Variation Proposal Authorised by:</b>	<b>Proposal Date:</b>
<b>PART B (TO BE COMPLETED BY THE SUPPLIER)</b>	
<b>Price Breakdown</b>  Note: If a further breakdown is needed please append details as a separate sheet.	ASITE WILL BE USED
<b>Effect(s) on Contract Programm</b>	
<b>Expected Delivery Date:</b>	
<b>Supplier's Representative:</b>	
<b>Print Name:</b> .....	<b>Signature:</b> ..... <b>Date:</b> .....
Completed document to be returned to the Company's Representative _____	

<b>PART C (TO BE COMPLETED BY THE COMPANY'S REPRESENTATIVE)</b>		
<b>Comment on Parts A and B:</b>		
Variation Authorisation		
<b>Company's Representative:</b>		
<b>Print Name:</b> .....	<b>Signature:</b> .....	<b>Date:</b> .....

NOTE:  
ASITE WILL  
BE USED

**Schedule 6**  
**Company IPRs**

This Schedule is provided on the CD-Rom that forms parts of the contract agreement.

**Schedule 7**  
**Deed of Novation**

This Schedule is provided on the CD-Rom that forms parts of the contract agreement.

## **Schedule 8**

### **Form of Parent Company Guarantee and Performance Bond**

This Schedule is provided on the CD-Rom that forms parts of the contract agreement.

**Schedule 9**  
**Form of Collateral Warranty**

This Schedule is provided on the CD-Rom that forms parts of the contract agreement.

**Schedule 10**

**Not used**

## **Schedule 11**

### **Form of Escrow Agreement**

This Schedule is provided on the CD-Rom that forms parts of the contract agreement.

#### **APPENDIX 1 Escrow Materials**

The source code to any Software forming part of the Supplier's IPR, together with any programmers' notes and other documentation reasonably required to set up the test system and operate the source code in object code form and to maintain and adapt the source code.

**Schedule 12**  
**Form of Take Over Certificates**

**PART A: FORM OF QUALIFIED TAKEOVER CERTIFICATE**

QUALIFIED TAKE OVER CERTIFICATE		
<b>TAKE OVER CERTIFICATE</b>	TO No.	
In accordance with Clause 12.4 (Take Over) I hereby certify: <ul style="list-style-type: none"> <li>The Plant and Machinery to which this certificate relates can be operated safely and in accordance with all Applicable Laws and the terms of all Relevant Consents</li> <li>That the following Take Over Criteria have not been satisfied:</li> </ul>		
Take Over Criterion (as Clause 12.4.1	Reason(s) not met	
(B)		
(C)		
(D)		
(E)		
(F)		
(H)		
(I)		
Actual completion was <span style="float: right; margin-right: 50px;"><b>Day</b></span> <span style="float: right; margin-right: 50px;"><b>Month</b></span> <span style="float: right;"><b>Year</b></span>		
In accordance with clause 12.5 (Qualified Take Over) the Supplier shall satisfy the following conditions and complete the following tasks:		
	Condition to be satisfied / task to be performed	Timetable for completion
1		
2		
3		
4		
5		
6		
7		
All the above must be complete on or before [date on which Final Acceptance is scheduled to occur pursuant to the Contract Programme]		
Signed _____ Company Representative Date _____		

Company	
Supplier	
Company Representative	
<b>TAKE OVER CERTIFICATE, FOLLOWING QTOC</b>	
	TO No.
In accordance with clause 12.5 (Qualified Take Over) of the above contract I hereby certify that following conditions have been satisfied / tasks have been performed:	
Take Over was achieved on	<b>Day</b> <b>Month</b> <b>Year</b>
Signed _____	Company Representative      Date _____

**PART B: FORM OF TAKE OVER CERTIFICATE**

Company	.....		
Supplier	.....		
Company Representative	.....		
<b>TAKE OVER CERTIFICATE</b>		TO No.	
In accordance with Clause 12.4 (Take Over) of the above contract we hereby certify that the IMV completed and has passed all Tests required required to be performed prior to Take Over and the Take Over Criteria have been satisfied.			
SCHEDULE			
Planned completion was	Day	Month	Year
Signed .....	For the Supplier		Date .....
Signed .....	Company Representative		Date .....

**PART C: FORM OF FINAL ACCEPTANCE CERTIFICATE**

Company	_____
Supplier	_____
Company Representative	_____

**FINAL ACCEPTANCE CERTIFICATE**

In accordance with Clause 12.6 (Final Acceptance) of the above contract we hereby certify that the Final Acceptance Criteria have been satisfied.

SCHEDULE

Planned completion was	<b>Day</b>	<b>Month</b>	<b>Year</b>
------------------------	------------	--------------	-------------

Signed _____	For the Supplier	Date _____
--------------	------------------	------------

Signed _____	Company Representative	Date _____
--------------	------------------------	------------

**EXECUTION PAGE:**

Executed as a deed by the parties and delivered on the date of this Contract

Executed as a deed by affixing the Common Seal of )

Transport for London )

in the presence of:- )

6159

[Redacted signature area]

Executed as a Deed by

DMA S.r.l

acting by

) [Redacted signature]  
) [Redacted signature]

) Authorised Signatory

and

) [Redacted signature]  
) [Redacted signature]

) Authorised Signatory