

Local Procurement

Invitation to Tender (“ITT”) for Heating Distribution works

Version – Final

FS0137 Southend YMCA Community School

Date Issued: 16th March 2023

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Document Control

DfE and its advisers accept no liability whatsoever for any expense, liability, loss, claim, or proceedings arising from reliance placed upon this Local Procurement Invitation to Tender for heating distribution repairs at Southend YMCA Community School.

Version History				
Date	Editor	Version	Status	Reason for change
8 March 23	Stuart Wager	1	Draft	For review and approval
13 March 23	Stuart Wager	2	Final	Minor amendments
15 March	Stuart Wager	3	Final	For Tender

Glossary of Terms

“Bidder(s)”	Those Tenderers participating in this Local Procurement Invitation to Tender (ITT) process;
“Contract”	JCT Minor Works with Contractor Design
“Closing Date”	The closing date for the delivery of Tender Responses as specified in paragraph 1.5 of this ITT;
“DfE”	The Department for Education, of Fourth Floor, Sanctuary Buildings, 20 Great Smith Street, London, SW1P 3BT;
“Employer’s Requirements / Specification”	The Employer’s Requirements and specification provided at Appendix B & E of this ITT;
“Tenderer(s)”	The contractors who have been invited to take part in this ITT.
“Employer”	Secretary of State being a contracting authority which is eligible to enter into the Building Contract(s)
“End User”	Southend YMCA Community School
“Local Procurement”	The design and build mini competition process of selection by a DfE of a Contractor to carry out a Scheme.
“Selected Bidder”	The successful Contractor selected pursuant to the Local Procurement ITT to carry out the Scheme;
“Scheme”	Southend YMCA Community School Heating Distribution works.
“Tender Response”	The written response submitted by a Tenderer to this ITT.

Important Notice

This Local Procurement is being conducted by the DfE which is an executive agency within the Department for Education (“DfE”). Any appointment made pursuant to this ITT will be managed by the DfE. The legal contracting party and the “Employer” for the purposes of executing the Contract on behalf of the DfE is the Secretary of State for Education. References to the “DfE” in this ITT (and accompanying tender documentation) shall be deemed to include the DfE and the Secretary of State for Education as the legal entity.

The contents of this ITT and of any other documentation sent to you in respect of this Local Procurement are provided on the basis that they remain the property of the DfE and must be treated as confidential. If you are unable or unwilling to comply with this requirement, you are required to destroy this ITT and all associated documents immediately and not to retain any electronic or paper copies.

Local Procurement ITT for Heating Distribution repairs

This Local Procurement ITT for heating distribution repairs is structured in four parts:

<u>Part Reference</u>	<u>Content</u>
Part 1 – Background Information	<p>This part provides: -</p> <ul style="list-style-type: none">• Details on the structure of the ITT documentation;• Information about the Scheme, a description of the works, educational requirements, programme, funding, and Contract.
Part 2 – Specific Information	<p>This part provides: -</p> <ul style="list-style-type: none">• Project specific information relating to the School's requirements, surveys, specification, and risks and constraints.
Part 3 – Technical Requirements	<p>This part comprises: -</p> <ul style="list-style-type: none">• Information about the Tender Response submission process, the timetable, communication routes, and contacts; and• Instructions on the ITT process setting out the core qualitative and pricing requirements to which Tenderers are required to respond and which will form the basis of the technical evaluation of the Tenderer's response to this ITT.
Part 4 – Tenderer's Response	<p>This part provides: -</p> <ul style="list-style-type: none">• Details of the documentation to be submitted as part of the Tender Response.

The DfE reserves the right, at its discretion, to amend the materials in these parts as may be appropriate from time to time.

Part 1 – Background Information

1.1 Introduction

The DfE is inviting submissions from Tenderers interested in taking part in a Local Procurement for the Scheme, FS0137 Southend YMCA Community School.

This ITT is issued to Tenderers and represents the beginning of the Local Procurement. The purpose of the Local Procurement is to identify the Tenderer who can best deliver the Scheme.

Bidders must obtain for themselves at their own expense all information necessary for the preparation of their Tender Response.

1.2 Description of the Works

Background

The school building comprises two main parts; the original 'Ticket Office' – a Victorian era two-storey red-brick and slate roofed building, which is joined by a 'link block' to a modular type block, installed by McAvoy under the Free Schools programme in 2013.

The original Ticket Office building underwent some significant building fabric works in 2021 and 2022, as well as some investigations into the existing heating system installed throughout the school. These investigations were necessary as the provision of heating within the school was inadequate following the addition of the modular block. A report was prepared identifying the reasons for the inadequate heating and recommendation for remedial works.

These remedial works comprised two stages. The first stage was to ensure the existing BMS was operating correctly and the school were able to use and operate the BMS themselves. Works to address this were completed in 2022.

The second stage is to address the defects in the current heating system. These have arisen through inadequate installation when the new modular block was installed and extensive works to integrate the heating system of the modular block with the Victorian building were undertaken.

Scope

The scope of work set out is to address these defects so that the school have a heating system that is fit for purpose. The required works are more specifically described in Appendix B and E of this ITT.

1.3 School Educational Requirements

The works must be completed to a standard suitable for educational use and provide the longevity lifecycles required by the Department for Education for all works.

1.3 Description of the Site

Southend YMCA Community School is located between the corner of two roads and a railway line, at the end of a residential street in a suburb of Southend-on-Sea. The school building comprises two main parts; the original ticket office – a Victorian era two-storey red-brick and slate roofed building, which is now joined by a new 'link block' to a modular type block, installed by McAvoy under the Free School programme in 2013. There is also a standalone boiler room which is a single storey structure with flat roof and solid brick wall which consists of a plant room and external store separated by an internal masonry partition.

The site is rectangular in shape and the ticket office is at the front of the site facing East Street. The site address is Southend YMCA Community School, Ticket House, 110 East Street, Prittlewell, Southend-on-Sea.

The Selected Bidder will have access to the works area for the duration of the works, but it should be noted that other internal and external works may be ongoing at the same time. Access and security will need to be co-ordinated with the End User and Contractor(s) undertaking those works.

1.4 Programme

An indicative timetable for this Local Procurement is as follows. It should be noted that access to the site is available by appointment with the Contract Administrator and/or End User.

- | | |
|--|---------------------------------|
| • Issue ITT to Tenderers | 16 th March 2023 |
| • Site visit (subject to school availability) | w/c 27 th March 2023 |
| • Deadline for receipt of Tender Responses to ITT | 6 th April 2023 |
| • Notification of award of Scheme to successful and unsuccessful Bidders | 5 th May 2023 |
| • Contract Award | 9 th June 2023 |

The Works will be undertaken over the summer holiday period from mid-July until 25th August 2023.

1.6 Form of Contract

The form of contract to be entered into between the DfE and Selected Bidder will be:

JCT Minor Works Contract with Contractor Design.

Draft version of the Scheme Contract can be found at Appendix C.

Please also note that a draft version of a Pre-Construction Services Agreement has also been included in the Appendix. The purpose of including this is to provide an agreed contractual basis for appointment of the preferred Contractor in the event that any early detailed design or pre-construction input is required in advance of entering into the main building contract.

It is currently anticipated that none will be required, however, Bidders should set out in their responses whether any such input will be necessary.

1.7 Enquiries

Any enquiries must be submitted to the Contract Administrator in writing via e-mail

Stuart Wager of Arcadis LLP at:

Stuart.wager@arcadis.com

Part 2 – Specific Information

2.1 Brief Description of the Works

The works are described as follows:

- Installation of supplementary heating equipment, including:
 - New boiler, pump, flue and ancillaries
 - Pressurisation unit
 - Classroom radiant panels
- Thermal insulation of the new and modified pipework.
- Associated pipework upgrade, alteration and extensions to heating and mains water service
- Gas pipework upgrade
- Improvements to ASHP surface water drainage
- Builder's works, opening up, making good and painting etc.
- Testing, commissioning, flushing, chlorination, etc associated with the above works.
- Strip out of existing items rendered redundant by the work
- Modifications to mechanical control panel and associated controls
- Minor electrical works in connection.

2.2 Location

Southend YMCA Community School, Ticket House, 110 East Street, Prittlewell, Southend-on-Sea, Essex SS2 6LH.

2.3 Details of School Requirements

This project will require access throughout the school, so no works can be undertaken during school terms or school hours. However, it should be noted that the Southend YMCA Community School is a pupil referral school therefore Bidders should be mindful of this when visiting site.

2.4 Surveys

For the purposes of this Local Procurement, the following report is provided in Appendix H:

Survey	Date	Warranted / Unwarranted
Survey Report on Existing Heating Plant & Distribution Systems	January 2022	Unwarranted

2.5 Employers Requirements / Specification

Works are to be provided in accordance with the Schedule of Works (see Appendix B), Specification (see Appendix E) and best industry practice.

2.6 Risks and Constraints

When preparing their tender for these works, Bidders must take into consideration the following:-

- It is possible these works will be undertaken at the same time as another contractor is undertaking works on site. This will be confirmed prior to commencement.
- It is possible that other maintenance works may be scheduled by the current maintenance provider. This will be subject to confirmation with the school and the timing of any such works will be communicated to the successful Bidder by no later than Contract Award.
- Access for parking is limited on site.
- The successful bidder will have access to the schools welfare facilities. They will be expected to keep these in a good clean standard during and at completion of the works.
- It is recommended that the contractor undertake a photographic record of condition at the start and completion of the works.

Part 3 – Technical Requirements

3.1 Instructions

3.1.1 Tender Submission

An indicative timetable for this Local Procurement is set out in 1.5 (above). The DfE reserves the right to amend this from time to time and Bidders will be notified accordingly.

The Tender Response must be received by the DfE in accordance with the relevant instructions no later than the time and date stipulated. Subject to 3.1.3 (below) a failure to do so may result in a Bidder not being considered and being disqualified from the process.

The DfE reserves the right to disqualify any Bidder who makes material changes to any aspect of its Tender Response (after the deadline), unless substantial justification can be provided to the satisfaction of the DfE, and such change is in accordance with procurement law.

3.1.2 Tender Response Format

- 3.1.2.1 Each Tender Response must comprise the completion of Appendix B and documents set out in Part 4 of this ITT.
- 3.1.2.2 All Tender Responses must be in English.
- 3.1.2.3 Written responses must be in Arial font size 11 and must not exceed the page allowances stipulated.

- 3.1.2.4 The Tender Response must be marked with the following details:
- Scheme title;
 - Bidder's name.
- 3.1.2.5 One [1] electronic copy of the Tender Response shall be submitted by each Bidder.
- 3.1.2.6 The person signing the Tender Response must state his capacity and official position in the Bidder's organisation and must be the person empowered and duly authorised to sign and submit Tender Responses for and on behalf of the Bidder and nominated for that purpose in the Forms contained in Part 4 of this ITT (Form of Tender and Certificate of Bona Fide Tender, Non-Collusion Certificate and Non-Canvassing Certificate).
- 3.1.2.7 The DfE reserves the right to reject (at its absolute discretion) a Tender Response which is non-compliant with the requirements of this ITT. Bidders submitting any qualifications should therefore give explicit justification and reasoning for entering a qualification.
- 3.1.2.8 Only one Tender Response is permitted from each Bidder. In the event that more than one Tender Response is submitted by a Bidder the one with the latest time of submission (prior to the deadline given) will be evaluated and the other(s) will be disregarded.
- 3.1.2.9 Any signatures must be made by a person who is authorised to commit the Bidder to the Contract.

3.1.3 Tender Response Delivery

- 3.1.3.1 Tender Responses must be delivered by the Closing Date to;
- Stuart.wager@arcadis.com
- attaching all relevant documents required by this ITT.
- 3.1.3.2 The DfE reserves the right to reject any Bid Response that arrives after the stipulated time on the Closing Date.

3.1.4 Tender Response Clarification

- 3.1.4.1 During Tender Response preparation, Bidders may submit questions and requests for clarification or further information. Bidders should address their questions and request for clarification or further information to the Contract Administrator whose details are set out in paragraph 1.7 above.
- 3.1.4.2 Subject to 3.1.4.3 and 3.1.4.4 (below), all questions and requests for clarification or further information, and the corresponding responses, will be circulated to all Bidders.
- 3.1.4.3 Request for information or clarification which may be commercially sensitive should be marked: "confidential – not to be circulated to other Bidders" (and Bidders are expressly requested not to mark a question as confidential in this way unless this is genuinely the case). At its discretion, the DfE will respond to that specific request privately, providing that the principle of equal availability of information to all Bidders is not breached.

- 3.1.4.4 If the DfE considers that it is unable to respond to the question or request for clarification or further information on a confidential basis it will inform the Bidder, and the Bidder must as soon as practicable thereafter respond in writing requesting that either the query be withdrawn or treated as not confidential. The DfE will deem that the question or request for clarification or further information has been withdrawn if the DfE is not contacted in writing within three (3) working days following informing the Bidder as referred to above.
- 3.1.4.6 Bidders should note that all responses to requests for clarification cannot be relied upon unless the DfE subsequently confirms that clarification or further information in writing. Bidders should therefore ensure that all requests for clarification or further information have been the subject of written correspondence.
- 3.1.4.7 The DfE will be at its sole discretion decide whether to respond to any requests for clarification or further information received less than 3 working days before the ITT Tender Response date.

3.3 Pricing Response

Bidders must price their Tender Responses by providing costs for each element of the works as set out in Appendix B, including the Provisional Sums and Rates schedule.

3.4 Evaluation

The Tender Response will be evaluated on the basis of full compliance with the Appendix B and receipt of the most economic tender.

3.5 General Conditions

3.5.1 General

It is the Bidder's responsibility to understand all aspects of this ITT and associated tender documents.

3.5.2 Conflicts of Interest

The DfE requires all actual or potential conflicts of interest to be notified to the DfE at least 5 working days before the Tender Response date. The DfE will consider the actual or potential conflict and will require such conflict to be resolved to the DfE's satisfaction prior to the delivery of Tender Responses to this ITT.

3.5.3 Additional Information

The DfE reserves the right to ask for additional information by way of clarification and confirmation from Bidders at any time during the procurement of the Scheme. Such requests will include time limits for response.

The DfE reserves the right to issue supplementary documentation at any time during the Local Procurement process to clarify any issue or amend any aspect of the ITT. All such further documentation that may be issued shall be deemed to form part of the ITT and shall supplement and/or supersede any part of the ITT to the extent indicated.

3.5.4 Collusive Proposals

The Bidder shall sign and submit the Certificate of Non-Collusion which is included at Part 4 of this ITT.

Any Bidder which:

1. Fixes or adjusts its Tender Response by arrangement with any other person;
2. Communicates to any person other than the DfE or its own advisers (from whom it shall have secured all necessary guarantees of confidentiality beforehand) the details of its Tender Response;
3. Enters into any arrangement with any other person that it will cease to discuss its Tender Response with the DfE; or

4. Offers or agrees to pay or give or does pay or give any sum of money, other inducement, or consideration, directly or indirectly, to any person in respect of its Tender Response or the Scheme,
5. will be disqualified, without prejudice to any other civil remedy which may be available to the DfE, and any criminal liability that may be incurred.

3.5.5 Preparation and Proposal

Information supplied by the DfE is supplied for general guidance in the preparation of the Tender Response. Bidders must satisfy themselves by their own investigations with regard to the accuracy of any such information and no responsibility whatsoever is accepted by the DfE or its advisers for any inaccurate or incomplete information obtained by Bidders.

3.5.6 The DfE Not Bound

The DfE is not bound to accept the lowest priced or any Tender Response.

3.5.7 Costs and Expenses

The DfE shall have no liability or obligation to pay any costs incurred by the Bidder as a result of this tendering procedure. The Bidder shall sign the statement entitled Form of Tender and Bona Fide Certificate (Part 4) declaring that it fully understands and accepts that the DfE shall not bear any costs, in particular, in relation to: -

1. Incidental work in responding to the ITT;
2. Any presentations, demonstrations, or other arrangements;
3. Submission of a Tender Response, whether or not the same is compliant or successful.

3.5.8 Publicity

Tenderers shall not undertake (or permit to be undertaken) at any time during the procurement stage, any publicity activity with any section of the media in relation to this Scheme, other than with the prior written agreement of the DfE.

3.5.9 The DfE's Employees

No DfE employee has any implied or actual power from the DfE to give any undertaking, guarantee, warranty, or representation (express or implied) in relation to this ITT or any other matter relating to the Scheme.

3.5.10 Variation / Suspension / Cancellation of Procedure

The DfE reserves the right to vary, suspend or cancel the Local Procurement process at any time without explanation or liability for Bidders costs.

3.5.11 Subject to Contract

No offer or Tender Response is deemed accepted until the Contract has been signed by the DfE and the Selected Bidder and declared unconditional. Any enquiries between the Selected Bidder and the DfE do not imply acceptance of any offer. Only the express terms of any written Contract

which is finally signed for and on behalf of the relevant parties and which is duly declared unconditional shall have any contractual effect.

3.5.12 Updating of Information

Any matter which comes to the attention of the Bidder at any time which may cause any information given to the DfE (whether prior to or after this ITT has been issued) to be inaccurate, incomplete, or misleading shall be notified by the Bidder to the DfE without delay, in sufficient detail to enable the DfE fully to evaluate the impact of such information.

3.5.13 English Law

Negotiations and all subsequent contracts will be subject to English law and the exclusive jurisdiction of the English courts.

3.5.14 English Language

All negotiations will be conducted, and all documents will be prepared in the English language.

3.5.15 Canvassing

The DfE reserves the right to disqualify (without prejudice to any other civil remedies available) any Bidder who, in connection with this ITT does anything which would constitute a relevant offence under the Bribery Act 2010.

3.5.16 Copyright

The copyright in this ITT is vested in the DfE. This ITT may not be copied or stored in any electronic medium without the DfE's prior written consent, other than strictly for the purpose of preparing a Tender Response to this ITT.

3.5.17 Failure to Comply

Failure to comply with any of the instructions set out in this ITT or any other procedures required in it may result in the Tender Response not being considered by the DfE and such Bidder being disqualified from the procurement process. The DfE also reserves the right to reject any Bidder who is guilty of material misrepresentation in supplying any of the information requested in this ITT or at any point in the procurement.

3.5.18 Amendments

The documents which accompany this ITT for submission by Bidders as part of their Tender Response must not be amended or altered by the Bidder, except in so far as the same is required to complete the Tender Documents.

Any amendment to the documents which accompany this ITT to Tenderers (including, but not limited to amendments made pursuant to the process referred to in paragraph 3.1.4), and/or to the scope of the Scheme, that the DfE decides to make during the Local Procurement period will be communicated in writing to the Bidder.

3.5.19 Freedom of Information, Environmental Information Statement and Transparency Agenda

The DfE is subject to the Freedom of Information Act 2000 ("Act"), The Environmental Information Regulations 2004 ("EIR") and Government obligations in respect of transparency in procurement.

As part of the DfE's duties under the Act or EIR, it may be required to disclose information concerning the Local Procurement process or the Building Contract(s) to anyone who makes a request.

If the Bidder considers that any of the information provided in their Tender Response is commercially sensitive (meaning it could reasonably cause prejudice to the Bidder if disclosed to a third party) then it should be clearly marked as "Not for disclosure to third parties" together with valid reasons in support of the information as being exempt from disclosure under the Act or EIR.

The DfE will endeavour to consult with the Bidder and have regard to comments and any objections before it releases any information to a third party under the Act or EIR. However, the DfE shall be entitled to determine in its absolute discretion whether any information is exempt from the Act or EIR or is to be disclosed in response to a request of information. The DfE must make its decision on disclosure in accordance with the provisions of the Act or EIR and can only withhold information if it is covered by an exemption from disclosure under the Act or EIR.

The DfE will not be held liable for any loss or prejudice caused by the disclosure of information that:

has not been clearly marked as "Not for disclosure to third parties" with supporting reasons (referring to the relevant category of exemption under the Act or EIR where possible); or

does not fall into a category of information that is exempt from disclosure under the Act or EIR (for example, a trade secret or would be likely to prejudice the commercial interests of any person); or

in cases where there is no absolute statutory duty to withhold information, then notwithstanding the previous clauses, in circumstances where it is in the public interest to disclose any such information.

The Government has set out the need for greater transparency across its operations to enable the public to hold public bodies and politicians to account. As part of the transparency agenda, the Government has made certain commitments with regard to procurement and contracting. This includes the requirement to publish all tender and contract documents for contracts over £10,000 from January 2011. Bidders should therefore be aware that the tender documents and the resulting Building Contract (with appropriate redactions made in accordance with the exemptions under the Act) will be published as part of the DfEs' obligations under the transparency agenda.

Further guidance is available to Bidders:
<https://www.gov.uk/government/publications/procurement-and-contracting-transparency-requirements-guidance>

The DfE may consult with the Bidder should it be successful, to inform its decision regarding any exemptions applicable for redacting parts of the resulting Building Contract, but the DfE shall have the final decision in its absolute discretion.

Part 4 – Documents to be provided with Tender Response

4.1 Form of Tender and Certificate of Bona Fide Tender

Template below (the form must not be altered by the Bidder save for completion of appropriate details).

4.2 Non-Canvassing Certificate

Template below (the form must not be altered by the Bidder save for completion of appropriate details).

4.3 Non-Collusion Certificate

Template below (the form must not be altered by the Bidder save for completion of appropriate details).

4.5 Pricing Response

See Appendix B.

4.6 Agreement to Form of Contract

Confirmation they agree to the terms of contract set out in the Appendix C.

4.7 Response to Qualitative Questions

Provide responses to questions set out in Appendix G.

ITT – PART 4.1 – FORM OF TENDER AND CERTIFICATE OF BONA FIDE TENDER

Certificate of Bona Fide Tender

To: Stuart Wager

Having examined the ITT and accompanying tender documentation, I/we undertake, if this Tender Response is accepted, to complete and deliver the whole of the work comprised within any Contracts executed pursuant to this ITT and generally to comply with the obligations on the part of the Tenderer contained within the ITT documents.

I/We declare that to the best of our knowledge and belief no payments, gifts or other inducements have been or will be offered by us or our agents to board members, officers, or employees of the DfE for the purpose of obtaining any favour in connection with the award of the Contract.

I/We agree to abide by this Tender Response for a period of 90 days from the date set for receiving the same and it shall remain binding and open for acceptance at any time prior to the expiration of that period.

I/We understand that the DfE is not bound to accept any Tender Response it may receive and understand that the DfE has no liability to defray expenses herewith nor be responsible for return of any document submitted for the purpose of tendering.

I/We certify this is a Bona Fide Tender and that I/We have not fixed or adjusted the amount of the Response by or under or in accordance with any agreement or arrangement with any other Bidder or Tenderer.

Dated _____

Signed _____

Status _____

Duly authorised to sign the Tender Response and acknowledge the contents of this Form of Tender and Certificate of Bona Fide Tender,

For and on behalf of _____

(Name of Bidder)

ITT- PART 4.2 - NON-CANVASSING CERTIFICATE

Non-canvassing Certificate

To: Stuart Wager

1. We hereby certify that we have not canvassed or solicited any officer, board member or employee of the DfE or their advisers, agents, or representatives in connection with this Tender Response or in connection with any other bid or proposed bid for the Scheme and that no person employed by us or acting on our behalf has done any such act.
2. We further hereby undertake that we will not in the future canvass or solicit any director, officer, member, or employee of the DfE or their advisers, agents, or representatives in connection with this Tender Response or in connection with any other bid or proposed bid for the Scheme and that no person employed by us or acting on our behalf will do any such act.

Dated _____

Signed _____

Status _____

Duly authorised to sign the Tender Response and acknowledge the contents of the Non-Canvassing Certificate,

For and on behalf of _____

(Name of Bidder)

ITT – PART 4.3 – NON-COLLUSION CERTIFICATE

Non-Collusion Certificate

To: Stuart Wager

The essence of the public procurement process is that the DfE shall receive *bona fide* competitive Tender Responses from Tenderers. In recognition of this principle, we hereby certify that this is a *bona fide* Tender Response, intended to be competitive, and that we have not fixed or adjusted the amount of the Tender Response or the rates or prices quoted by or under or in accordance with any agreement or arrangement with any other Bidder. We have not and in so far as we are aware neither has any other Bidder:

1. entered into any agreement with any other person with the aim of preventing Tender Responses being made or as to the fixing or adjusting of the amount of any Tender Response or the conditions on which any Tender Response is made;
2. informed any other person, other than the DfE, of the detail including (but not limited to) the amount of the Tender Response, except where the disclosure, in confidence, of the amount of the Tender Response was necessary to obtain quotations necessary for the preparation of the Tender Response for insurance, professional or consultancy advice required for the preparation of the Tender Response;
3. caused or induced any person to enter into such an agreement as is mentioned in paragraphs 1 and 2 above or to inform us of the amount or the approximate amount of any rival Tender Response for the ITT or had the benefit, in the preparation of this Tender Response of any inside information about the intentions of any other Bidder;
4. committed any relevant offence under the Bribery Act 2010;
5. admitted and/or been found by a relevant regulatory authority to have participated in or undertaken behaviour which is or is apparently intended to or has the consequence of significantly restricting competition.
6. offered or agreed to pay or give any sum of money, inducement, or valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done any act or omission in relation to any other Tender Response;
7. contacted any member or officer of, or any person engaged as an adviser by the DfE about any aspect of the Tender Response in a manner not permitted by the ITT including (but without limitation) for the purposes of discussing the possibility of their future employment for or engagement by the Bidder.

We also undertake that we shall not procure the doing of any of the acts mentioned in paragraphs 1 to 7 above nor (in the event of the Tender Response being accepted) shall we do so while the resulting Building Contract(s) continues in force between us (or our successors in title) and the DfE.

We understand that if we have been involved in the conduct described above and/or falsely complete this certificate and/or we fail to declare any circumstances described above then the DfE shall be entitled to exclude us and the Tender Response from this Local Procurement process.

In this certificate the word "person" includes any person, body, or association, corporate or incorporate and "agreement" includes any arrangement whether formal or informal and whether legally binding or not.

Dated _____

Signed _____

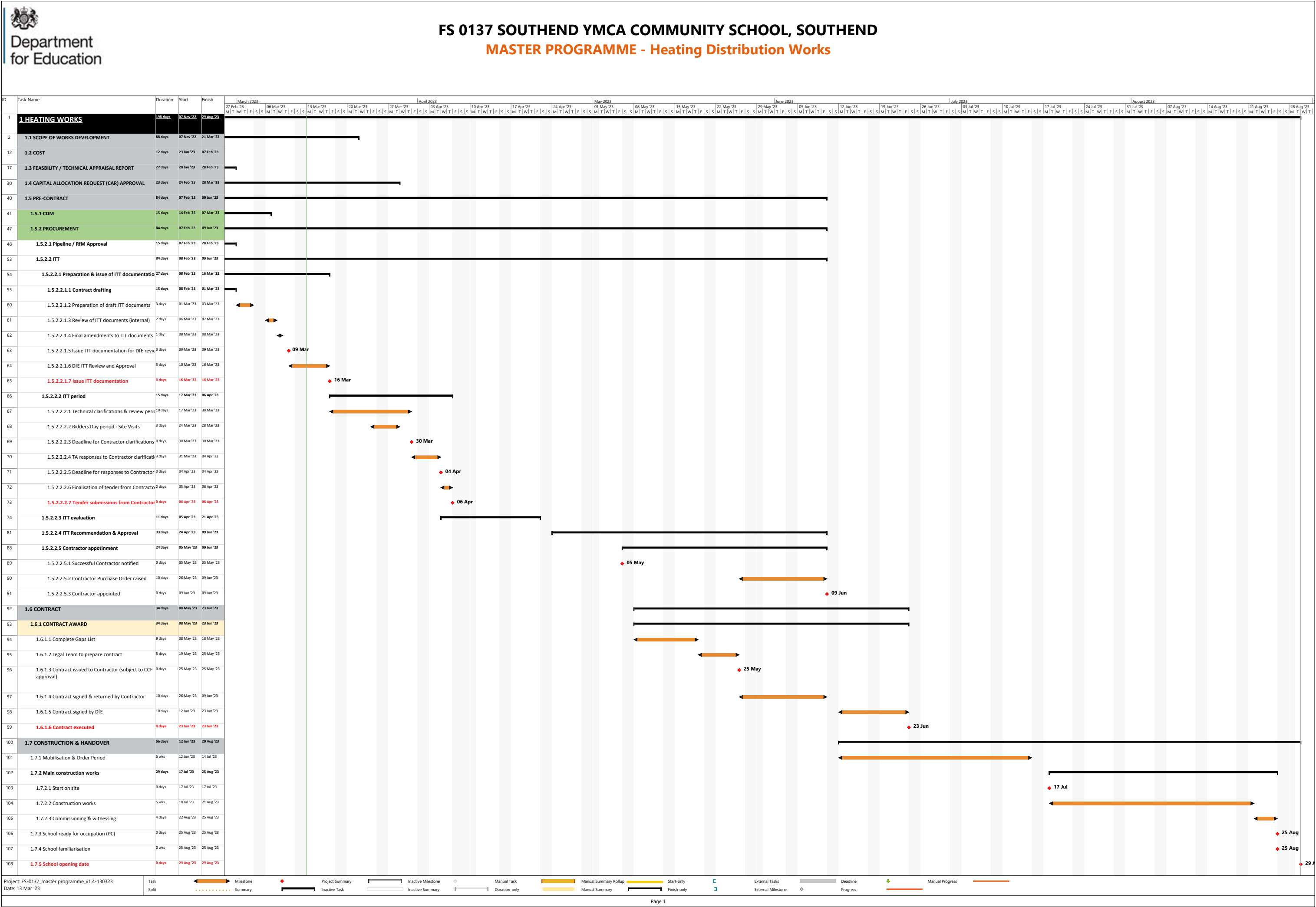
Status _____

Duly authorised to sign the Tender Response and acknowledge the contents of the Non-Collusion Certificate,

For and on behalf of _____

(Name of Bidder)

Appendix A – Programme



Appendix B – Schedule of Works and Pricing Document

See separate Excel file attached to this ITT

	Collection Page			
Item	Works Description			Cost (£)
Specification				
1.0	GENERAL REQUIREMENTS			£0.00
2.0	MAINS COLD WATER SERVICE			£0.00
3.0	ABOVE AND BELOW GROUND DRAINAGE			£0.00
4.0	GAS SERVICE			£0.00
5.0	LPHW HEATING SYSTEMS (LOW & HIGH GRADE)			£0.00
6.0	DX HEAT-PUMP SYSTEMS			£0.00
7.0	MECHANICAL VENTILATION			£0.00
8.0	ELECTRICAL IN CONNECTION			£0.00
9.0	BUILDING MANAGEMENT SYSTEMS & CONTROLS			£0.00
10.0	ASBESTOS			£0.00
11.0	HANDOVER, TESTING AND COMMISSIONING, BUILDING CONTROL APPROVAL			£0.00
12.0	PROVISIONAL SUMS			£8,000.00
	Sub Total of Schedule of Works			
				£8,000.00
	Total of Construction Works			
				£8,000.00
13.0	PRELIMINARIES			£0.00
	TOTAL OF PRELIMINARIES PRICING			
OH&P		0 %		£0.00
	Total (excluding VAT)			£8,000.00

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

Southend YMCA Community School

Ticket House, 110 East Street, Prittlewell, Southend-on-Sea, Essex SS2 6LH

Heating Distribution Works

Schedule of Works

Mar-23

		Quantity	Unit	Rate	Total
1.00	GENERAL REQUIREMENTS				
	IMPORTANT NOTES TO BE READ BY TENDERERS				
1.01	The contractor is to ensure that each item is priced separately.				
	ALL QUANTITIES ARE INDICATIVE. CONTRACTORS ARE TO CHECK DIMENSIONS AND MEASUREMENTS AND SUBMIT FIRM PRICES FOR THE SCOPE OF WORK DESCRIBED.				
	SITE VISIT WILL BE ARRANGED FOR TENDERERS				
1.02	BACKGROUND: The purpose of the project is to carry out repair works to external areas of the Southend YMCA Community School as follows: The works are to be undertaken when the school is not in use by pupils during the half-term or holiday periods as set out in the programme. The general requirements for each space, area or building element within the works area are described within the Schedule of Work below.	-	-	Note	-
1.03	ACCESS: The contractor will have full and clear access to the works area for the duration of the works, but it should be noted that the remainder of the buildings will be managed by the Southend YMCA Community School, so access and security will need to be co-ordinated with them. The contractor will be responsible for securing the defined works area as would normally be expected	-	-	Note	-
1.04	PROGRAMME: The contractor must provide a works programme to demonstrate delivery and achieve completion within the given commencement and completion dates. Programmes will be considered as part of the qualitative assessment.	-	-	Note	-
1.05	RESOURCES: The Contractor will allocate resources as necessary including directly employed and/or sub-contracted staff and suppliers, to enable completion by the programmed dates.	-	-	Note	-
1.06	SCOPE: The contractor shall carry out everything necessary for the proper execution of the works, whether or not shown on drawings or described within the specification, provided that the same may be reasonably inferred therefrom.	-	-	Note	-

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

1.07	PROVISIONAL SUMS: May not be expended until written instructions have been received from the contract administrator. Provisional works are only to be undertaken if a contract instruction is issued.	-	-	Note	-
1.08	SNAGGING: The contractor shall not rely on the contract administrator to detect faults and provide snagging lists and shall plan and undertake his own inspections to identify snags and/or outstanding works items that he is obliged to complete.	1	item		
1.09	SETTING OUT: The contractor is required to check all proposed locations, sizes and setting out of new fittings on site and is to confirm that all proposals can be accommodated in existing locations.	1	item		
1.10	MAINS SERVICES: Prior to the commencement of works, ensure that all necessary gas, water and electrical services are isolated to facilitate works described within this schedule. Upon completion of works, ensure that gas, water and electrical services are in full working order. Any significant defects identified during the works shall be reported to the contract administrator at the earliest opportunity.	1	item		
1.11	BWIC: The Contractor is to allow for forming and making good all penetrations required for the installation works, ensuring all gaps around cables and pipes are appropriately sealed to maintain fire and acoustic separation.	1	item		
1.12	FIRE STOPPING: Maintain fire seals - where new openings and penetrations are formed as part BWIC for any work undertaken, ensure gaps around cables and pipes are fully sealed to maintain fire integrity. The contractor is to report any instances of missing or poor quality existing fire-stopping or seals discovered during the works to the Contract Administrator	1	item		
1.13	QUANTITIES: given in the schedule of works are indicative only and it is the contractor responsibility to satisfy themselves that the quantities are correct prior to submitting a tender.	-	-	Note	-
1.14	CONTRACTORS WELFARE AND SITE OFFICE: Contractor is to make allowance to provide the minimum CDM required welfare facilities with a stand alone ground hog welfare unit or similar.	1	item		
1.15	DETAILED SURVEY. Detailed survey of services in the works area, including opening up, accurate location and recording of existing M&E services in the work areas	1	item		

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

1.16	RECORD DRAWINGS. The Contractor must prepare and submit for approval a detailed set of record drawings, O&Ms and H&S File for approval by the Employers Representative.	1	item		
1.17	PRINCIPAL CONTRACTOR. The Contractor is to act as the Principal Contractor for these works.	1	item		
TOTAL					£0.00
2.00	MAINS COLD WATER SERVICE	Quantity	Unit	Rate	Total
2.01	Isolate incoming service and replace existing single check valve with double-check valve to BS 6282/5 (WRAS approved). Adapt copper pipework to suit.	1	item		
2.02	Cut back and modify copper mains water service to suit new twin-circuit pressurisation unit. Provide new 15mm connection, complete with isolation valve. Ensure no deadlegs are left on the system. Copper pipework to be jointed using Viega press-fittings, installed in accordance with manufacturer's recommendations. All materials must be WRAS approved	1	item		
2.03	Check connection and calibrate existing water meter pulse data at BMS	1	item		
2.04	Apply foil-faced mineral wool to all new and modified pipework, to match existing. Apply labelling bands and direction arrows.	1	item		
2.05	Pressure test modified pipework. Undertake flushing and chlorination of mains water to BS EN 806	1	item		
2.06	Provide record information for the mains water works, including updated schematics, manufacturer's leaflets and data, test, chlorination and WRAS certificates, etc	1	item		
2.07	Any other works to mains water service (state):	1	item		
TOTAL MAINS COLD WATER SERVICES					£0.00
3.00	ABOVE AND BELOW GROUND DRAINAGE	Quantity	Unit	Rate	Total
3.01	Retain the existing boiler PVC drain, terminating over floor gulley. Test operation of the drain and demonstrate clear	1	item		
3.02	Provide new trapped 25mm PVC-C condensate drain from the new boiler to correct falls, terminating over the existing floor gulley. Provide all necessary solvent welded fittings, supports, etc	1	item		

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

3.03	Remove one existing overflow from the two pressurisation units and adapt the other to suit the new twin circuit fill unit. Make good redundant fixing holes. Provide new solvent welded 20mm PVC pipework from the new twin system fill unit and discharge over the existing floor gulley. Provide all necessary fixings.	1	item		
3.04	Provide new surface water drainage for the heat-pump enclosure, as indicated on the drawings. Open-up and survey existing manholes and set-out new drainage Prior to starting work, undertake surface CAT scanning, to locate any buried services in the location of the proposed drainage. Note that existing heating pipework passes below-ground from the boiler room to the school building and all necessary tracing, marking and projection must be provided, to prevent damage and disturbance. Carefully break-out surface finishes and excavate for new 100mm connection to the existing manhole. Provide all materials to provide a sealed connection. Neatly cut surface finishes for new drainage channels. Install a section of 110mm PVC below ground drainage to falls, connected to a new ACO Hexdrain sump, as indicated on the drawings. Provide new ACO Hexdrain 125 x 80mm drainage channel, as indicated on the drawings, complete with end stops, corner unit, galvanised steel gratings (A15 class). Include for all necessary bedding of channels and drainage pipework, backfilling and making good surface finishes. Ensure that no raised edges are present, which could present a trip hazard. Install to manufacturer's recommendations and verify that water drains quickly and effectively from the gulley system.	1	item		
3.05	Provide record information for drainage works, including manufacturer's leaflets and record drawings	1	item		
3.06	Any other above and below-ground drainage works (state)	1	item		
TOTAL ABOVE & BELOW GROUND DRAINAGE					£0.00
4.00	GAS SERVICE	Quantity	Unit	Rate	Total
4.01	Survey the existing gas installation and remove existing	1	item		
4.02	Upgrade pipework from the solenoid valve to 54mm copper	1	item		
4.03	Check connection and calibrate gas meter pulse data	1	item		
<i>Note that the scope items 3.4 to 3.7 below have been instructed and are anticipated to be completed as emergency works (prior to this scope commencing in Summer 2023), following failure of the gas panel. Note that the new system has been instructed to incorporate facilities for the second boiler</i>					

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

4.04	Survey, isolate and remove the existing gas safety system in the boiler room (retaining the existing DN 50, 230V solenoid valve) Install new gas safety system, including control panel, resettable electrothermal links over proposed and existing boiler, gas	-	-	Note	-
4.05	Provide a connection from the existing fire alarm interlock to the new gas safety system. Commission the system to remain operation when the fire alarm system is in "test mode". Connect and test existing "boilerhouse gas detection" alarm lamp on the panel. Test and validate the "building fire" lamp and associated interlocks. Report any defects Verify that facilities exist within the existing MCC to enable the hard-wired interlocks to be provided to suit a second boiler. If not, report on what modifications will required as part of the boiler installation works. Connect new panel to existing BMS gas detection alarm input and demonstrate remote indication of system monitoring and status	-	-	Note	-
4.06	Clearly identify gas knock-off button with permanent traffolyte label	-	-	Note	-
4.07	Provide record information for the new gas safety system, including schematics, manufacturer's leaflets and data, test certificates, etc	-	-	Note	-
4.08	Test, purge all gas pipework and issue certificates for new pipework installation	1	item		
4.09	Provide gas schematic in the gas meter and boiler room Apply gas service identification bands to new pipework every meter and at all changes of direction	1	item		
4.10	Any other works to gas service (state):	1	item		
TOTAL GAS SERVICE					£0.00

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

		Quantity	Unit	Rate	Total
5.00	LPHW HEATING SYSTEMS (LOW & HIGH GRADE)				
5.01	Survey the existing heating system to establish the location of all equipment, means of isolation, draining, etc. Note that the existing plant room drawing does not accurately indicate the position of all plant, but every effort has been made to ensure that the required alterations are correctly positioned. Drain the high and low grade systems to allow the indicated works. Allow for refilling and returning as many times as necessary to remove all air from the system.	1	item		
5.02	Provide supplementary Potterton Sirius Two WH 60 (55kW), mounted on the wall next to the existing matching boiler. Prove all necessary ancillaries and fixings, including safety valve, discharging at low level, over the existing floor gulley.	1	item		
5.03	Provide new 80/125 manufacturer supplied flue, installed in the same manner existing. Install the flue to fall back to the boiler. Neatly form new hole in the external wall and provide a new balanced flue terminal as the existing boiler. Make good around the flue on completion	1	item		
5.04	Renew and upgrade primary circuit with self balancing arrangement including isolation valve, DRV, filter and pump on the new boiler and enlarged air dirt separator on the new primary loop. Provide drain points on all low points and air vents at all high points. Connect the existing heating dosing pot. Heating pipework is to be installed using low carbon steel, with press-fittings to match existing.	1	item		
5.05	Replace existing defective high grade heating and low grade pressurisation unit with new twin-circuitry device, feeding both systems. Isolate and remove two wall-mounted Grundfos fill units. Inspect and make good walls of all fixing holes. Remove external pressure switches, but retain wiring for reconnect to new unit outlet terminals. Modify existing fill/expansion connections and anti-gravity loops as indicated on the drawings, to connect both systems to the new twin system filling device. Existing expansion vessels are to be inspected and retained. The new unit is to be a digital, pressure transducer controlled unit as Flamco Flexfiller Twin System (two pump) , complete with separate high make-up alarms outputs for each system. Provide all necessary wall fixings to secure the filling device to the boiler room wall. Alarms are to be taken to the BMS, along with hard-wired high and low pressure alarms, which are to be integrated into the existing panel and fault lamps. Test and commission the pressurisation system and set pressures. Demonstrate the correct operation of high and low pressure interlocks and BMS alarms. Provide record information for the new pressurisation system, including test certificates, manufacturer data, commissioned values, fault-finding, etc	1	item		

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

5.06	<p>Replace UFH manifold feeding the sports hall with type with pump and diverting valve. The existing manifold has 5No flow and return connections. Provide packaged manifold, with AAV, service valves, temperature and pressure gauges, 4-port valve, circuit balancing valves, draincock and circulation pump</p> <p>Disconnect and remove the existing manifold, flush heating loops and cap open PEX pipework ends for protection.</p> <p>Remove the existing manifold and supports</p> <p>Mount the new manifold and connect existing incoming 20mm low grade heating F&R and 5No incoming and outgoing UFH PEX circuits</p> <p>Remove existing 2-port control valve and replace with section of 20mm pipework.</p> <p>See BMS and controls below for incorporating new UFH manifold.</p> <p>Balance circuits to ensure even temperature difference between outgoing heating loops</p>	1	item			
5.07	<p>Allow for installing 6No automatic air vents on existing high and low grade heating system high-points. Fit ball-o-fix valves on AAV connections to allow future replacement</p>	1	item			
5.08	<p>Supplement MVHR's with radiant panels (Frenger Modular SP range, or equal and approved), in rooms where there is no other means of heating, to allow separation of heating and ventilation control. Note rooms fitted with DX heat-pumps are to retain these for heating purposes.</p> <p>Heaters are to be designed for direct replacement of modular 600 x 600 tile system. Carefully remove tiles and all necessary T-bars to allow the installation of 15No emitters, as indicated in the schedule of emitters.</p> <p>Provide adjustable supports for the panels, fixed to the slab or roof structure above. Ensure that panels are levelled with the existing ceiling.</p> <p>Each emitter is to be fitted with a lockshield valve on the return and isolation valve on the return. Provide a means of venting panels.</p>	1	item			
5.09	<p>Control of emitters is to be on a room-by-room basis, using a remote sensing TRV, fitted on the common flow to the associated room.</p> <p>Provide new remote sensing TRV heads, complete with heavy duty Perspex ventilated covers (as Thermostop thermostat cover, or similar), to prevent malicious damage and unauthorised adjustment. Provide keys for removal of covers to the school</p> <p>Provide capillary connections between TRV heads and valves. Ensure that ceiling void capillaries are clipped and those dropping to remote heads are protected using 20mm steel conduit, surface clipped to masonry walls (support at half spacing).</p> <p>Make good any damage to walls and touch up paintwork. Paint conduit with primer and two coats of top-coat to match existing walls</p>	1	item			

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

5.10	<p>Undertake pipework modification and extension to suit new radiant panels. Note that the existing heating is installed using press-fit jointed low carbon steel.</p> <p>Survey existing distribution and verify that there are no mixed materials present in the system, that pipework is all insulated and that routes and sizes are as generally indicated on the record drawings. Identify any high-points without means of venting and advise the CA.</p> <p>New emitters are to be connected to the high-grade heating circuit. Isolate and drain down the existing system and remove sections that are to be increased in size. Cap open ends to prevent dirt ingress.</p> <p>Note that all new pipework is to be installed in ceiling voids, for protection.</p> <p>Provide new press-fit steel pipework to feed the new supplementary radiant panels, as indicated on the drawings. Upgrade branch sizes locally from 15mm to 20mm, as identified. Provide all necessary valves, fittings, ancillaries, supports, etc. Provide air vents on all high points and draincocks at all low points.</p> <p>Valves to be connected with demountable joints and be as manufactured by Hattersley, Oventrop, or equal and approved. Provide lever operated ball isolation valves on flow and DRV on return of all new branches with existing.</p> <p>Fit sleeves to all pipework passing through walls and floors and fire-stop compartment walls using minimum 60 minute rated material.</p>	1	item		
5.11	Correctly label dosing and pressurisation lines (currently labelled as boosted cold water)	1	item		
5.12	Thermally insulate all new and modified heating pipework in the boiler room and school building, with foil-faced mineral wool to match existing and apply labelling bands and direction arrows	1	item		
5.13	<p>Pressure test all new and existing (high and low grade) heating distribution pipework to 1.5 times the working pressure for 1 hour (including below-ground pipework between the boiler room and plant room). Inspect for leakage and repair, as required. Offer testing for witness by the CA</p> <p>Fill, flush in accordance with BSRIA application guides and balance heating system and provide commissioning report. Demonstrate that heating is available to all areas, under control.</p> <p>Empty/clean all new and existing strainers and separators on completion. Instruct the school on emptying separate</p> <p>Ensure that the system is evacuated of air. Allow for returning as necessary to vent the system</p>	1	item		
5.14	<p>Employ the manufacturer to commission the new boiler and obtain 5 year warranty in the favour of the school. Test and commission the existing boiler and new twin-circuit pressurisation unit.</p> <p>Commission new boiler shunt pumps and associated interfaces, to ensure minimum flow are maintained though the system</p>	1	item		
5.15	Inspect the heat-pump support channels for corrosion and treat with cold galvanising paint.	1	item		

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

5.16	Provide clear permanent labels for both the existing high grade and low grade dosing pots. Replace the pipework deification from the dosing pot (currently labelled hot water flow and return) with suitable dosing line ID tape. Introduce inhibitor to the high grade circuit (to boiler manufacturer's recommendations). Introduce inhibitor, biocide and anti-frost to the low grade heating circuit to ASHP recommendations. Provide record information, including COSHH sheets, recommended dosing levels, details of products used.	1	item		
5.17	Employ a registered Carrier specialist to commission the existing air source heat pump (and ancillary components) in both heating and cooling modes.	1	item		
5.18	Modify the high-grade heating circuit, to incorporate a new connection and two-port valves, to enable bidirectional resilience, as indicated on the drawings.	1	item		
5.19	Fire stop openings in plant room walls. Note that there are three high level openings to the adjacent switch room, which require fire stopping. Apply fire rated material to provide 60 minutes compartmentation. Inspect and report any further missing or damaged fire stopping within ceiling voids, risers and plant rooms	1	item		
5.20	Provide plant room schematic (for new and existing plant) and detailed valve chart. Provide record information for the new heating equipment, including test certificates, manufacturer data, commissioned values, fault-finding, etc	1	item		
5.21	Any other works to heating and heat-pump systems (state):	1	item		
TOTAL LPHW HEATING SYSTEM					£0.00

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

		Quantity	Unit	Rate	Total
6.00	DX HEAT-PUMP SYSTEMS				
6.01	Inspect, test and commission DX heat-pumps	1	item		
6.02	Set-up supplementary heat pumps in IT classrooms to provide heating in winter and train staff	1	item		
6.03	Establish FGas register and testing/inspection regime	1	item		
6.04	Replace all room unit filters	1	item		
6.05	Any other works to DX systems (state):	1	item		
	TOTAL DX HEAT-PUMP SYSTEMS				£0.00
		Quantity	Unit	Rate	Total
7.00	MECHANICAL VENTILATION				
7.01	Service 7No MVHR's and change inlet and exhaust filters	1	item		
7.02	Check operation of local extract fans and report any	1	item		
7.03	Any other works to ventilation systems (state):	1	item		
	TOTAL MECHANICAL VENTILATION				£0.00
		Quantity	Unit	Rate	Total
8.00	ELECTRICAL IN CONNECTION				
8.01	Survey the existing installation and review latest test and inspection report. Identify any shortcomings or non-compliances to the CA	1	item		
8.02	Provide new 2.5mm ² single core LSF wiring and adapt/extend galvanised steel containment for the new boiler and pump, from the existing MCC. Provide new labelled SP DP local	1	item		
8.03	Strip out redundant supply for second pressurisation unit and modify wiring and containment to suit new single device. Provide new SP DP local isolator	1	item		
8.04	Extend local electrical circuit in the hall store to provide supply to new manifold pump. Provide surface steel conduit painted to match existing décor	1	item		
8.05	Modify and supplement earthing and bonding as required to suit the new installation.	1	item		
8.06	Test all new and modified circuits in accordance with IET Regulations and issue certificates	1	item		
8.07	Any other electrical works (state):	1	item		
	TOTAL ELECTRICAL IN CONNECTION				£0.00

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

		Quantity	Unit	Rate	
9.00	BUILDING MANAGEMENT SYSTEMS & CONTROLS				
9.01	Note that in 2022, remedial works were undertaken to the controls, to ensure that all components, hardware, software and ancillaries operated correctly. The system was recommissioned, but new elements need to be incorporated to allow the system to perform optimally	1	item		
9.02	Incorporate hardware and ancillaries for new boiler arrangement. Note that spare panel switches and lamps have been provided for a second boiler and min flow pump (labelled "future use". Where are to be relabelled "gas boiler No2" and "Gas boiler min flow pump No2" respectively.	1	item		
9.03	Provide all necessary internal panel components to suit the second boiler and pump, including wiring, relays, interlocks, ancillaries, terminals, etc. Provide connections to run and fault lamps	1	item		
9.04	Modify the controls and BMS strategy to incorporate the new pumped UFH manifold. The pump is to be enabled whenever the system has a load and the system is in heating mode. Modulate the associated 4-port valves to maintain the space temperature. Integrate system response time, to prevent overshoot of temperatures.	1	item		
9.05	Provide new inputs and outputs for the new boiler and pump, to duplicate the existing boiler. Provide Fault indication and run status. Boiler to operate on a cascade basis, to optimise firing efficiency. Raise an alarm on boiler failure. Incorporate boiler into frost, optimum start/stop and boiler flow compensation routines If the ASHP is in fault, operate the boilers as the primary heat-source. <u>Low grade heat circuit control:</u> Operate the ASHP and primary pump in optimised start, to ensure the buffer vessel is up to temperature at the start of the day (by 7.30am). Operate the secondary ASHP pumps to deliver heat to the UFH and MVHR coils. Activate UFH manifold and pump to ensure that the hall is up to temperature by occupancy. Maintain hall temperature by modulating the new manifold valve. MVHR's are to operate under air quality mode during heating mode, with fans modulating to maintain required CO2 levels and supply air delivered at constant 21oC. Should the ASHP fail to maintain the MVHR temperatures, the boilers are to be fired and the plate exchanger valves modulated to raise the temperature of the LG heating circuit, to maintain 21oC off-coil. Should the valve fail and the ASHP circuit overheat, close the hardwired high-limit valve Under extreme external conditions, the MVHR's may need to be run at 23oC to assist in offsetting heat loss.	1	item		

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

9.06	Directly feed the MVHR's and underfloor heating from the low grade heating circuit and modulate valves to maintain constant supply temperature.	1	item		
9.07	<u>Heat-pump - Cooling mode</u> Utilise free-cooling utilising the MVHR's, modulating speed based on internal temperature. In periods of high external temperature, run night-time free-cooling using the MVHR's In internal temperature exceeds 24oC, run the heat-pump in cooling mode and deliver water at 16oC (minimum, to prevent condensation) flow to the MVHR coils. Modulate valves to maintain supply air temperature at 21oC. During period of high temperature, pass cooled water through the sports hall underfloor heating, to cool the structure	1	item		
9.08	<u>High Grade heating circuit control</u> Provide frost protection, optimum start and compensation (of boiler flow) routines for the boilers, based on the demand in the original building. Provide feedback from both original and extended areas. Modulate the control valves to the plate heat exchanger and radiant panel branch, under the dictates of the ASHP demand and worst case room sensors. Provide additional feedback from existing room sensors in Foodtech, D of E rooms and extension classrooms. Utilise lowest room temperature as input feedback to the compensation routine.	1	item		
9.09	Configure BMS strategy controls to vary inlet and exhaust fan speeds on MVHR's for CO2 control in heating mode. Test and calibrate CO2 sensors	1	item		
9.10	Provide 2 No new control valves and controls strategy to provide bidirectional resilience under boiler failure. The routine is to close the existing HG heating return valve and the new primary flow valve, and open the new return valve, to create a series loop with the PHX and radiant panel circuit. refer to schematic and drawings for mode of operation The is to operate under boiler failure, to provide background heating. Also provide a strategy to run the routine when heating loads are low and can be met by ASHP operating temperatures	1	item		
9.11	Incorporate hardware and ancillaries for new boiler arrangement. Note that spare panel switches and lamps have been provided for a second boiler and min flow pump (labelled "future use". Where are to be relabelled "gas boiler No2" and "Gas boiler min flow pump"). Associated internal wiring and ancillaries are not currently installed	1	item		

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Heating Distribution Works 2023 Southend YMCA Community School

9.12	Testing, commissioning and training- Undertake comprehensive testing and commissioning of the HVAC controls/BMS in accordance with Building Regulation, CIBSE Commissioning Codes and BSRIA application guide AG9/2001. Demonstrate correct operation of the system under all operating (heating and cooling) modes and prove that safe, stable and efficient control is achieved. Provide training for school operational staff, so that they can adjust set-points, see plant status plant, programme holiday dates, extend plant operation out of hours, identify faults, etc. Provide building operator password protection Provide training for maintenance provider to allow them to override plant, make set-point adjustments, view software parameters, clear alarms and faults. Provide maintainer level password protection.	1	item		
9.13	Visit site and undertake fine tuning of systems to take account seasonal adjustments (after 3, 6 and 12 months).	1	item		
9.14	Provide Updated record information for the BMS and controls, including any altered schematics, description of operations, points lists, test certificates, details of new components, schedules of initial settings, passwords and set points. Provide back-up copy of commissioned software, including any fine-tuning.	1	item		
9.15	Any other works to controls systems (state):	1	item		
	TOTAL BUILDING MANAGEMENT SYSTEMS & CONTROLS				£0.00
10.00	ASBESTOS	Quantity	Unit	Rate	Total
10.01	The building fabric is not anticipated to have any ACMs. A Demolition Survey report is contained within the PCI. If during the works the Contractor discovers any materials they suspect to be ACMs, they are to stop works and notify the Employers Representative immediately. A plan will then be agreed aon how to proceed.	-	-	Note	-
	TOTAL				£0.00

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Heating Distribution Works 2023 Southend YMCA Community School

		Quantity	Unit	Rate	Total
11.00	HANDOVER, TESTING AND COMMISSIONING, BUILDING CONTROL APPROVAL				
11.01	The contractor is to notify the Employers Representative one week before the completion of the works.	1	item		
11.02	The contractor is to ensure all works are operational, free from defects and fully cleaned prior to hand over.	1	item		
11.03	Upon completion of the works the Contractor is to provide the full written documents associated with any guarantee's.	1	item		
11.04	The Contractor is to ensure all areas of works are clean and free of dust, debris, materials and plant at final completion of the works. All areas used or occupied by the Contractor during the works are to be left in a good clean condition.	1	item		
	TOTAL				£0.00
12.00	PROVISIONAL SUMS				
12.01	The following provisional sums have been identified. The Contractor is not to expend any of these sums without the prior written consent of the Employers Representative. The Contractor will be required to provide a detailed break down supporting the proposed expenditure of Provisional Sums and agreeing this with the Employers Representative before commencing any works.	1	Item		
P1	Remedial works to local TRV's and controls	1	Item	£800.00	£800.00
P2	Modified ASHP drainage to suit site conditions and surface scan	1	Item	£1,100.00	£1,100.00
P3	Additional fire stopping identified during the works	1	Item	£500.00	£500.00
P4	Additional venting facilities on existing pipework identified during the works	1	Item	£300.00	£300.00
P5	Remedial works to MCC following opening up	1	Item	£1,200.00	£1,200.00
P6	Replace defective CO2 and temperature sensor	1	Item	£600.00	£600.00
P7	Remedial works to existing thermal insulation identified during opening up	1	Item	£1,500.00	£1,500.00
P8	Remedial works following ASHP service	1	Item	£2,000.00	£2,000.00
	TOTAL PROVISIONAL SUMS				£8,000.00

Schedule of Works

Heating Distribution Works 2023 Southend YMCA Community School

		Quantity	Unit	Rate	Total
13.00	PRELIMINARIES				
13.01	Generally: Preliminaries costs to be shown as weekly amounts. Preliminaries costs to include all management costs, including but not limited to the items listed below; Staff and Management Accommodation/Site Office Telecommunications Plant / Equipment Temporary Works Temporary Services Hoarding, Security & Protection Cleaning & Attendance Insurances, Charges, Contract Conditions NOTE: Provisional sums deemed to include preliminaries and be included in works programme ('defined')	6	wks.		
	TOTAL PRELIMINARIES				£0.00
	TOTAL FOR SOW				£8,000.00

Appendix C – Form of Contract

FS 0137 – PRE-CONSTRUCTION SERVICES AGREEMENT (IF REQUIRED)

HEATING DISTRIBUTION WORKS

Dated

20[^{*}]

THE SECRETARY OF STATE FOR EDUCATION

and

[NAME OF CONTRACTOR]

**PRE-CONSTRUCTION SERVICES AGREEMENT
for use with JCT Minor Works Building Contract with
Contractor's Design 2016 (as amended) in relation to
FS0137 Southend YMCA Community School**

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THIS AGREEMENT is made on

20[^{*}]

BETWEEN

- (1) **THE SECRETARY OF STATE FOR EDUCATION** of Sanctuary Buildings, Great Smith Street, London, SW1P 3BT ("**Employer**"); and
- (2) [**FULL COMPANY NAME OF CONTRACTOR**] incorporated and registered in England and Wales with company number [NUMBER] whose registered office is at [REGISTERED OFFICE ADDRESS] ("**Contractor**").

WHEREAS

- (A) This agreement is entered into pursuant to the Construction Framework established by the DfE pursuant to a contract notice published on 28 December 2020 in the Official Journal of the European Union under reference 2020/S 252-638043 (the "Framework Agreement").
- (B) The Employer wishes to carry out the Project.
- (C) The Employer wishes to engage the Contractor to carry out the Services.
- (D) The Employer may appoint the Contractor to carry out the Works and wishes to secure agreement on the terms on which that appointment may be made.

NOW IT IS AGREED as follows:

1 INTERPRETATION

- 1.1 The definitions and rules of interpretation in this clause 1.1 apply in this agreement.

Additional Services means the services which are additional or represent an alteration to the Pre-Construction Services as then specified and as may be instructed pursuant to clause 6 of this agreement;

Additional Services Instruction means the form of instruction set out in Part 2 Schedule 4 (Additional Services Instruction);

BIM Protocol means the BIM Protocol as set out in the Proposed Contract Documents;

Business Day means any day which is not a Saturday, a Sunday or a Public Holiday;

CDM Regulations means the Construction (Design and Management) Regulations 2015 (SI 2015/51);

Consents means any planning permissions relating to the Services and/or Works, the approvals of reserved matters relating to the conditions attaching to any planning permissions referred to in the Services or any other planning permissions relating to the Works, any obligation under section 106 Town and Country Planning Act 1990, section 38 and/or section 278 Highways Act 1980 or section 104 and/or section 106 Water Industry Act 1991, and all other permissions, consents, approvals, licences, certificates, authorisations, and permits whether of a public or private nature as may be necessary lawfully to commence, carry out and complete the Works and, if they are destroyed or damaged, the reinstatement of the Works;

Contract means the proposed contract to be entered into between the Employer and the Contractor in relation to the Works and the Project in the form of (or based on) the Proposed Contract Documents;

Contract Sum means the sum to be agreed by the parties under this agreement and included as the contract sum or prices in the Contract;

Crown Body means any department, office or agency of the Crown;

DfE means the Department for Education whose registered office is at Sanctuary Buildings, Great Smith Street, London, SW1P 3BT;

Early Works means any works instructed by the Employer to be performed by the Contractor pursuant to clause 7 of this agreement;

Early Works Instruction means the form of instruction set out in Part 1 Schedule 4 (Early Works Instruction);

Early Works Site means the site of the Early Works as identified in the plan appended to the Early Works Instruction;

Educational Services means the provision of teaching and pastoral support for school age children, the provision of careers advice, liaison with parents and guardians of pupils and the use of educational accommodation by the local community;

Employer's Representative means Stuart Wager of Arcadis LLP (company number OC368843) or such other person as may be appointed by the Employer to act as the Employer's representative, contract administrator or Employer's Representative as the case may be, in connection with the Contract from time to time;

Employer's Requirements means the drawings, Project Cost Plan, details and specifications of materials, goods and workmanship and other related documents that have been prepared or will be prepared by or on behalf of the Employer in relation to the requirements of the Works, as referred to in the Proposed Contract Documents;

Good Industry Practice means the exercise of that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced Contractor engaged in the same type of undertaking under the same or similar circumstances;

Insolvent means for the purposes of this agreement:

- (a) if a company:
 - (i) when it enters administration within the meaning of Schedule B1 to the Insolvency Act 1986;
 - (ii) on the appointment of an administrative receiver or a receiver or manager of its property under Chapter I of Part III of that Act, or the appointment of a receiver under Chapter II of that Part;
 - (iii) on the passing of a resolution for voluntary winding-up without a declaration of solvency under section 89 of that Act; or
 - (iv) on the making of a winding-up order under Part IV or V of that Act;
- (b) if a partnership:
 - (i) on the making of a winding-up order against it under any provision of the Insolvency Act 1986 as applied by an order under section 420 of that Act; or
 - (ii) when sequestration is awarded on the estate of the partnership under section 12 of the Bankruptcy (Scotland) Act 1985 or the partnership grants a trust deed for its creditors;
- (c) if an individual:
 - (i) on the making of a bankruptcy order against him under Part IX of the Insolvency Act 1986; or
 - (ii) on the sequestration of his estate under the Bankruptcy (Scotland) Act 1985 or when he grants a trust deed for his creditors;

- (d) if:
- (i) it commences negotiations with all or any class of its creditors with a view to rescheduling any of its debts, or makes a proposal for or enters into any compromise or arrangement with any of its creditors (excluding a scheme of arrangement as a solvent company for the purposes of amalgamation or reconstruction);
 - (ii) (in the case of a partnership) each partner is the subject of an individual arrangement or any other event or proceedings referred to in this definition; or
 - (iii) it applies to court for, or obtains, a moratorium under Part A1 of the Insolvency Act 1986;

Intellectual Property Rights means:

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

Key Personnel means the persons identified in paragraph 4 of Schedule 1 (Project Particulars), or as otherwise agreed under clause 4.3;

Material means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Contractor in relation to the Services, the Project and the Works (including any updates, amendments, additions and revisions), together with any other design documents or information to be provided by him under the BIM Protocol;

Pre-Construction Fee means the sum set out in Part 1 of Schedule 3 (Payments) to be paid in accordance with the schedule of payments set out in Part 1 of Schedule 3 (Payments) as may be adjusted in accordance with this agreement;

Pre-Construction Period means that part of the Project up to and including the date of the Contract;

Pre-Construction Services means the services required to be performed by the Contractor as set out in Part 1 of Schedule 2 (Pre-Construction Services);

Pre-Construction Services Manager means [INSERT NAME] or such other person as the Contractor may appoint from time to time. Such appointment shall be subject to the approval of the Employer (not to be unreasonably withheld or delayed);

Principal Designer means the Contractor or such replacement as the Employer at any time appoints to fulfil that role under the CDM Regulations and the person with responsibility for carrying out such role is [INSERT NAME] or such other person as the Employer shall approve;

Professional Consultants means the professional consultants listed in paragraph 3 of Schedule 1 (Project Particulars) and any other professional consultants from time to time engaged by the Employer in connection with the Project;

Project (also referred to as 'Scheme' in the Proposed Contract Documents) means the development of the Property for the purposes identified in paragraph 1.1 of Schedule 1 (Project Particulars);

Project Cost Plan means the budget for the Project prepared by the Employer's Representative and agreed by the Employer;

Property means the property identified in paragraph 1 of Schedule 1 (Project Particulars);

Proposed Contract Documents means the documents listed in Schedule 5 (Proposed Contract Documents) together with any amendments, alterations or variations to them as may be agreed between the parties;

Public Holiday means Christmas Day, Good Friday or a day which under the Banking and Financial Dealings Act 1971 is a bank holiday;

Services means:

- (a) the Pre-Construction Services;
- (b) any Additional Services that the Contractor is required to perform pursuant to clause 6 of this agreement; and
- (c) any Early Works the Contractor is required to perform pursuant to clause 7 of this agreement.

Standard of Care means the professional skill, care and diligence reasonably to be expected of a contractor and, to the extent that the Services comprise design, properly qualified and competent designer of the appropriate discipline(s) for such design acting independently under a separate contract with the Employer and experienced in providing services such as those required under this agreement in relation to projects of a similar size, scope, nature, complexity, location, timescale and value to the Project;

Statutory Requirements means any statute, statutory instrument, regulation, rule or order made under any statute or directive having the force of law which affects the Works or performance of any obligations under this agreement and any regulation or bye-law of any local authority or statutory undertaker which has any jurisdiction with regard to the Works or with whose systems the Works are, or are to be, connected including any statutory provisions and any decision or a relevant authority thereunder which control the right to develop the Property;

VAT means value added tax chargeable under the Value Added Tax Act 1994 (as amended, extended or re-enacted) and any similar or replacement tax;

Works means the works and the services required to facilitate the design, construction, completion and commissioning of the Project in accordance with the Contract.

- 1.2 Clause, schedule and paragraph headings shall not affect the interpretation of this agreement.
- 1.3 A "person" includes a natural person, corporate or unincorporated body (whether or not having separate legal personality) and that person's successors and permitted assigns.
- 1.4 The schedules form part of this agreement and shall have effect as if set out in full in the body of this agreement and any reference to this agreement includes the schedules.
- 1.5 A reference to a "company" shall include any company, corporation or other body corporate, wherever and however incorporated or established.
- 1.6 Unless the context otherwise requires, words in the singular shall include the plural and in the plural include the singular.

- 1.7 Unless the context otherwise requires, a reference to one gender shall include a reference to the other genders.
- 1.8 A reference to a party shall include that party's legal and personal representatives, successors or permitted assigns.
- 1.9 A reference to a statute, statutory provision or subordinated legislation is a reference to it as it is in force from time to time, taking account of any amendment, extension, or re-enactment and includes any statute, statutory provision or subordinate legislation which it amends or re-enacts.
- 1.10 A reference to a statute or statutory provision shall include any subordinate legislation made from time to time under that statute or statutory provision.
- 1.11 Any reference to a party's "consent" or "approval" being required is to a consent or approval in writing, which must be obtained before the relevant action is taken or event occurs.
- 1.12 Any obligation in this agreement on a person not to do something includes an obligation not to agree or allow that thing to be done.
- 1.13 A reference to "writing" or "written" includes e-mail.
- 1.14 References to clauses and schedules are to the clauses and schedules of this agreement; references to paragraphs are to paragraphs of the relevant schedule.
- 1.15 A reference to a document is a reference to that document as varied or novated (in each case, other than in breach of the provisions of this agreement) at any time.
- 1.16 Unless this agreement expressly provides otherwise, a reference to the Property or the Project is to the whole and any part of it.
- 1.17 Where the words "include(s)", "including" or "in particular" are used in this agreement, they are deemed to have the words "without limitation" following them.
- 1.18 Terms defined in the Proposed Contract Documents have the same meaning in this agreement as in the Proposed Contract Documents unless the meaning given in the Proposed Contract Documents is different to, or conflicts with, the meaning given in this agreement, in which case the meaning given in this agreement prevails.
- 1.19 Notwithstanding any other provision of this agreement, the Contractor's obligations and/or liabilities under this agreement shall not be removed, reduced, qualified or limited by any enquiries, approvals, admissions, comments, consents, confirmations, sanctions, acknowledgement, advice, inspections, attendance at meetings or any failure in relation to the same by the Employer or its agents or representatives.

2 DURATION AND EFFECT OF THIS AGREEMENT

- 2.1 The parties' obligations under this agreement start on the date of this agreement or, if earlier, the date on which the Contractor commenced performance of the Services until the earlier of:
 - 2.1.1 the execution and completion of the Contract; or
 - 2.1.2 the Contractor or Employer issuing a notice of termination of this agreement and/or the employment of the Contractor under this agreement under clause 13.
- 2.2 Before execution and completion of the Contract, the rights and obligations of the Employer and the Contractor in relation to the Works shall be governed by the provisions of this agreement supplemented by the Proposed Contract Documents. If there is any conflict or difference between this agreement and the Proposed Contract Documents, the provisions of this agreement shall prevail.

- 2.3 On the execution and completion of the Contract, the parties' respective rights and liabilities in respect of all matters with which this agreement is concerned (including any design performed or any work or services carried out or order placed under clauses 6 or 7) shall be subsumed into and be subject to the Contract. The payment of any or all of the Pre-Construction Fee shall be deemed to be payments on account under the Contract.
- 2.4 In the event that this agreement is terminated such termination shall not affect the continuing rights and obligations under clauses 3.5, 10, 14, 15, 17 and/or any other provision of this agreement which are expressed to survive termination of this agreement or the consequences of such termination of this agreement.

3 PRE-CONSTRUCTION PERIOD

- 3.1 The Contractor warrants and undertakes that it shall:
- 3.1.1 comply with this agreement and the Proposed Contract Documents;
 - 3.1.2 carry out and fulfil, in all respects, the duties of a principal contractor and the principal designer (save where the Contractor is not named as Principal Designer at clause 1.1 in this agreement) under the CDM Regulations;
 - 3.1.3 ensure that the Key Personnel maintain a material involvement in the Services; and
 - 3.1.4 allocate personnel of sufficient numbers and qualifications to perform the Services deploying as a minimum the personnel and resources listed in Part 2 of Schedule 2 (Personnel and Resources).
- 3.2 The Contractor warrants and undertakes that it has exercised and shall continue to exercise the Standard of Care:
- 3.2.1 when performing the Services; and
 - 3.2.2 in not permitting to be used specifying or approving for use or using in connection with the Works any materials which at the time of use:
 - (a) are known to be deleterious (either to health and safety or to the durability of the Works); or
 - (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
 - (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use.
- 3.3 The Employer and the Contractor shall comply with their respective obligations set out in the BIM Protocol.
- 3.4 Without prejudice to the scope of the Pre-Construction Services and, if instructed, any Additional Services and/or Early Works, the Contractor shall perform the Services in accordance with:
- 3.4.1 the Proposed Contract Documents;
 - 3.4.2 such financial constraints as the Employer may from time to time agree with the Contractor;
 - 3.4.3 the Master Programme (as referred to in paragraph 2 of Part 1 of Schedule 2 (Pre-Construction Services)) and such other time constraints as the Employer, acting reasonably, may from time to time agree with the Contractor;

- 3.4.4 the instructions of the Employer properly given under this agreement (whether given by the Employer or by the Employer's Representative on behalf of the Employer);
 - 3.4.5 any Early Works Instruction; and
 - 3.4.6 any Additional Services Instruction.
- 3.5 The Contractor shall:
- 3.5.1 be responsible for the acts and activities of its sub-contractors, consultants and suppliers, and its liability to the Employer shall not in any way be reduced, qualified, released or diminished by the Employer's approval of any list, design, document, material, programme, sub-contract, appointment, supply agreement, order, sub-contractor or supplier;
 - 3.5.2 ensure that any sub-contractor or consultant appointed during the Pre-Construction Period in relation to any element of the design of the Works shall, to the extent requested by the Employer, provide a collateral warranty in favour of the Employer and any other parties advised by the Employer, in the form set out at Schedule 6 (Collateral Warranties);
 - 3.5.3 ensure that any sub-contract or supply agreement entered into in relation to the Works during the Pre-Construction Period contains:
 - (a) a clause that permits its termination if the Employer does not enter into the Contract; and
 - (b) any other clause(s) identified in the Early Works Instruction;
 - 3.5.4 itself, and shall procure that any sub-contractor, consultant or supplier appointed by it in relation to the Works during the Pre-Construction Period shall, on any determination or termination of this agreement by the Employer and/or determination or termination of the Contractor's employment under this agreement, consent to and (if requested by the Employer or the Contractor) effect the novation of their respective sub-contract, appointment, supply agreement, order and any other similar document to the Employer or any person that the Employer nominates; and
 - 3.5.5 give the Employer a copy of any sub-contract, supply agreement, order and any other similar document within five (5) Business Days of the Employer's request to do so.
- 3.6 The Contractor acknowledges that the Employer has relied and will continue to rely upon the Contractor's skill and judgement in relation to the Services and the Employer shall be entitled to rely upon such skill and judgement notwithstanding the engagement of any other contractor to carry out and complete the Works.
- 3.7 The Employer and the Contractor agree to work together during the Pre-Construction Period to finalise the Contract Sum and all designs and technical documents to be inserted in the Contract. The Contractor agrees to provide such information and assistance to the Employer as may be necessary for this purpose.
- 3.8 Nothing in this agreement shall prevent or restrict the Employer from entering into negotiations or contracting with any other contractor at any time in relation to the Project.
- 3.9 The Employer shall within a reasonable time:
- 3.9.1 comply with any reasonable request from the Contractor for information in the Employer's possession or control, which is relevant to the Contractor's obligations under this agreement and which has not previously been provided to the Contractor; and
 - 3.9.2 give instructions or approvals and make decisions (or procure that the Employer's Representative or the Professional Consultants give instructions or approvals and make

decisions) as reasonably requested by the Contractor, to allow the Contractor to comply with its obligations under this agreement (including performing the Services).

4 KEY PERSONNEL

- 4.1 The Contractor shall procure that the Pre-Construction Services Manager assumes direction and control of the Services and that he maintains direct and regular contact with the Employer or the Employer's Representative on all matters pertaining to the Contractor's responsibilities under this agreement.
- 4.2 If the Pre-Construction Services Manager is unable to assume or continue to provide such personal direction and control, the Contractor shall consult with the Employer and procure that such other members of the Contractor's staff as shall be approved by the Employer (such approval not to be unreasonably withheld or delayed) shall assume personal direction and control of the Services.
- 4.3 The Contractor shall not appoint other Key Personnel in connection with the Services, or change any of the Key Personnel without in each case obtaining the Employer's prior written consent (such consent not to be unreasonably withheld or delayed).
- 4.4 The Employer shall have the right, after consultation with the Contractor, to request the removal of any person engaged in the performance of the Services if, in the Employer's opinion (acting reasonably), his performance or conduct is or has been unsatisfactory. The Contractor shall promptly remove such person and replace him with a person who shall previously have been approved by the Employer (such approval not to be unreasonably withheld or delayed).

5 TIME FOR PERFORMANCE

- 5.1 The Contractor shall, subject to the provisions of this agreement, proceed with the Services regularly and diligently and shall perform the same as may be necessary having regard to any timetable that the Employer issues to the Contractor.
- 5.2 The Contractor shall perform the Services and generally provide all drawings, details, specifications, and other required information so as not to cause any programme, milestone and/or completion dates as notified to the Contractor by the Employer to be exceeded, subject to the Contractor promptly making known to the Employer any reasonable objections to such dates.
- 5.3 If at any time the Contractor is prevented or delayed in the performance of the whole or any part of the Services for any reason the Contractor shall:
 - 5.3.1 as soon as he becomes aware forthwith so notify the Employer giving the specific reason for such delay or prevention together with his best estimate of its effect on the procurement timetable, the proposed construction period and any other impact, and
 - 5.3.2 use all reasonable endeavours to mitigate the effect of any delay and as soon as practicable to resume and expedite the performance of the Services so as to complete the same with all reasonable speed.

6 ADDITIONAL AND/OR OMISSION OF SERVICES

- 6.1 The Employer may at any time, instruct the Contractor to carry out Additional Services by issuing an Additional Services Instruction and the Contractor shall comply with such instruction provided that if the Contractor (acting reasonably) requires any amendment to the Additional Services Instruction then within five (5) Business Days of receipt of the Additional Services Instruction (but in any event prior to carrying out any services pursuant to the same) the Contractor shall issue a notice to the Employer stating:
 - 6.1.1 its proposed amendment or clarification to the scope of Additional Services;
 - 6.1.2 the total sum the Contractor requires to perform the Additional Services; and

- 6.1.3 its proposed adjustments to the milestone table in Part 1 of Schedule 3 and the Pre-Construction Fee.
- 6.2 Within five (5) Business Days of receipt of the notice issued by the Contractor pursuant to clause 6.1, the Employer may either accept the Contractor's notice or cancel the relevant Additional Services Instruction. Where the Employer accepts the Contractor's notice it shall issue a revised Additional Services Instruction confirming the same and the Contractor shall proceed to carry out the relevant Additional Services.
- 6.3 Where the Employer does not accept the Contractor's notice issued under clause 6.1 it may cancel the Additional Services Instruction and the Contractor shall comply with the same and not carry out the relevant Additional Services and there shall be no cost to the Employer (who shall not pay the Contractor for the relevant Additional Services).
- 6.4 The Employer may at any time, notify the Contractor that it does not require the Contractor to carry out certain elements of the Pre-Construction Services, and to the extent instructed, any Additional Services. The Contractor shall provide the Employer with a breakdown of the sum(s) included in the Pre-Construction Fee in relation to such omitted elements of the Pre-Construction Services and/or Additional Services and details of any expenditure prior to the Employer instructing those elements be omitted from the Pre-Construction Services and/or Additional Services. The Employer shall omit from the Pre-Construction Fee such sum agreed between the parties for the omitted services. If the parties do not agree a sum, the Employer shall omit a fair and reasonable sum taking into account any rates and prices used to calculate the Pre-Construction Fee.

7 EARLY WORKS

- 7.1 The Employer may at any time, instruct the Contractor to carry out Early Works by issuing an Early Works Instruction and the Contractor shall comply with such instruction provided that if the Contractor (acting reasonably) requires any amendment to the Early Works Instruction then within five (5) Business Days of receipt of the Early Works Instruction (but in any event prior to carrying out any works pursuant to the same) the Contractor shall issue a notice to the Employer stating:
 - 7.1.1 its proposed amendment or clarification to the scope of the Early Works;
 - 7.1.2 the total sum the Contractor requires to perform the Early Works; and
 - 7.1.3 its proposed adjustments to the milestone table in Part 1 of Schedule 3 and the Pre-Construction Fee.
- 7.2 Within five (5) Business Days of receipt of the notice issued by the Contractor pursuant to clause 7.1, the Employer may either accept the Contractor's notice or cancel the relevant Early Works Instruction. Where the Employer accepts the Contractor's notice it shall issue a revised Early Works Instruction confirming the same and the Contractor shall proceed to carry out the relevant Early Works.
- 7.3 Where the Employer does not accept the Contractor's notice issued under clause 7.1 it may cancel the Early Works Instruction and the Contractor shall comply with the same and not carry out the relevant Early Works and there shall be no cost to the Employer (who shall not pay the Contractor for the relevant Early Works).
- 7.4 The Employer may at any time, notify the Contractor that it no longer requires the Contractor to carry out certain elements of any Early Works instructed. The Contractor shall provide the Employer with a breakdown of the sum(s) included in the Pre-Construction Fee in relation to the omitted elements of such Early Works and details of any expenditure prior to the Employer instructing those elements be omitted from the scope of such Early Works. The Employer shall omit from the Pre-Construction Fee such sum agreed between the parties for the omitted Early Works. If the parties do not agree a sum, the Employer shall omit a fair and reasonable sum taking into account any rates and prices used to calculate the Pre-Construction Fee.

8 PAYMENT

8.1 The Employer shall pay the Contractor the Pre-Construction Fee as may be amended in accordance with this agreement for carrying out the Services in accordance with Schedule 3 (Payments).

8.2 Except where expressly stated to the contrary in this agreement, the Pre-Construction Fee shall be inclusive payment for the Services and all other matters relating to this agreement (including all costs, disbursements, expenses and overheads of every kind incurred by the Contractor in connection therewith) other than VAT.

8.3

8.3.1 In this clause 8.3, the following definitions shall apply:

- (a) HMRC means HM Revenue & Customs;
- (b) Order means the Value Added Tax (Section 55A) (Specified Services and Excepted Supplies) Order 2019 (SI 2019 No. 892);
- (c) Reverse Charge means, in relation to a supply, that under section 55A(6) of the Value Added Tax Act 1994 it is for the recipient, on the supplier's behalf, to account for and pay VAT on the supply and not for the supplier; and
- (d) Supply means a supply made for VAT purposes under or in connection with this agreement by the Contractor and Supplies shall be construed accordingly.
- (e) Tax Point means the time of supply for VAT purposes as defined in Regulation 93 of Part XI of the VAT Regulations 1995.

8.3.2 In respect of the Supplies made with a Tax Point, for VAT purposes, before 1 March 2021, the provisions of clauses 8.3.1 to 8.3.4 (inclusive) only of this clause 8.3 shall apply. In respect of Supplies made with a Tax Point on or after 1 March 2021, the provisions of clauses 8.3.1 to 8.3.6 (inclusive) of this clause 8.3 shall apply.

8.3.3 The parties agree and confirm that the procedure for the payment of VAT (if any) by either party to the other shall be governed entirely and exclusively by the provisions of clauses 8.3.1 – 8.3.5 notwithstanding any other provision of this agreement.

8.3.4 Any consideration (whether monetary consideration or non-monetary consideration) paid or provided under or in connection with this agreement is to be treated as exclusive of any VAT. If the person making the supply (or the representative member of the VAT group of which it is a member) is required to account for VAT on any supply, the recipient of the supply shall pay (in addition to paying or providing any other consideration) an amount equal to the amount of that VAT upon the later of:

- (a) the time for payment or provision of the consideration; and
- (b) the receipt by the recipient of the supply of a VAT invoice in respect of that VAT.

8.3.5 The Employer confirms that the requirements specified in article (8)(1)(b) of the Order will be satisfied in respect of any Supply and the parties consider that the Reverse Charge will not apply to the Supplies so that it is for the Contractor to account for and pay VAT to HMRC.

8.3.6 Where the Contractor has accounted for VAT on Supplies (on the understanding that the Reverse Charge did not apply) but HMRC notifies the Employer in writing that:

- (a) the Reverse Charge did apply in respect of those Supplies, and

- (b) notwithstanding that the Contractor has accounted for VAT to HMRC in respect of those Supplies, the Employer has to account for VAT under the Reverse Charge on those Supplies,

the Employer shall provide written notification to the Contractor of HMRC's decision that the supply should have been treated as subject to the reverse charge. Any amount of overcharged VAT shall be refunded by the Contractor to the Employer within 28 days following repayment to the Contractor of the overcharged VAT by HMRC (either via a correction in the VAT return or via a voluntary disclosure).

8.4 If the Employer or any party authorised by the Employer appoints the Contractor under clause 9.1:

8.4.1 the Employer's obligations to pay the Contractor under this agreement (including its obligations under clauses 8.1 to 8.3 inclusive) shall be replaced by an obligation to pay the Contractor the sums due under the Proposed Contract Documents and all payments under this agreement (including the Pre-Construction Fee, payment for the Additional Services and/or payment of the Early Works) shall be included within and treated as paid on account of the Contract Sum under the Proposed Contract Documents; and

8.4.2 for the avoidance of doubt, when the Contract has been executed and completed the Employer shall make no further payments under this agreement and all payments made under this agreement (including the Pre-Construction Fee, payment for the Additional Services and/or payment of the Early Works) shall be included within and treated as paid on account of the Contract Sum under the Contract.

8.5 If the Employer does not pay a sum due under this agreement on or before the final date for payment the Employer shall pay interest on that sum to the Contractor as if that sum was due under the Proposed Contract Documents. The rate of interest payable shall be five per cent (5%) above the official bank rate of the Bank of England current at the relevant final date for payment.

9 APPOINTMENT UNDER THE CONTRACT

9.1 The Employer, or any party authorised by the Employer, may, at its sole option and discretion appoint the Contractor to perform the Works and the Contractor agrees to accept that appointment.

9.2 The Contractor shall by entering into this agreement be deemed to have notice of the contents of the Proposed Contract Documents insofar as they relate to the design, carrying out and completion of the Works and hereby acknowledges and agrees that all obligations, risks and liabilities under the Proposed Contract Documents insofar as they relate to the design, carrying out and completion of the Works are in the actual contemplation of the Contractor as at the date of this agreement.

9.3 The Contract will be on the terms of the Proposed Contract Documents, incorporating the particulars set out in paragraph 4 of Schedule 1 (Project Particulars) (subject to any changes to those particulars agreed by the parties) and incorporating the Contract Sum agreed between the parties, as referred to in the Pre-Construction Services.

9.4 In the event that the Contract is entered into pursuant to clause 9.1 all Services provided by the Contractor under this agreement shall form part of the Works under the Contract (with an appropriate acknowledgement for prepayment).

10 INTELLECTUAL PROPERTY RIGHTS

10.1 The Intellectual Property Rights in the Material prepared by or on behalf of the Contractor in relation to this agreement and the work executed by him remains the property of the Contractor. The Contractor hereby grants to the Employer an irrevocable, royalty free, non-exclusive licence to use and reproduce the Material for any and all purposes connected with the construction, use, alterations or demolition of the Project. Such licence entitles the Employer to grant sub-licences to third parties in the same terms as this licence provided always that the Contractor shall not be liable to any licensee for any use of the Material or the use of the Intellectual Property Rights in the

Material for purposes other than those for which the same were originally prepared by or on behalf of the Contractor.

- 10.2 The Employer may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 10.1 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Employer.
- 10.3 In the event that the Contractor does not own the copyright or any Intellectual Property Rights in any of the Material the Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Employer to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Contractor is unable to procure the right to grant to the Employer in accordance with the foregoing the Contractor shall procure that the third party grants a direct licence to the Employer on industry acceptable terms.
- 10.4 The Contractor waives any moral right to be identified as author of the Material in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Material subjected to derogatory treatment in accordance with section 8 of that Act as against the Employer or any licensee or assignee of the Employer.
- 10.5 In the event that any act unauthorised by the Employer infringes a moral right of the Contractor in relation to the Material the Contractor undertakes, if the Employer so requests and at the Employer's expense, to institute proceedings for infringement of the moral rights.
- 10.6 The Contractor warrants to the Employer that he has not granted and shall not (unless authorised by the Employer) grant any rights to any third party to use or otherwise exploit the Material.
- 10.7 The Contractor shall supply copies of the Material to the Employer and the Employer's other contractors and consultants for no additional fee to the extent necessary to enable them to discharge their respective functions in relation to this agreement or related works.
- 10.8 After the termination or conclusion of the Contractor's employment hereunder, the Contractor shall supply the Employer with copies and/or computer discs of such of the Material as the Employer may from time to time request and the Employer shall pay the Contractor's reasonable costs for producing such copies or discs.
- 10.9 In carrying out the Services the Contractor shall not infringe any Intellectual Property Rights of any third party. The Contractor shall indemnify the Employer against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

11 LIMIT OF EMPLOYER'S LIABILITIES

- 11.1 The Employer's liability, however that liability arises (including a liability arising by breach of contract, arising by tort, including the tort of negligence, or arising by breach of statutory duty) in connection with this agreement, shall be limited to the following:
 - 11.1.1 a fair and reasonable proportion of the Pre-Construction Fee, which shall be commensurate with the Pre-Construction Services performed by the Contractor to the date of issue of any notice of termination of this agreement, but which shall not exceed the Contractor's cumulative entitlement to the Pre-Construction Fee at the date of issue of any notice of termination, as set out in and calculated in accordance with Schedule 3 (Payments);
 - 11.1.2 a fair and reasonable proportion of any payment due under clause 8 for any Additional Services;
 - 11.1.3 the value of work actually executed and orders actually placed by the Contractor as Early Works under clause 7, calculated in accordance with the Proposed Contract Documents; and

11.1.4 any interest due under clause 8.5,

provided that this clause 11.1 shall not exclude or limit any liability of the Employer for death or personal injury caused by the Employer's negligence.

11.2 The parties acknowledge and agree that unless the Employer has entered into the Contract the Employer shall be under no obligation to the Contractor other than as set out in this agreement (including being under no obligation with respect to any tender, further contract or other appointment to carry out part or all of the Project or the Works) and the Contractor shall have no claim against the Employer for:

11.2.1 loss of profit, loss of contract, loss of business, loss of chance or other similar loss; or

11.2.2 any indirect or consequential loss.

12 SUSPENSION

12.1 The Employer may, at any time, suspend performance of part or all of the Services by giving notice to the Contractor. Subject to clause 13.2, the Contractor shall resume performance of that part or all of the Services as soon as reasonably practicable after receiving a notice from the Employer to do so.

12.2 If the Employer does not pay a sum due under this agreement on or before the final date for payment and the failure continues for seven (7) days after the Contractor has given notice to the Employer of its intention to suspend the performance of any or all of its obligations the Contractor may suspend the performance of any or all of its obligations under this agreement.

12.3 In the event of a suspension under clause 12.1, subject to clause 11.1, the Employer shall pay the Contractor any sums due under clause 8 and such payment shall be the Contractor's sole compensation for suspension of the Services.

12.4 In the event of a suspension under clause 12.2, subject to clause 11.1, the Employer shall pay the Contractor any sums due under clause 8 and any other sum due and not otherwise provided for in this agreement, which is required to be paid under section 112 of the Housing Grants, Construction and Regeneration Act 1996, and such payment shall be the Contractor's sole compensation for suspension of the Services.

13 TERMINATION

13.1 The Employer may terminate this agreement or the Contractor's employment under this agreement at any time by giving the Contractor notice to that effect and such termination shall be effective from the date of issue of that notice.

13.2 The Contractor may terminate its employment under this agreement if:

13.2.1 the Employer is Insolvent; or

13.2.2 a suspension of all of the Services under clause 12.1 continues for a continuous period of six (6) months and the Employer does not instruct the Contractor to resume those Services within ten (10) Business Days of receiving a notice from the Contractor requiring it to do so,

by giving notice to the Employer to that effect and such termination shall be effective from the date of issue of that notice.

13.3 If this agreement or the Contractor's employment under this agreement is terminated, the parties shall co-operate to bring the Services to an orderly conclusion and to allow the parties to comply with their remaining obligations under this agreement.

- 13.4 If this agreement or the Contractor's employment under this agreement is terminated, the Contractor shall:
- 13.4.1 as soon as reasonably practicable, vacate the Early Works Site and leave the Early Works in a safe, clean, secure, orderly and (to the extent reasonably practicable) water tight condition and remove from the Early Works Site in a proper and orderly manner all waste materials and site accommodation, plant and machinery used in or arising out of the Early Works always having due regard to the fact that it is a school site and so as to minimise any disruption to the provision of Educational Services;
 - 13.4.2 if required by the Employer within 14 days of the date of termination, assign (so far as assignable and so far as he may lawfully be required to do so) to the Employer, without charge, the benefit of any agreement for the supply of materials, goods or services and/or for the execution of any work or services (including to the extent available any manufacturer's warranties or guarantees) for the purposes of this agreement; and
 - 13.4.3 to the extent not yet provided or requested by the Employer, execute and/or procure collateral warranties in accordance with clause 15.
- 13.5 Subject to clauses 10.8, 11.1 and 13.6 and the Contractor complying with its obligation to provide collateral warranties in accordance with clauses 13.4.3 and 15, if this agreement or the Contractor's employment under this agreement is terminated, the Employer shall pay the Contractor the total value of work properly executed at the date of termination of the employment of the Contractor under this agreement and that payment shall be the Contractor's sole compensation for such termination.
- 13.6 Without prejudice to the Employer's rights and remedies pursuant to any other clause of this agreement or law, if the Contractor is Insolvent or is in material or persistent breach of this agreement, the Contractor shall be liable to the Employer for all properly mitigated costs and losses that the Employer incurs or suffers as a consequence of that breach and the Employer shall be entitled to set off such costs and losses against any sum due or becoming due to the Contractor under this agreement.
- 13.7 Termination shall bring an end to the Contractor's obligation to provide the Services but shall be without prejudice to its duty to the Employer in respect of such Services performed prior to termination.

14 INSURANCE

- 14.1 Without prejudice to any other obligations under this agreement or otherwise at law, the Contractor shall take out and maintain with a licenced insurance company carrying on business in the United Kingdom, from the date hereof and for a period:
- 14.1.1 expiring no earlier than 12 years from completion of the Services, professional indemnity insurance (without conditions or excesses that in the market place are unusual or onerous) to cover all of its liability which it may incur under this agreement and otherwise relating to the Project, with a limit of indemnity of not less than one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance, subject to such insurance continuing to be available in the United Kingdom market upon reasonable terms and at commercially reasonable premium rates; and
 - 14.1.2 expiring no later than completion of the Services:
 - (a) third party and public and products liability cover in connection with the Services and the Project for not less than ten million pounds (£10,000,000); and
 - (b) employer's liability insurance cover to cover any claim for personal injury to or the death of any person under a contract of service or apprenticeship with the Contractor and arising out of and in the course of the person's employment in connection with

the Services or the Project, and providing cover of not less than ten million pounds (£10,000,000) any one event; and

14.1.3 such additional insurances as are set out in any Early Works Instruction.

Such insurance shall comply with the Employer's Liability (Compulsory Insurance) Act 1969 and all orders and regulations made thereunder.

14.2 The Contractor shall produce documentary evidence that the insurances required are being properly maintained, as and when reasonably required to do so by the Employer.

14.3 Any increased or additional premium required by insurers as a result of the Contractor's own claims record or other acts, omissions, matters or things particular to the Contractor (having regard to the premiums, terms and conditions then available in the UK insurance market) shall be deemed to be within reasonable terms and commercially reasonable rates.

14.4 The Contractor shall not do anything which might render any of the insurance policies referred to in this clause 14 void or voidable, and shall carry out his obligations under this agreement, and shall use all reasonable endeavours to ensure that his servants or agents shall carry out their respective obligations, in a manner that fully complies with all requirements terms conditions stipulations and provisos of such insurances.

14.5 The Contractor's obligation to maintain such insurances shall in no way negate or limit any or all of its obligations or duties hereunder nor its liability in respect of any breach or non-performance of the same.

15 COLLATERAL WARRANTIES: CONTRACTOR, PROFESSIONAL CONSULTANTS AND SUB-CONTRACTORS

15.1 The Contractor shall execute as deeds collateral warranties in the form set out in Schedule 6 in favour of any party advised by the Employer and shall deliver the same duly executed to the Employer within 14 days of a written request from the Employer.

15.2 The Contractor shall procure as deeds collateral warranties in the form set out in Schedule 6 from any consultant (which shall include, but is not limited to, design consultants and any consultant instructed to carry out surveys) or sub-contractor (as relevant) appointed by the Contractor in favour of:

15.2.1 the Employer; and

15.2.2 any other party advised by the Employer,

and shall deliver the same duly executed to the Employer within 14 days of a written request from the Employer.

16 NOTICES

16.1 Any notice to be given under this agreement shall be in writing and shall be deemed to have been given if:

16.1.1 delivered personally to a person in authority;

16.1.2 sent by email to a person in authority; or

16.1.3 sent by first class recorded delivery post.

16.2 The addresses for service are as follows:-

16.2.1 the Employer: Stuart Wager, Arcadis LLP, 80 Fenchurch Street, London, EC3M 4BY

Stuart.Wager@arcadis.com

the Contractor: [insert address]

[insert email address]

or such other address or number for service as the party to be served may have previously notified in writing to the other party.

- 16.3 A notice shall be deemed to have been served at the time of delivery if personally delivered, if sent by email, at the time of transmission and if posted, at the expiration of 48 hours after the envelope containing the notice was delivered into the custody of the postal authorities, unless the contrary can be proved.

17 ASSIGNMENT AND SUB-CONTRACTING

- 17.1 The Employer may assign or otherwise transfer the benefit of this agreement to any person without the consent of the Contractor on two (2) occasions only.
- 17.2 The Employer shall notify the Contractor of any assignment in writing within ten (10) Business Days specifying the name and address of the assignee and the date of the assignment. If the Employer fails to do this, the assignment shall still be valid.
- 17.3 The Contractor shall not contend that any person to whom the benefit of this agreement is assigned under clause 17.1 may not recover any sum under this agreement because that person is an assignee and not a named party to this agreement.
- 17.4 The Contractor shall not assign or charge the benefit of this agreement or any right arising under it without the Employer's prior consent, which the Employer may withhold at its absolute discretion.
- 17.5 No sub-contracting is permitted without the Contractor ensuring that:
- 17.5.1 the sub-contract contains such terms and conditions as are necessary for the Employer to be entitled to a copyright licence in terms the same as those of Clause 10; and
- 17.5.2 the sub-contractors with design responsibility are obliged to grant collateral warranties in the form set out in Schedule 6 (Collateral Warranties).
- 17.6 Notwithstanding any sub-contracting by the Contractor, the Contractor shall remain liable to the Employer to perform the Services and to comply with the Contractor's obligations under this agreement. The Contractor shall be responsible for checking all work carried out by any sub-contractor to ensure that it complies with the overall design intent and for the co-ordination and integration of any design work into the design of the Project.

18 DISPUTES

- 18.1 Notwithstanding any other provision of this agreement either party may refer a dispute arising under this agreement to adjudication at any time under Part I of the Scheme for Construction Contracts (England and Wales) Regulations 1998 (SI 1998/649).
- 18.2 The adjudicator shall be nominated by the Technology and Construction Solicitors' Association.

19 THIRD PARTY RIGHTS EXCLUSION

No term of this agreement is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this agreement. This clause does not affect any right or remedy of any

successor to the Employer in title or assigns or any right or remedy of any person which exists or is available otherwise than pursuant to that Act.

20 ENTIRE AGREEMENT

- 20.1 This agreement constitutes the entire agreement between the parties and supersedes and extinguishes all previous agreements, promises, assurances, warranties, representations and understandings between them, whether written or oral, relating to its subject matter.
- 20.2 Each party acknowledges that in entering into this agreement it does not rely on, and shall have no remedies in respect of, any representation or warranty (whether made innocently or negligently) that is not set out in this agreement.
- 20.3 Each party agrees that it shall have no claim for innocent or negligent misrepresentation based on any statement in this agreement.
- 20.4 Nothing in this clause shall limit or exclude any liability for fraud.

21 GOVERNING LAW AND JURISDICTION

This agreement and any non-contractual obligation arising out of or in connection with this agreement shall be governed by and construed in all respects in accordance with the laws of England and Wales. Subject to the operation of the dispute resolution procedure in clause 18, the English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this agreement.

22 COUNTERPARTS

- 22.1 This agreement may be executed in any number of counterparts, each of which when executed and delivered shall constitute an original of this agreement, but all the counterparts shall together constitute the same agreement.
- 22.2 Without prejudice to the validity of the agreement, each of the Employer and the Contractor shall provide the other with the original of such counterpart as soon as reasonably practicable thereafter.

23 ELECTRONIC EXECUTION

- 23.1 Each party agrees that this agreement may be signed by electronic signature (whatever form the electronic signature takes) and that this method of signature is as conclusive of their intention to be bound by this agreement as if signed by each party's manuscript signature.

24 LIMITATION

Notwithstanding that this agreement may be signed underhand, the parties hereby agree that the limitation period under this agreement shall be twelve (12) years from the date on which the cause of action accrued. For the avoidance of doubt, section 5 of the Limitation Act 1980 does not apply to this agreement.

By signing below, the Contractor confirms that this agreement is irrevocably and unconditionally released to the Employer for completion.

This agreement is executed on the date stated at the beginning of this agreement.

.....
Signed by [insert name of authorised
signatory] on behalf of **THE SECRETARY OF
STATE FOR EDUCATION**

.....
Signed by [insert name of director] for and on
behalf of **[CONTRACTOR]**

SCHEDULE 1 – PROJECT PARTICULARS

1 THE PROPERTY

- 1.1 Southend YMCA Community Schol, Ticket House, 110 East Street, Prittlewell, Southend-on-Sea, Essex SS2 6LH - Existing late Victorian building linked to a modular building erected in circa 2015.

1.2 THE PROJECT

- 1.3 Remedial works to the existing heating distribution system.

2 PROFESSIONAL CONSULTANTS

- 2.1 Arcadis LLP, Employer's Representative.
- 2.2 [[PROFESSIONAL CONSULTANT], Principal Designer]
- 2.3 [PROFESSIONAL CONSULTANT], [ROLE]
- 2.4 [PROFESSIONAL CONSULTANT], [ROLE]
- 2.5 [PROFESSIONAL CONSULTANT], [ROLE]

3 KEY PERSONNEL¹

- 3.1 [KEY PERSON], [ROLE]
- 3.2 [KEY PERSON], [ROLE]
- 3.3 [KEY PERSON], [ROLE]

4 KEY CONTRACT INFORMATION

Proposed date for completion of the Works	25 August 2023
Liquidated damages	at the rate of £1,701.28 per week or pro rata part thereof
Insurances	Insurance Option C (as amended) applies
Defects Liability/Rectification Period	12 months

¹ Contractor to provide details of its staff that are to be involved in the Pre-Construction Period.

SCHEDULE 2 - PRE-CONSTRUCTION SERVICES, PERSONNEL AND RESOURCES AND RIBA PLAN OF WORK STAGE 2, 3 & 4 DELIVERABLES²

Part 1– Pre-Construction Services

The services required to be carried out by the Contractor during the Pre-Construction Services Period are:

1 GENERALLY

- 1.1 With the Employer, agreeing objectives in terms of design, budget and assignment of responsibilities.
- 1.2 Agreeing all contract documents with the Employer.
- 1.3 Liaising with the Employer's legal advisers in connection with the form of sub-contracts and associated documents.
- 1.4 Recommending economies in terms of cost and time that may be made, provided they are consistent with the Proposed Contract Documents.
- 1.5 Attending all meetings called by the Employer and the Professional Consultants in relation to the Project unless authorised by the Employer not to attend.
- 1.6 Keeping full and proper records of all meetings and negotiations attended or conducted by the Contractor and making the same available for inspection by the Employer on request.
- 1.7 In accordance with this agreement and the BIM Protocol, implement the Project's Information Protocol, including the Information Particulars within the Project's Information Protocol, and the following documents:
 - 1.7.1 Project's Information Production Methods and Procedures; and
 - 1.7.2 Project's Information Standard,all of which are set out in the Proposed Contract Documents detailed in Schedule 5 (Proposed Contract Documents).
- 1.8 Acting as the Lead Appointed Party as defined in the Information Particulars within the BIM Protocol.
- 1.9 Ensuring the deliverables for each design stage comply with the requirements set out in Part 3 of Schedule 2 (Project Specific Stage Deliverables).

2 PROGRAMMES

- 2.1 Preparing and agreeing with the Employer and the Professional Consultants an integrated Master Programme relating to the Pre-Construction Services and the carrying out and completion of the Project by the Date for Completion stated in Project Particulars.
- 2.2 Updating and adapting the Master Programme described in paragraph 2.1 as may be necessary to reflect further information or changes in circumstances, regularly monitoring progress and, when appropriate, initiating corrective action to ensure adherence to the agreed Master Programme.
- 2.3 Agreeing, preparing and completing with the Professional Consultants the deliverables required as detailed in Part 3 of Schedule 2 (Project Specific Stage Deliverables) including as a minimum:

² Scope to be agreed and replace this template schedule of services if applicable.

- 2.3.1 A detailed Design Programme with details of dates for the completion of surveys, the feasibility study (if applicable), production and completion of the design development deliverables, submission of a planning application (if applicable), production and completion of Contractor's Proposals and preparation and completion of schedules required for completion of the Contract.
- 2.3.2 A detailed Works Package Procurement Programme setting out of dates for the settling of tender lists and for preparation and despatch of tender documents, the tender period and sub-contracts. Maintain and update the Works Package Procurement Programme (and advise on any corresponding changes to be made to any relevant Design Programme) to address any delays or changes occurring in the procurement process.
- 2.3.3 A detailed Construction Programme showing the critical path for the Project with reference to the Master Programme and any relevant sub-contractors.
- 2.3.4 Preparing detailed Construction Method Statement(s) for the Project.
- 2.4 Advising on the programme implications of availability, selection, and relative suitability of alternative materials and components, methods of working, building systems and equipment. Identifying those materials and components that require advance ordering and processing and providing and monitoring the details for advance ordering and processing.
- 2.5 Continuing to manage the timely preparation of the scheme design, detailed design and production of information, to ensure the programme for design, procurement and construction is maintained in accordance with the Master Information Delivery Plan.
- 2.6 Preparing and agreeing dates for design information availability with the Professional Consultants and sub-contractors who have a design responsibility. Co-ordinating the production of that information in accordance with the agreed Master Programme and the Master Information Delivery Plan and ensuring it is provided to all relevant parties to allow them to fulfil their design and design co-ordination responsibilities. Adjusting and revising this Master Programme and the Master Information Delivery Plan as agreed with the Employer, the Professional Consultants and sub-contractors as dictated by the requirements of the Project.

3 CONSTRUCTION ADVICE

- 3.1 Ensuring the deliverables for each stage comply with the requirements set out in Part 3 of Schedule 2 (Project Specific Stage Deliverables).
- 3.2 Commenting as may be necessary on all specifications and drawings. Reviewing for compliance with the Proposed Contract Documents, the outline and sketch drawings, project drawings and their further development to working drawings and all performance and detailed specifications. Advising on the suitability, selection, availability and price of materials, methods of working, building systems and equipment. Advising on the requirements for off-site design and off-site manufacture of components.
- 3.3 Visiting the Property and carrying out an initial appraisal of the Property to satisfy the Contractor of all constraints and opportunities for the Project.
- 3.4 Assisting with the ascertainment of any restrictions that may affect the design of the Works in respect of but not limited to ownership of the site, existing buildings on or adjacent to the Site, fences or other enclosures, easements, encroachments, underground services, rights of way, rights of support and any other relevant matters.
- 3.5 Developing a co-ordination strategy that addresses the construction phasing, sequencing and interface between the existing facilities on the Site(s) and the Works.
- 3.6 Preparing logistics plans to mitigate the effect of the construction works on adjoining sites.

- 3.7 Advising on the need for works such as geotechnical works and existing services surveys as required and procuring such services or surveys acting as agent for and on behalf of the Employer. Where to the extent the Contractor does procure such services or surveys they shall be fully warranted in favour of the Employer or any third party as the Employer may direct.
- 3.8 Carrying out the surveys set out in 3.8.1 as part of the Pre-Construction Services. (These surveys have been priced by the Contractor on a fixed price lump sum basis and the price for the surveys set out below is included in the Pre-Construction Fee and shall not be subject to adjustment.) In the event that any further surveys are required in addition to the surveys listed below, the Employer and Professional Consultants shall agree the price of any such survey ("Additional Survey(s)") with the Contractor and shall, if it considers such Additional Survey(s) are required, instruct such Additional Survey(s) to be carried out as an Additional Service. Where any of the surveys set out in 3.8.1 are not required, the Pre-Construction Fee shall be reduced accordingly. The surveys to be carried out by the Contractor are:
- 3.8.1 [list all surveys which the Contractor is required to carry out. The scope of each survey should be set out clearly, together with the agreed price for the survey.]
- 3.9 Advising the Employer and Professional Consultants on the relative suitability of alternative materials and components.
- 3.10 Considering parameters for noise levels and acoustics in respect of noise emanating from the carrying out of the Works or noise created externally from any source which may affect the design and/or the construction of the Works.
- 3.11 Proposing and finalising construction methods with the Professional Consultants and advising on time and cost implications of alternative solutions.
- 3.12 Proposing and agreeing with the Professional Consultants the requirement and programme for temporary works including any approvals and execution periods.
- 3.13 Identifying areas of potential increases or savings in the Project budget and recommending action to the Professional Consultants. Using best endeavours to achieve economies in the time and cost to the extent that such economies are consistent with the Employer's overall objectives and the Proposed Contract Documents.
- 3.14 Recommending a breakdown of the Project into suitable packages for sub-contracting and preparing a specific statement of the content of each package to the Professional Consultants, its inter-relationship with other packages and the responsibilities at interfaces between packages.
- 3.15 Advising on the need for specialist contractor or supplier input, particularly regarding the design process.
- 3.16 Advising the Employer and the Professional Consultants of any error or inconsistency:
- 3.16.1 in or between any preliminary information issued for comment or the information issued for construction purposes and the Employer's Requirements; and
- 3.16.2 in or within the Employer's Requirements.
- 3.17 Advising on the resources and timescales necessary for mobilisation on site.
- 3.18 Advising on the potential impact of the Works on neighbouring occupiers, third party occupiers and users of nearby highways and planning the execution of the Works in such a way as to minimise disruption and prevent nuisance.
- 3.19 Considering and accounting for any agreements with third parties entered into by the Employer that may affect the Project, the Works or the Pre-Construction Services and ensuring the Employer is not put in breach of its obligations under those agreements. Advising the Employer of any adverse effect

the Employer's obligations under those agreements may have on the Project or the Works (including the programming of the Works).

4 COST AND CONTRACT

- 4.1 Ensuring the deliverables for each stage comply with the requirements set out in Part 3 of Schedule 2 (Project Specific Stage Deliverables).
- 4.2 At the outset, the Contractor agrees to carry out all elements of the construction works as stated within the ITT tender documents within a fixed tendered sum. Using the Contractor's tendered Framework Pricing Schedule the Contractor develops with the Employer's Representative their Tender Sum for the identified Cost Development Categories only, to reflect the progression of the design stages and updating their Framework Pricing Schedule submitted at ITT. The Framework Pricing Schedule will later inform the final Contract Sum.
- 4.3 Collaborating with the Professional Consultants and the Employer's Representative, providing costing advice and updating their Cost Plan within the Framework Pricing Schedule on a monthly basis, including obtaining the budget costs of equipment and materials and advising on current pricing levels. Additionally the Contractor must regularly review the Risk Register and risk allowances which are to be offset against the developed design.
- 4.4 Confirming that each element of the Cost Plan (at least every month) represents a fair and reasonable projection of that element of the anticipated Contract Sum. Immediately on it becoming apparent that the Cost Plan (or an element of it) is likely to be exceeded, initiating corrective action and advising the Employer's Representative of the excess and the corrective action.
- 4.5 With the Employer's Representative, establishing a cost and programme reporting document in the format provided by the DfE, throughout the Project, and agreeing with the Employer's Representative a protocol to ensure transparency of cost and information including advising on items that should be added, removed or adjusted on the Risk Register.
- 4.6 With the Employer's Representative, managing design development within the agreed tendered sum.
- 4.7 In consultation with the Employer's Representative, preparing and agreeing a detailed cash flow forecast related to the programmes referred to in paragraph 2 of Part 1 of Schedule 2 (Pre-Construction Services).
- 4.8 Participating in any benchmarking processes as required by the Employer.
- 4.9 Ensuring the Contractor's form of sub-contract and associated tender documents are fully compatible with the Proposed Contract Documents.
- 4.10 Permitting the Employer to review and monitor all tender and enquiry materials sent to prospective sub-contractors in connection with the tendering of such packages.
- 4.11 Agreeing the levels of cover and other terms of any insurances with the Employer and its advisors.
- 4.12 The Contract Sum will be agreed with the Employer and the Professional Consultants as a development of the initial fixed tendered sum. Any inflation adjustment will be made in accordance with the Pricing Rules applicable at the time the Contract Sum is being agreed.
- 4.13 Agreeing with the Employer and Professional Consultants the format and content of the Contract Sum Analysis to be included in the Contract.

5 DESIGN PROCESS

- 5.1 Ensuring the deliverables for each design stage comply with the requirements set out in Part 3 of Schedule 2 (Project Specific Stage Deliverables).

- 5.2 Preparing, developing and completing the detailed designs for the Works. Providing detailed designs, including construction drawings and specifications, for fixed price elements tendered within the Contractor's tender for the Works.
- 5.3 Establishing, agreeing and implementing, with the Professional Consultants a design/compliance review procedure:
 - 5.3.1 listing the design information to be reviewed by the Employer, or its agents; and
 - 5.3.2 including a process and timescale for the review and approval of that information.
- 5.4 Actively managing and participating in the design development process and arranging the meetings required to develop the design, including issuing agendas and minutes.
- 5.5 Ensuring that procedures are established for the Professional Consultants to check compliance with sub-contractor designs and specifications and for the Professional Consultants to monitor standards of workmanship and materials and report to the Contractor accordingly.
- 5.6 Reviewing compliance with safety requirements (including the CDM Regulations), the outline and schematic drawings, and their further development to tender drawings and specifications.
- 5.7 Providing advice to the Employer and the Professional Consultants on all aspects of "buildability" in relation to the proposed design and on the feasibility of construction interfaces and tolerances and suggesting any construction changes which could be used to reduce the incidence of conflicts or difficult interfaces between different elements of a single package of work or between different packages of work.
- 5.8 Advising on the suitability, selection, availability and price of materials, methods of working, labour plans, building systems, off site fabrication, feasibility of construction and manufacture of components, installation of construction and equipment.
- 5.9 Advising the Professional Consultants on the practical and cost implications of proposed drawings and specifications with reference to safety requirements, sound construction practice and the Employer's overall requirements. Contribute information for which the Contractor is responsible and participate in the overall design process. Attend all meetings relating to the overall design and planning process.
- 5.10 Advising the Professional Consultants on offsite fabrication, temporary works and on alternative methods of construction and manufacture and installation of components.
- 5.11 Through the design development process, developing Contractor's Proposals that satisfy the Employer's Requirements for agreement with the Employer and the Professional Consultants to be included in the Contract.
- 5.12 Without affecting the terms of this agreement, throughout the design process, complying with the BIM Protocol and advising on any practical issues arising out of its implementation in the design or construction phase of the Project.

6 LIAISON

- 6.1 Liaising with neighbouring owners, occupiers and any third party occupiers to establish and agree satisfactory working methods, times, areas, sequences, hoardings, security measures, health and safety measures, noise control, waste management and pollution prevention measures for the Project.

7 HEALTH AND SAFETY MANAGEMENT AND RISK MANAGEMENT

- 7.1 To fulfil the role of principal contractor and Principal Designer in compliance with the requirements of the CDM Regulations.

- 7.2 The principal contractor when appointing and/or fulfilling the role of the Principal Designer must evidence the competency of the individual(s) fulfilling that role for each project before they commence in that role to the satisfaction of DfE.
- 7.3 Managing any site investigations and other on-site activities including providing information on any known hazardous materials, buried services, other relevant pre-construction information and acting as principal contractor and Principal Designer for the purposes of the CDM Regulations in relation to any on-site activities including demolition work, if any.
- 7.4 Advising on site access and site security arrangements, provision and layout of site facilities and services to be provided or secured by the Contractor, including those that will be required for provision of welfare facilities for the purposes of the CDM Regulations.
- 7.5 Identifying, in conjunction with the Professional Consultants, project, health and safety, procedural, financial and contractual risks and providing and agreeing proposals to mitigate those risks from an early stage and throughout the Project. In conjunction with the Employer's Representative and Professional Consultants, leading the risk management process.
- 7.6 Participation in any benchmarking, risk management and/or value engineering processes and CDM risk assessment workshops required by the Employer.
- 7.7 Developing the Construction Phase Plan for the Project and the establishment and maintenance of adequate safety procedures incorporating best industry safety practices, lessons learnt drawn from other DfE or external projects, the latest requirements of all authorities having responsibility for or jurisdiction over safety matters and any requirements advised by the Employer or the Professional Consultants in compliance with the applicable CDM Regulations.

8 CHANGE

- 8.1 Assisting in setting up and managing, and participating in, a change control system as agreed by and in conjunction with the Employer and the Professional Consultants to ensure the proper control of all proposed changes.
- 8.2 Promptly operating the agreed change management procedure consistently with the BIM Protocol to formally capture any changes to the Employer's Requirements during the Pre-Construction Period.

9 CONSENTS

- 9.1 Applying for and using best endeavours to obtain all Consents from time to time as may be appropriate before and throughout the course of the Project.
- 9.2. Consulting with all relevant stakeholders as may be appropriate to obtain Consents.
- 9.3 Keeping the Employer's Representative fully informed of the progress of the Contractor's applications for those Consents and, if and when they are obtained, supplying the Employer with complete and full details of those applications together with copies of all Consents.
- 9.4 Appealing against the refusal or taking such other action as may be appropriate to proceed with the Project if such a Consent is refused, subject to the approval of the Employer (such approval not to be unreasonably withheld).
- 9.5 Identifying the need for any agreements with the owners and occupiers of neighbouring property for oversailing, the release of rights of way, light and air or otherwise or the extinguishment of interests in, over or with respect to the Property to the extent that those rights and interests would be infringed by the Project or would prevent or impede the carrying out or progress of the Project or its use and enjoyment. Liaising with the Employer to facilitate entry into those agreements, including as provided for in the Proposed Contract Documents.

- 9.6 Applying for and assisting the Employer to obtain any necessary orders for the stopping up or diversion of highways or footpaths to the extent that they may be required to enable the Project to be carried out, used and enjoyed.

10 LOCAL AND STATUTORY AUTHORITIES

- 10.1 Advising the Employer on the cost implications of the requirements of local and statutory undertakers and suggesting possible alternative construction solutions.
- 10.2 Identifying any agreements, licences, and other consents necessary to enable the Project to be completed. Producing a schedule indicating which party will be responsible for the entering into and/or obtaining each of the identified agreements, licences and consent.
- 10.3 Liaising and placing orders with local and statutory authorities and statutory undertakers in connection with road closures, traffic restrictions, hoardings, services, mains diversions and connections and the like and liaising with the local and statutory authorities and statutory undertakers to check that those arrangements comply with their requirements.
- 10.4 Providing any necessary information and enter into negotiations, where necessary, in conjunction with any application, order, sanction, licence, permit or other consent, approval or authorisation necessary to enable the Works to proceed in accordance with the Contract.

11 AGREEMENTS RELATING TO RENEWABLE ENERGY INFRASTRUCTURE

- 11.1 Where the Contractor's Proposals include the installation of any renewable energy infrastructure (including photovoltaic panels and wind turbines), Employer approval will be required in advance for any proposed sub-contracts which contain obligations extending beyond practical completion, or where landowners or responsible bodies will be required to enter into agreements for this infrastructure (including but not limited to leases, power purchase agreements, operation and maintenance agreements). Requirements for these agreements must be raised with the Employer as soon as reasonably practicable and the parties acknowledge that the Employer's Requirements may need to be updated to include further obligations on the Contractor in relation to this infrastructure. Employer approval is unlikely to be granted for any lease arrangements for new infrastructure save in exceptional circumstances.

Part 2– Personnel and Resources

[The parties have attached and initialled a schedule of personnel and resources required.]

OR

Resource or personnel required	Number required
[RESOURCE OR PERSONNEL]	[NUMBER]
[RESOURCE OR PERSONNEL]	[NUMBER]
[RESOURCE OR PERSONNEL]	[NUMBER]

SCHEDULE 3– PAYMENTS

Part 1– Pre-Construction Fee

The Pre-Construction Fee shall be the sum of £[SUM].

The Pre-Construction Fee shall be calculated and paid as set out in this milestone table and under Part 2 of this Schedule 3 (Payments).

Milestone	Definition	Value	Cumulative Value
1	[At completion of CEM 3] ³ / [At completion of CEM 4] ⁴	£[SUM] ⁵	[£]
2 (RIBA 3)	Approval by the Employer of the Contractor's submitted deliverables in accordance with the , BIM Execution Plan and Master Information Delivery Plan (by reference to the BIM Protocol)	£[SUM] ⁶	[£]
3 (RIBA 4)	Submission of a complete set of Contractor's Proposals in accordance with the BIM Execution Plan and Master Information Delivery Plan (by reference to the BIM Protocol) that complies with the Framework's Pricing Guidance	£[SUM] ⁷	[£]
4	Agreement of Contractor's Proposals and Contract	£[SUM] ⁸	[£]

³ Applicable to High Value Band (Route A2), Low and Medium Value Bands(Route A3), Direct Awards and Future Schools

⁴ Applicable to High Value Band (Route A1). TA to ensure reference to CEM is correct taking project specific timelines into account. This should refer to the first milestone post-completion of the PCSA.

⁵ This milestone is 20% of the Pre-Construction Fee.

⁶ This milestone is 25% of the Pre-Construction Fee.

⁷ This milestone is 35% of the Pre-Construction Fee.

⁸ This milestone is 20% of the Pre-Construction Fee.

Part 2 – Payment Terms of this Agreement

1 APPLICATIONS FOR PAYMENT

The Contractor may make payment applications on completion of the relevant milestone specified in the table in Part 1 of Schedule 3 (Payments).

2 VAT

The Employer shall pay the Contractor any Value Added Tax (VAT) properly chargeable on a sum due under this agreement. Any amount expressed as payable under this agreement is exclusive of VAT unless stated otherwise.

3 PAYMENT DUE DATE AND FINAL DATE FOR PAYMENT

3.1 The due date for payment of any amount payable shall be ten (10) days after the receipt by the Employer of the Contractor's proper application for payment submitted in accordance with paragraph 1.

3.2 The final date for payment shall be twenty (20) days after the relevant payment due date.

4 PAYMENT NOTICE

Not later than five (5) days after the due date for payment, the Employer shall give a notice to the Contractor specifying the sum it proposes paying, to what that sum relates, and the basis on which that sum has been calculated (a "payment notice").

5 CONTRACTOR'S DEFAULT NOTICE

If the Employer does not give a notice to the Contractor in accordance with paragraph 4 the payment to be made by the Employer shall, subject to paragraph 7, be the amount in the Contractor's application issued in accordance with paragraph 1.

6 NOTIFIED SUM

In this Part 2 of Schedule 3 (Payments), "notified sum" means:

6.1 the sum referred to in a payment notice given under paragraph 4, or, if such notice is not given;

6.2 the sum referred to in a payment notice given under paragraph 5.

7 PAY LESS NOTICE

Not later than five (5) days before the final date for payment, the Employer may give a notice to the Contractor specifying its intention to pay less than the notified sum. If given, such notice shall specify the sum that the Employer considers to be due on the date the notice is served and the basis on which that sum is calculated (a "pay less notice").

8 EMPLOYER TO PAY ON OR BEFORE FINAL DATE FOR PAYMENT

8.1 Subject to paragraph 7, the Employer shall pay the notified sum on or before the final date for payment.

8.2 In relation to the requirements for the giving of notices under paragraphs 4 and 7, it is immaterial that the amount then considered to be due may be zero.

9 EARLY WORKS RETENTION

- 9.1 In the event that the Employer instructs the Contractor to carry out any Early Works, then notwithstanding any other provision in this agreement, the Employer may deduct and retain from any monies properly due to the Contractor in respect of such Early Works a retention in the amount equal to the retention percentage as set out in the Proposed Contract Documents. Subject to paragraph 9.2, such retention shall be held by the Employer and released in accordance with the terms of the Proposed Contract Documents.
- 9.2 In the event that this agreement or the Contractor's employment under this agreement is terminated, and at that time the parties have not entered into a Contract, any retention shall be released
- 9.3 The Employer's interest in the monies referred to in this paragraph 9 shall be as beneficial owner and shall not be fiduciary as trustee and the Employer shall be under no obligation to set aside the same in a separate account.

SCHEDULE 4 - INSTRUCTIONS

Part 1 – Early Works Instruction

To be issued on the Employer's headed paper

[Details of project]: EARLY WORKS INSTRUCTION

We refer to the pre-construction services agreement entered into between us on [Insert date of PCSA] (the "PCSA").

Capitalised terms used but not defined in this letter shall have the same meanings given to them as in the PCSA.

1 Instruction

Pursuant to clause [7] of the PCSA, we hereby instruct you to carry out the Early Works detailed in Schedule 1 to this letter, which comprise part of the Works. We instruct that the Early Works detailed in Schedule 1 shall be completed by [].

2 Payment

In consideration of the Early Works to be carried out by you pursuant to this letter, and subject to our right to withhold retention under Schedule 3 Part 2 Paragraph 9.1, we shall pay you the part of the Pre Construction Fee that relates to the Early Works instructed under this letter, which is [£] (plus VAT). A breakdown of the sums to be paid for Early Works properly carried out pursuant to this letter is set out at Schedule 2.

3 Applicable terms

In addition, we confirm that the PCSA and clauses 2.1, 2.2, 4.18⁹ and [include any other relevant clauses]¹⁰ of the Proposed Contract Documents apply to this Early Works Instruction provided that in the event of any inconsistencies between a term in the Proposed Contract Documents and the PCSA, the PCSA shall prevail.

4 Sub-contract and supply contract requirements

- 4.1 You may only enter into a sub-contract or place a supply contract in connection with the Early Works or the Works with our written consent (such consent not to be unreasonably withheld or delayed).
- 4.2 You will ensure that any order placed for materials and any contract for the supply of services under this Early Works Instruction may be taken over by us or our nominee without any additional payment to you or any sub-contractors, suppliers or consultants.

5 Insurance

Before you carry out any of the Works at the Property, you shall ensure that you maintain, or the Employer maintains (as the case may be) any insurance required by the Proposed Contract Documents.

6 Termination

⁹ This refers to the retention clause in the main contract. Amend clause reference if not using JCT DB16 contract.

¹⁰ Any additional clauses of the Contract that are required should be considered on a project specific basis.

On termination of the PCSA or your employment under the PCSA for any reason, if instructed by us you shall without charge transfer any or all orders placed for materials and/or contracts for the supply of services to us or our nominee, as we may specify.

7 Counterparts

- 7.1 This Early Works Instruction may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.
- 7.2 Without prejudice to the validity of this Early Works Instruction, each of the parties shall provide the other with the original of such counterpart as soon as reasonably practicable thereafter.

8 Electronic Execution

The parties agree that this Early Works Instruction may be signed by electronic signature (whatever form the electronic signature takes) and that this method of signature is as conclusive of their intention to be bound by the terms of this letter as if signed by each party's manuscript signature.

9 Limitation

Notwithstanding that this letter may be signed underhand, the parties hereby agree that the limitation period under this letter shall be twelve (12) years from the date on which the cause of action accrued. For the avoidance of doubt, section 5 of the Limitation Act 1980 does not apply to this letter.

10 Confirmation of agreement

This Early Works Instruction is supplemental to the PCSA and represents the agreed position between us in relation to the works which we have instructed you to perform pursuant to clause [7] of the PCSA.

By signing below, the Contractor confirms that this agreement is irrevocably and unconditionally released to the Secretary of State for Education for completion.

Yours sincerely

.....¹¹

Signed on behalf of the Employer

.....

Signed on behalf of [CONTRACTOR]

¹¹ Note: when sending agreed PDF for execution, please make clear in covering email where signatories are to sign and where dates need inserting to complete the contract.

Schedule 1 – Scope of Early Works ¹²

[TA to insert scope of Early Works]

Schedule 2 – Cost breakdown of Early Works including a milestone for inclusion in Schedule 3 (Payment)

[The Pre-Construction Fee shall be amended to the sum of £[SUM].

The milestone table in Part 1 of Schedule 3 shall be amended as follows:

INSERT UPDATED MILESTONE TABLE^{13]}

Schedule 3 – Early Works Site Plan

[TA to provide Early Works Site Plan]

¹² Any Early Works Instruction to deal with the removal of asbestos must clearly define the scope as the risk profile in the Proposed Contract Documents will not apply to the instruction. The Contractor will only be responsible for exactly what is covered by the scope of the Early Works Instruction. Any additional asbestos not covered by the scope would need to be dealt with by way of a further Early Works Instruction, which would incur additional costs.

¹³ TA to prepare an updated milestone table including any additional milestone(s).

Part 2 – Additional Services Instruction

To be issued on the Employer's headed paper

[Details of project]: ADDITIONAL SERVICES INSTRUCTION

We refer to the pre-construction services agreement entered into between us on [Insert date of PCSA] (the "PCSA").

Capitalised terms used but not defined in this letter shall have the same meanings given to them as in the PCSA.

1 Instruction

- 1.1 Pursuant to clause [6] of the PCSA, we hereby instruct you to carry out the Additional Services as detailed in Schedule 1 to this letter.
- 1.2 We instruct that the Additional Services shall be completed by [insert date].

2 Payment

In consideration of the Additional Services to be carried out by you pursuant to this letter the Pre-Construction Fee shall be [increased/decreased] by [£] (plus VAT). A breakdown of the sums to be [added/deducted] [to/from] the Pre-Construction Fee is set out at Schedule 2.

3 Counterparts

- 3.1 This Additional Services Instruction may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.
- 3.2 Without prejudice to the validity of this Additional Services Instruction, each of the parties shall provide the other with the original of such counterpart as soon as reasonably practicable thereafter.

4 Electronic Execution

The parties agree that this Additional Services Instruction may be signed by electronic signature (whatever form the electronic signature takes) and that this method of signature is as conclusive of their intention to be bound by the terms of this letter as if signed by each party's manuscript signature.

5 Limitation

Notwithstanding that this Additional Services Instruction may be signed underhand, the parties hereby agree that the limitation period under this Additional Services Instruction shall be twelve (12) years from the date on which the cause of action accrued. For the avoidance of doubt, section 5 of the Limitation Act 1980 does not apply to this Additional Services Instruction.

6 Confirmation of agreement

This Additional Services Instruction is supplemental to the PCSA and represents the agreed position between us in relation to the works which we have [instructed you to perform/varied/omitted] pursuant to clause [6] of the PCSA.

By signing below, the Contractor confirms that this agreement is irrevocably and unconditionally released to the Secretary of State for Education for completion.

Yours sincerely

.....¹⁴

Signed on behalf of the Employer

.....

Signed on behalf of [CONTRACTOR]

Schedule 1 – Scope of Additional Services

[TA to insert scope of Additional Services]

Schedule 2 – Cost breakdown of Additional Services including an updated milestone table for inclusion in

[The Pre-Construction Fee shall be amended to the sum of £[SUM].

The milestone table in Part 1 of Schedule 3 shall be amended as follows:

INSERT UPDATED MILESTONE TABLE^{15]}

¹⁴ Note: when sending agreed PDF for execution, please make clear in covering email where signatories are to sign and where dates need inserting to complete the contract.

¹⁵ TA to prepare an updated milestone table including any additional milestones.

SCHEDULE 5 – PROPOSED CONTRACT DOCUMENTS¹⁶

The parties agree that the documents listed below are those documents included in the ITT tender documents issued on [DATE]:

- 1** Employer's Requirements including the BIM Protocol
- 2** JCT Minor Works (with contractor's design), 2016 edition

¹⁶ DfE to confirm any additional documents to be listed as "Proposed Contract Documents".

SCHEDULE 6 – COLLATERAL WARRANTIES

Part 1 – Contractor Warranty

DATED _____ 20[]

[CONTRACTOR]

and

[]

DUTY OF CARE DEED

relating to []

THIS DEED is dated

20[] BETWEEN:-

- (1) [CONTRACTOR] (Company Number [] whose registered office is at [] (the "**Contractor**"); and
- (2) [] of [] (the "**Beneficiary**"), which expression includes its permitted successors in title and assigns.

BACKGROUND

- (A) By a pre-construction services agreement dated [] (the "**PCSA**") the Employer has appointed the Contractor to carry design and construction services as more particularly set out in the PCSA.
- (B) The Contractor is obliged under the PCSA to give a warranty in this form in favour of the Beneficiary.
- (C) The Contractor has agreed to execute this Deed in favour of the Beneficiary.

1. DEFINITIONS AND INTERPRETATIONS

In this Deed unless the context otherwise requires, any defined term in this Deed shall have the same meaning given to such term in the PCSA.

2. OPERATIVE PROVISIONS

In consideration of the payment of one pound (£1.00) by the Beneficiary to the Contractor, receipt of which the Contractor acknowledges:-

3. CONTRACTOR'S WARRANTY AND LIABILITY

3.1 The Contractor warrants to the Beneficiary that:

- 3.1.1 it has carried out and completed and will continue to carry out and complete its duties and obligations under the PCSA in accordance with the PCSA;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in the design of the Works the professional skill, care and diligence reasonably to be expected of a properly qualified and competent designer of the appropriate discipline(s) acting independently under a separate contract with the Employer and experienced in carrying out design such as that required under the PCSA in relation to works of a similar size, scope, nature, complexity, location, timescale and value to the Works in relation to:
- (a) any design of the Works;
- (b) the selection and standards of all goods, materials, equipment or plant for the Works;
- 3.1.3 subject to the standard of skill, care and diligence set out in clause 3.1.2, it has not and shall not permit, specify or approve for use in connection with the Works or use any materials which at the time of use:
- (a) are known to be deleterious (either to health and safety or to the durability of the Works); or
- (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or

- (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use;
- 3.2 The Contractor shall have no liability under this clause 3 that is greater or of longer duration than it would have had and shall be entitled in any action or proceedings by the Beneficiary to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Beneficiary had been a party to the PCSA as joint employer.
- 3.3 For the avoidance of doubt the Contractor warrants to the Beneficiary that the Contractor shall not raise any defence to a claim by the Beneficiary under this Deed on the grounds that the losses in respect of which the Beneficiary seeks damages, compensation or other relief are not losses suffered or to be suffered by the Employer or that the Employer has suffered no loss. The Contractor shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Employer of any monies due under the PCSA.

4. INTELLECTUAL PROPERTY

- 4.1 The Intellectual Property Rights in the Material prepared by or on behalf of the Contractor in relation to this Deed and the work executed by him remains the property of the Contractor. The Contractor hereby grants to the Beneficiary an irrevocable, royalty free, non-exclusive licence to use and reproduce the Material for any and all purposes connected with the construction, use, alterations or demolition of the Project. Such licence entitles the Beneficiary to grant sub-licences to third parties in the same terms as this licence provided always that the Contractor shall not be liable to any licensee for any use of the Material or the use of the Intellectual Property Rights in the Material for purposes other than those for which the same were originally prepared by or on behalf of the Contractor.
- 4.2 The Beneficiary may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 4.1 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Beneficiary.
- 4.3 In the event that the Contractor does not own the copyright or any Intellectual Property Rights in any of the Material the Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Beneficiary to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Contractor is unable to procure the right to grant to the Beneficiary in accordance with the foregoing the Contractor shall procure that the third party grants a direct licence to the Beneficiary on industry acceptable terms.
- 4.4 The Contractor waives any moral right to be identified as author of the Material in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Material subjected to derogatory treatment in accordance with section 8 of that Act as against the Beneficiary or any licensee or assignee of the Beneficiary.
- 4.5 In the event that any act unauthorised by the Beneficiary infringes a moral right of the Contractor in relation to the Material the Contractor undertakes, if the Beneficiary so requests and at the Beneficiary's expense, to institute proceedings for infringement of the moral rights.
- 4.6 The Contractor warrants to the Beneficiary that he has not granted and shall not (unless authorised by the Beneficiary) grant any rights to any third party to use or otherwise exploit the Material.
- 4.7 The Contractor shall supply copies of the Material to the Beneficiary for no additional fee.
- 4.8 In carrying out the Works the Contractor shall not infringe any Intellectual Property Rights of any third party. The Contractor shall indemnify the Beneficiary against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. **PROFESSIONAL INDEMNITY INSURANCE**

5.1 The Contractor hereby covenants with the Beneficiary to:-

5.1.1 take out and maintain professional indemnity insurance covering all of its design and professional obligations under the PCSA (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) with a limit of indemnity that shall be a minimum of one million pounds (£10,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance, upon customary and usual terms and conditions prevailing for the time being in the insurance market and that it will maintain such insurance with reputable insurers carrying on business in the United Kingdom from the date hereof until twelve (12) years after practical completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Contractor must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and

5.1.2 provide evidence (as and when reasonably required by the Beneficiary) satisfactory to the Beneficiary of the professional indemnity insurance (referred to in clause 5.1.1) being in full force and effect from the date of the PCSA (such evidence to include details of the cover).

5.2 Any increased or additional premium required by insurers by reason of the Contractor's own claims record or other acts, omissions, matters or things peculiar to the Contractor shall be deemed to be within commercially reasonable rates.

5.3 The Contractor shall immediately inform the Beneficiary if such insurance ceases to be available at commercially reasonable rates or is no longer and/or if for any other reason the Contractor is unable to maintain and/or is not maintaining such insurance in which case the Contractor shall take out and maintain a professional indemnity insurance policy having the maximum limit of indemnity and the widest cover which is available to the Contractor upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Beneficiary and shall further discuss means of best protecting the respective positions of the Beneficiary and the Contractor in respect of the Works.

6. **NOTICES**

6.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

6.1.1 Contractor: [e-mail address]¹⁷

6.1.2 Beneficiary: [e-mail address]¹⁸

or as otherwise specified by the relevant party by notice in writing to the other party.

6.2 Any notice sent by hand or by post in accordance with clause 6.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting

¹⁷ Insert e-mail address

¹⁸ Insert e-mail address

and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

7. ASSIGNMENT

- 7.1 The benefit of and the rights of the Beneficiary under this Deed may be assigned without the consent of the Contractor on two (2) occasions only and the Beneficiary will notify the Contractor in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.
- 7.2 The Contractor will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

8. BENEFICIARY'S REMEDIES

The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies it may have against the Contractor including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. INSPECTION OF DOCUMENTS

The Contractor's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Contractor or provided to the Beneficiary or attendance at site meetings or other enquiry or inspection which the Beneficiary may make or procure to be made for its benefit or on its behalf.

10. SUB-CONTRACTORS

Following a written request from the Beneficiary the Contractor will (unless it has already done so) and/or procure that its sub-contractors execute a Deed of collateral warranty in the relevant form specified in the PCSA in favour of any person in whose favour the PCSA obliges the Contractor to give or procure the giving of such a warranty.

11. SEVERABILITY

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Deed.

12. WAIVER

- 12.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.
- 12.2 No waiver under clause 12.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

13. THIRD PARTY RIGHTS

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed.

14. GOVERNING LAW AND JURISDICTION

This Deed shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of in connection with this Deed.

15. **COUNTERPARTS**

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by [CONTRACTOR]
acting by a Director and its Secretary/two
Directors:

Director

Director/Secretary

OR

EXECUTED as a deed by [CONTRACTOR]
acting by its duly authorised attorneys under a
power of attorney dated []

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

EXECUTED AS A DEED by
[BENEFICIARY] acting by
two authorised signatories:-

Authorised Signatory

Authorised Signatory

OR

EXECUTED AS A DEED by
[BENEFICIARY] acting by a Director
And its Secretary/two Directors:

Director

Director/Secretary

Part 2 – Sub-Contractor Warranty in favour of Employer

DATED _____ 20[]]

[SUB-CONTRACTOR]

and

[EMPLOYER]

and

[CONTRACTOR]

DUTY OF CARE DEED
relating to []]

THIS DEED is dated

20[] BETWEEN:-

- (1) [SUB-CONTRACTOR] (Company Number [] whose registered office is at [] (the "**Sub-Contractor**");
- (2) [EMPLOYER] of [] (the "**Employer**"), which expression includes its permitted successors in title and assigns; and
- (3) [CONTRACTOR] (registered in England and Wales under Company Number [] whose registered office is at [] (the "**Contractor**").

BACKGROUND

- (A) By a pre-construction services agreement dated [] (the "**PCSA**") the Employer has appointed the Contractor to carry design and construction services as more particularly set out in the PCSA.
- (B) The Sub-Contractor has been appointed by the Contractor under a subcontract (the "**Subcontract**") in relation to the [] element of the Works (the "**Subcontract Works**").¹⁹
- (C) The Sub-Contractor is obliged under the Subcontract to enter into this Deed in favour of the Employer.
- (D) The Sub-Contractor and the Contractor have agreed to duly execute and deliver this Deed in favour of the Employer.

1. DEFINITIONS AND INTERPRETATIONS

In this Deed unless the context otherwise requires, any defined term in this Deed shall have the same meaning given to such term in the PCSA.

2. OPERATIVE PROVISIONS

In consideration of the payment of one pound (£1.00) by the Employer to the Sub-Contractor, receipt of which the Sub-Contractor acknowledges:-

3. SUB-CONTRACTOR'S WARRANTY AND LIABILITY

3.1 The Sub-Contractor warrants to the Employer that:

- 3.1.1 it has carried out and completed and will continue to carry out and complete its duties and obligations under the Subcontract in accordance with the Subcontract;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in the design of the Subcontract Works the professional skill, care and diligence reasonably to be expected of a properly qualified and competent designer of the appropriate discipline(s) for such design experienced in carrying out works of a similar size, scope, nature, complexity, location, timescale and value to the Subcontract Works in relation to:
 - (a) any design of the Works;
 - (b) the selection and standards of all goods, materials, equipment or plant for the Subcontract Works;

¹⁹ Insert details of relevant subcontract package.

- 3.2 subject to the standard of skill, care and diligence set out in clause 3.1.2, it has not and shall not permit, specify or approve for use in connection with the Subcontract Works or use any materials which at the time of use:
- (a) are known to be deleterious (either to health and safety or to the durability of the Works); or
 - (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
 - (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use;
- 3.3 The Sub-Contractor shall have no liability under this clause 3 that is greater or of longer duration that it would have had and shall be entitled in any action or proceedings by the Employer to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Employer had been a party to the Subcontract as joint employer.
- 3.4 For the avoidance of doubt the Sub-Contractor warrants to the Employer that the Sub-Contractor shall not raise any defence to a claim by the Employer under this Deed on the grounds that the losses in respect of which the Employer seeks damages, compensation or other relief are not losses suffered or to be suffered by the Contractor or that the Contractor has suffered no loss. The Sub-Contractor shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Contractor of any monies due under the Subcontract.

4. **INTELLECTUAL PROPERTY**

- 4.1 In this clause 4 “**Sub-Contractor’s Design Documents**” means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Sub-Contractor in relation to the Subcontract Works (including any updates, amendments, additions and revisions), together with any other design documents or information to be provided by it under the BIM Protocol.
- 4.2 The Intellectual Property Rights in the Sub-Contractor’s Design Documents prepared by or on behalf of the Sub-Contractor in relation to the Subcontract and the work executed by it remains the property of the Sub-Contractor. The Sub-Contractor hereby grants to the Employer an irrevocable, royalty free, non-exclusive licence to use and reproduce the Sub-Contractor’s Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Employer to grant sub-licences to third parties in the same terms as this licence provided always that the Sub-Contractor shall not be liable to any licensee for any use of the Sub-Contractor’s Design Documents or the use of the Intellectual Property Rights in the Sub-Contractor’s Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Sub-Contractor.
- 4.3 The Employer may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 4.2 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Employer.
- 4.4 In the event that the Sub-Contractor does not own the copyright or any Intellectual Property Rights in any of the Sub-Contractor’s Design Documents the Sub-Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Employer to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Sub-Contractor is unable to procure the right to grant to the Employer in accordance with the foregoing the Sub-Contractor shall procure that the third party grants a direct licence to the Employer on industry acceptable terms.

- 4.5 The Sub-Contractor waives any moral right to be identified as author of the Sub-Contractor's Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Sub-Contractor's Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Employer or any licensee or assignee of the Employer.
- 4.6 In the event that any act unauthorised by the Employer infringes a moral right of the Sub-Contractor in relation to the Sub-Contractor's Design Documents the Sub-Contractor undertakes, if the Employer so requests and at the Employer's expense, to institute proceedings for infringement of the moral rights.
- 4.7 The Sub-Contractor warrants to the Employer that he has not granted and shall not (unless authorised by the Employer) grant any rights to any third party to use or otherwise exploit the Sub-Contractor's Design Documents.
- 4.8 The Sub-Contractor shall supply copies of the Sub-Contractor's Design Documents to the Employer upon paying a reasonable copying charge.
- 4.9 In carrying out the Subcontract Works the Sub-Contractor shall not infringe any Intellectual Property Rights of any third party. The Sub-Contractor shall indemnify the Employer against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. PROFESSIONAL INDEMNITY INSURANCE

- 5.1 The Sub-Contractor hereby covenants with the Employer to:-
- 5.1.1 take out and maintain professional indemnity insurance covering all of its design and professional obligations under the Subcontract (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) with a limit of indemnity that shall be a minimum of one million pounds (£10,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance upon customary and usual terms and conditions prevailing for the time being in the insurance market and that it will maintain such insurance with reputable insurers carrying on business in the United Kingdom from the date hereof until twelve (12) years after practical completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Sub-Contractor must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and
- 5.1.2 provide evidence (as and when reasonably required by the Employer) satisfactory to the Employer of the professional indemnity insurance (referred to in clause 5.1.1) being in full force and effect from the date of the Subcontract (such evidence to include details of the cover).
- 5.2 Any increased or additional premium required by insurers by reason of the Sub-Contractor's own claims record or other acts, omissions, matters or things peculiar to the Sub-Contractor shall be deemed to be within commercially reasonable rates.
- 5.3 The Sub-Contractor shall immediately inform the Employer if such insurance ceases to be available at commercially reasonable rates or is no longer and/or if for any other reason the Sub-Contractor is unable to maintain and/or is not maintaining such insurance in which case the Sub-Contractor shall take out and maintain a professional indemnity insurance policy having the maximum limit of indemnity and the widest cover which is available to the Sub-Contractor upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Employer

and shall further discuss means of best protecting the respective positions of the Employer and the Sub-Contractor in respect of the Subcontract Works.

6. NOTICES

- 6.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

6.1.1 Sub-Contractor: [e-mail address]²⁰

6.1.2 Employer: [e-mail address]²¹

6.1.3 Contractor: [e-mail address]²²

or as otherwise specified by the relevant party by notice in writing to the other party.

- 6.2 Any notice sent by hand or by post in accordance with clause 6.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

7. ASSIGNMENT

- 7.1 The benefit of and the rights of the Employer under this Deed may be assigned without the consent of the Sub-Contractor on two (2) occasions only and the Employer will notify the Sub-Contractor in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.
- 7.2 The Sub-Contractor will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

8. EMPLOYER'S REMEDIES

The rights and benefits conferred upon the Employer by this Deed are in addition to any other rights and remedies it may have against the Sub-Contractor including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. INSPECTION OF DOCUMENTS

The Sub-Contractor's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Sub-Contractor or provided to the Employer or attendance at site meetings or other enquiry or inspection which the Employer may make or procure to be made for its benefit or on its behalf.

10. STEP-IN RIGHTS IN FAVOUR OF THE EMPLOYER

- 10.1 Without prejudice to the Sub-Contractor's statutory rights the Sub-Contractor will not exercise or seek to exercise any right which may be or become available to it to:

²⁰ Insert e-mail address

²¹ Insert e-mail address

²² Insert e-mail address

- 10.1.1 terminate or treat as terminated or repudiated the Subcontract or its engagement under it without first giving to the Employer not less than 30 Business Days' prior written notice; or
 - 10.1.2 discontinue or suspend the performance of any duties or obligations under the Subcontract without first giving to the Employer not less than 7 Business Days' prior written notice.
- 10.2 Any notice given by the Sub-Contractor pursuant to clause 10.1 above shall:
- 10.2.1 specify the Sub-Contractor's ground for terminating or treating as terminated or repudiated the Subcontract or its engagement under it or for discontinuing or suspending its performance under it (as applicable);
 - 10.2.2 specify any other breaches by the Contractor; and
 - 10.2.3 state the amount (if any) of monies outstanding under the Subcontract (whether or not such amounts result from a breach entitling the Sub-Contractor to terminate or treat as terminated or repudiated the Subcontract or to discontinue or suspend the performance of any duties or obligations under the Subcontract (as applicable)).
- 10.3 Within the period of any notice given by the Sub-Contractor pursuant to clause 10.1:
- 10.3.1 the Employer may give written notice to the Sub-Contractor that the Employer will henceforth become the client under the Subcontract to the exclusion of the Contractor and thereupon the Sub-Contractor will admit that the Employer is its client under the Subcontract and the Subcontract will be and remain in full force and effect notwithstanding any of the said grounds but subject always to clause 10.3.2 below;
 - 10.3.2 if the Employer has given such notice as aforesaid or under clause 10.5 below, the Employer shall accept liability for the Contractor's obligations under the Subcontract and will as soon as practicable thereafter remedy any outstanding breach by the Contractor which is properly specified and which is capable of remedy by the Employer; and
 - 10.3.3 if the Employer has given such notice as aforesaid or under clause 10.5, the Employer will from the service of such notice become responsible for all sums properly payable to the Sub-Contractor under the Subcontract accruing due after the service of such notice but the Employer will in paying such sums be entitled to the same rights of set-off and deduction as would have applied to the Contractor under the Subcontract.
- 10.4 Notwithstanding anything contained in this Deed and notwithstanding any payments which may be made by the Employer to the Sub-Contractor, the Employer will not be under any obligation to the Sub-Contractor nor will the Sub-Contractor have any claim or cause of action against the Employer unless and until the Employer has given written notice to the Sub-Contractor pursuant to clause 10.3.1 or clause 10.5 of this Deed.
- 10.5 The Sub-Contractor further covenants with the Employer that if employment of the Contractor under the PCSA is determined or the PCSA is terminated, the Sub-Contractor, if requested by the Employer by notice in writing and subject to clause 10.3.2 and clause 10.3.3, will accept the instructions of the Employer to the exclusion of the Contractor in respect of its duties under the Subcontract upon the terms and conditions of the Subcontract and will if so requested in writing to enter into a novation agreement whereby the Employer is substituted for the Contractor under the Subcontract.
- 10.6 If the Sub-Contractor is requested to enter into a novation agreement pursuant to clause 10.5 above, the Contractor agrees to enter into the same at the request of the Employer.
- 10.7 The Contractor acknowledges that the Sub-Contractor will be entitled to rely on a notice given to the Sub-Contractor and the Contractor by the Employer under clause 10.5 as conclusive evidence

that the employment of the Contractor under the PCSA has been determined or the PCSA is terminated.

- 10.8 The Employer may by notice in writing to the Sub-Contractor and the Contractor appoint another person to exercise its right under this clause 10 subject to the Employer remaining liable to the Contractor as guarantor for its appointee in respect of its obligations under this Deed.
- 10.9 Upon request by the Employer the Sub-Contractor agrees to co-operate with the Employer in determining the duties performed or to be performed by the Sub-Contractor and to provide a copy of the Subcontract and any variations thereto and details of all monies paid and due under the Subcontract and the PCSA.
- 10.10 As from the date of service of notice under clause 10.3.1 or 10.5 to the extent that the Subcontract operates by reference to the existence and application of the PCSA, the Subcontract shall be administered and construed as though the PCSA was continuing and the Subcontract shall therefore continue, subject to amendment only as necessary to reflect the fact that the PCSA has in fact terminated and the Employer has undertaken the obligations set in clause 10.3.2.

11. SUB-CONSULTANTS

Following a written request from the Employer the Sub-Contractor will (unless it has already done so) procure that its sub-consultants execute a deed of collateral warranty in the relevant form specified in the Subcontract in favour of any person in whose favour the Subcontract obliges the Sub-Contractor to give or procure the giving of such a warranty.

12. SEVERABILITY

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provision of or any other documents referred to in this Deed.

13. WAIVER

- 13.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.
- 13.2 No waiver under clause 13.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

14. THIRD PARTY RIGHTS

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed.

15. GOVERNING LAW AND JURISDICTION

This Deed shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed.

16. COUNTERPARTS

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by
[SUB-CONTRACTOR] acting by
a Director and its Secretary/two Directors:-

Director
Director/Secretary

[THE CORPORATE SEAL of the SECRETARY)
OF STATE FOR EDUCATION herewith affixed)
is authenticated by:-)

.....
Authorised by the Secretary of State

.....
Full name (BLOCK CAPITALS)

OR

[EXECUTED AS A DEED (but not delivered
until the date hereof) by affixing the Common
deal of [EMPLOYER] in the presence of:-

Authorised Signatory]

OR

EXECUTED AS A DEED by [EMPLOYER]
acting by a Director and its Secretary/two
Directors:-

Director

Director/Secretary

EXECUTED AS A DEED by [CONTRACTOR]
acting by a Director and its Secretary/two
Directors:

Director

Director/Secretary

OR

EXECUTED as a deed by [CONTRACTOR]
acting by its duly authorised attorneys under a
power of attorney dated []

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

Part 3 – Consultant Warranty in favour of Employer

DATED _____ 20[]]

[CONSULTANT]

and

[EMPLOYER]

and

[CONTRACTOR]

DUTY OF CARE DEED
relating to []

THIS DEED is dated

20[] BETWEEN:-

- (1) THE PARTNERS IN [*insert name of partnership*] (being the persons listed in the schedule hereto) whose principal place of business is at [] OR [] LIMITED/PLC (Company Number []) whose registered office is at [] (the "**Consultant**");
- (2) [EMPLOYER] of [] (the "**Employer**"), (which expression includes its permitted successors in title and assigns); and
- (3) [CONTRACTOR] (registered in England and Wales under company number []) whose registered office is at [] (the "**Contractor**").

BACKGROUND

- (A) By a pre-construction services agreement dated [] (the "**PCSA**") the Employer has appointed the Contractor to carry design and construction services as more particularly set out in the PCSA.
- (B) The Consultant has been appointed by the Contractor (the "**Appointment**") to provide services in relation to the PCSA (the "**Services**").
- (C) The Consultant is obliged under the Appointment to give a warranty in this form in favour of the Employer.
- (D) The Consultant and the Contractor have agreed to execute this Deed in favour of the Employer.

1. DEFINITIONS AND INTERPRETATIONS

In this Deed unless the context otherwise requires, any defined term in this Deed shall have the same meaning given to such term in the PCSA.

2. OPERATIVE PROVISIONS

In consideration of the payment of one pound (£1.00) by the Employer to the Consultant, receipt of which the Consultant acknowledges:-

3. CONSULTANT'S WARRANTY AND LIABILITY

3.1 The Consultant warrants to the Beneficiary that:

- 3.1.1 it has carried out and completed and will continue to carry out and complete its duties and obligations under the Appointment in accordance with the Appointment;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in the performance of the Services the professional skill, care and diligence to be expected of a properly qualified and competent member of the Consultant's profession experienced in carrying out duties the like of those undertaken by the Consultant under the Appointment for works of a similar size, scope, nature, complexity, location, timescale and value to the Works;
- 3.1.3 subject to the standard of skill, care and diligence set out in clause 3.1.2, it has not and shall not permit, specify or approve for use in connection with the Works any materials which at the time of use:
 - (a) are known to be deleterious (either to health and safety or to the durability of the Works); or

- (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
 - (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use; and
- 3.1.4 if in the performance of its duties under the Appointment the Consultant becomes aware that it or any other person has specified or used, or authorised or approved the specification or use by others of any such products or materials the Consultant will notify the Beneficiary in writing forthwith. This clause does not create any additional duty for the Consultant to inspect or check the work of others which is not required by the Appointment.
- 3.2 The Consultant shall have no liability under this clause 3 that is greater or of longer duration that it would have had and shall be entitled in any action or proceedings by the Beneficiary to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Beneficiary had been a party to the Appointment as joint employer.
- 3.3 For the avoidance of doubt the Consultant warrants to the Beneficiary that the Consultant shall not raise any defence to a claim by the Beneficiary under this Deed on the grounds that the losses in respect of which the Beneficiary seeks damages, compensation or other relief are not losses suffered or to be suffered by the Contractor or that the Contractor has suffered no loss. The Consultant shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Contractor of any monies due under the Appointment.

4. **INTELLECTUAL PROPERTY**

- 4.1 In this clause 4 “**Consultant Design Documents**” means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Consultant in relation to the Services (including any updates, amendments, additions and revisions), together with any other design documents or information to be provided by it under the BIM Protocol.
- 4.2 The Intellectual Property Rights in the Consultant Design Documents prepared by or on behalf of the Consultant in relation to the Appointment and the work executed by it remains the property of the Consultant. The Consultant hereby grants to the Employer an irrevocable, royalty free, non-exclusive licence to use and reproduce the Consultant’s Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Employer to grant sub-licences to third parties in the same terms as this licence provided always that the Consultant shall not be liable to any licensee for any use of the Consultant’s Design Documents or the use of the Intellectual Property Rights in the Consultant’s Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Consultant.
- 4.3 The Employer may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 4.2 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Employer.
- 4.4 In the event that the Consultant does not own the copyright or any Intellectual Property Rights in any of the Consultant’s Design Documents the Consultant shall use all reasonable endeavours to procure the right to grant such rights to the Employer to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Consultant is unable to procure the right to grant to the Employer in accordance with the foregoing the Consultant shall procure that the third party grants a direct licence to the Employer on industry acceptable terms.

- 4.5 The Consultant waives any moral right to be identified as author of the Consultant's Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Consultant's Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Beneficiary or any licensee or assignee of the Employer.
- 4.6 In the event that any act unauthorised by the Employer infringes a moral right of the Consultant in relation to the Consultant's Design Documents the Consultant undertakes, if the Employer so requests and at the Employer's expense, to institute proceedings for infringement of the moral rights.
- 4.7 The Consultant warrants to the Employer that he has not granted and shall not (unless authorised by the Employer) grant any rights to any third party to use or otherwise exploit the Consultant Design Documents.
- 4.8 The Consultant shall supply copies of the Consultant's Design Documents to the Beneficiary upon paying a reasonable copying charge.
- 4.9 In carrying out the Services the Consultant shall not infringe any Intellectual Property Rights of any third party. The Consultant shall indemnify the Employer against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. PROFESSIONAL INDEMNITY INSURANCE

- 5.1 The Consultant hereby covenants with the Employer to:-
 - 5.1.1 take out and maintain professional indemnity insurance covering all of its design and professional obligations under the Appointment (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) with a limit of indemnity that shall be a minimum of one million pounds (£1,000,000) on an each and every claim basis upon customary and usual terms and conditions prevailing for the time being in the insurance market and that it will maintain such insurance with reputable insurers carrying on business in the United Kingdom from the date hereof until twelve (12) years after practical completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Consultant must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or reenactment- thereof; and
 - 5.1.2 provide evidence (as and when reasonably required by the Employer) satisfactory to the Employer of the professional indemnity insurance (referred to in clause 5.1.1) being in full force and effect from the date of the Appointment (such evidence to include details of the cover);
- 5.2 Any increased or additional premium required by insurers by reason of the Consultant's own claims record or other acts, omissions, matters or things peculiar to the Consultant shall be deemed to be within commercially reasonable rates.
- 5.3 The Consultant shall immediately inform the Employer if such insurance ceases to be available at commercially reasonable rates or is no longer and/or if for any other reason the Consultant is unable to maintain and/or is not maintaining such insurance in which case the Contractor shall take out and maintain a professional indemnity insurance policy having the maximum limit of indemnity and the widest cover which is available to the Consultant upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Employer and shall further discuss means of best protecting the respective positions of the Employer and the Consultant in respect of the Works.

6. **LIABILITY OF PARTNERS**

Where the Consultant is a partnership, references in this Deed to the "Consultant" will be deemed to include reference to each and every present and future partner of such partnership and the liability of each and every such partner under this Deed will be deemed to be joint and several.

7. **NOTICES**

7.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

7.1.1 Consultant: [e-mail address]²³

7.1.2 Employer: [e-mail address]²⁴

7.1.3 Contractor: [e-mail address]²⁵

or as otherwise specified by the relevant party by notice in writing to the other parties.

7.2 Any notice sent by hand or by post in accordance with clause 7.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

8. **ASSIGNMENT**

8.1 The benefit of and the rights of the Employer under this Deed may be assigned without the consent of the Consultant on two (2) occasions only and the Employer will notify the Consultant in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.

8.2 The Consultant will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any or as much loss.

9. **EMPLOYER'S REMEDIES**

The rights and benefits conferred upon the Employer by this Deed are in addition to any other rights and remedies it may have against the Consultant including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

10. **INSPECTION OF DOCUMENTS**

The Consultant's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Consultant or provided to the Employer or attendance at site meetings or other enquiry or inspection which the Employer may make or procure to be made for its benefit or on its behalf.

11. **STEP-IN RIGHTS IN FAVOUR OF THE EMPLOYER**

²³ Insert e-mail address

²⁴ Insert e-mail address

²⁵ Insert e-mail address

- 11.1 Without prejudice to the Consultant's statutory rights the Consultant will not exercise or seek to exercise any right which may be or become available to it to:
- 11.1.1 terminate or treat as terminated or repudiated the Appointment or its engagement under it without first giving to the Employer not less than 30 Business Days' prior written notice; or
 - 11.1.2 discontinue or suspend the performance of any duties or obligations under the Appointment without first giving to the Employer not less than 7 Business Days' prior written notice.
- 11.2 Any notice given by the Consultant pursuant to clause 11.1 above shall:
- 11.2.1 specify the Consultant's ground for terminating or treating as terminated or repudiated the Appointment or its engagement under it or for discontinuing or suspending its performance under it (as applicable);
 - 11.2.2 specify any other breaches by the Contractor; and
 - 11.2.3 state the amount (if any) of monies outstanding under the Appointment (whether or not such amounts result from a breach entitling the Consultant to terminate or treat as terminated or repudiated the Appointment or to discontinue or suspend the performance of any duties or obligations under the Appointment (as applicable)).
- 11.3 Within the period of any notice given by the Consultant pursuant to clause 11.1:
- 11.3.1 the Employer may give written notice to the Consultant that the Employer will henceforth become the client under the Appointment to the exclusion of the Contractor and thereupon the Consultant will admit that the Employer is its client under the Appointment and the Appointment will be and remain in full force and effect notwithstanding any of the said grounds but subject always to clause 11.3.2 below;
 - 11.3.2 if the Employer has given such notice as aforesaid or under clause 11.5 below, the Employer shall accept liability for the Contractor's obligations under the Appointment and will as soon as practicable thereafter remedy any outstanding breach by the Contractor which is properly specified and which is capable of remedy by the Employer; and
 - 11.3.3 if the Employer has given such notice as aforesaid or under clause 11.5, the Employer will from the service of such notice become responsible for all sums properly payable to the Consultant under the Appointment accruing due after the service of such notice but the Employer will in paying such sums be entitled to the same rights of set-off and deduction as would have applied to the Contractor under the Appointment.
- 11.4 Notwithstanding anything contained in this Deed and notwithstanding any payments which may be made by the Employer to the Consultant, the Employer will not be under any obligation to the Consultant nor will the Consultant have any claim or cause of action against the Employer unless and until the Employer has given written notice to the Consultant pursuant to clause 11.3.1 or clause 11.5 of this Deed.
- 11.5 The Consultant further covenants with the Employer that if employment of the Contractor under the PCSA is determined or the PCSA is terminated, the Consultant, if requested by the Employer by notice in writing and subject to clause 11.3.2 and clause 11.3.3, will accept the instructions of the Employer to the exclusion of the Contractor in respect of its duties under the Appointment upon the terms and conditions of the Appointment and will if so requested in writing to enter into a novation agreement whereby the Employer is substituted for the Contractor under the Appointment.
- 11.6 If the Consultant is requested to enter into a novation agreement pursuant to clause 11.5 above, the Contractor agrees to enter into the same at the request of the Employer.

- 11.7 The Contractor acknowledges that the Consultant will be entitled to rely on a notice given to the Consultant and the Contractor by the Employer under clause 11.5 as conclusive evidence that the employment of the Contractor under the PCSA has been determined or the PCSA is terminated.
- 11.8 The Employer may by notice in writing to the Consultant and the Contractor appoint another person to exercise its right under this clause 11 subject to the Employer remaining liable to the Contractor as guarantor for its appointee in respect of its obligations under this Deed.
- 11.9 Upon request by the Employer the Consultant agrees to co-operate with the Employer in determining the duties performed or to be performed by the Consultant and to provide a copy of the Appointment and any variations thereto and details of all monies paid and due under the Appointment and the PCSA.
- 11.10 As from the date of service of notice under clause 11.3.1 or 11.5 to the extent that the Appointment operates by reference to the existence and application of the PCSA, the Appointment shall be administered and construed as though the PCSA was continuing and the Appointment shall therefore continue, subject to amendment only as necessary to reflect the fact that the PCSA has in fact terminated and the Employer has undertaken the obligations set in clause 11.3.2.

12. SUB-CONSULTANTS

Following a written request from the Employer the Consultant will (unless it has already done so) procure that its sub-consultants execute a deed of collateral warranty in the relevant form specified in the Appointment in favour of any person in whose favour the Appointment obliges the Consultant to give or procure the giving of such a warranty.

13. SEVERABILITY

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provision of or any other documents referred to in this Deed.

14. WAIVER

- 14.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.
- 14.2 No waiver under clause 14.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

15. THIRD PARTY RIGHTS

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed.

16. GOVERNING LAW AND JURISDICTION

This Deed shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed.

17. COUNTERPARTS

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by
[CONSULTANT] acting by
a Director and its Secretary/two Directors:-

Director
Director/Secretary

[THE CORPORATE SEAL of the SECRETARY)
OF STATE FOR EDUCATION herewith affixed)
is authenticated by:-)

.....
Authorised by the Secretary of State

.....
Full name (BLOCK CAPITALS)

OR

[EXECUTED AS A DEED (but not delivered
until the date hereof) by affixing the Common
deal of [EMPLOYER] in the presence of:-

Authorised Signatory]

OR

EXECUTED AS A DEED by [EMPLOYER]
acting by a Director and its Secretary/two
Directors:-

Director

Director/Secretary

EXECUTED AS A DEED by [CONTRACTOR]
acting by a Director and its Secretary/two
Directors:

Director

Director/Secretary

OR

EXECUTED as a deed by [CONTRACTOR]
acting by its duly authorised attorneys under a
power of attorney dated []

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

FS 0137 – MAIN BUILDING CONTRACT

HEATING DISTRIBUTION WORKS

(1) THE SECRETARY OF STATE FOR EDUCATION

- and -

(2) [CONTRACTOR]

CONTRACT

relating to

FS0137 Southend YMCA Community School
incorporating the conditions of the JCT Minor Works Building Contract
with contractor's design 2016 Edition

AGREEMENT

THIS CONTRACT is made on

20[]

BETWEEN:

- (1) **THE SECRETARY OF STATE FOR EDUCATION** of Sanctuary Buildings, Great Smith Street, London, SW1P 3BT (the “**Employer**”); and
- (2) **[CONTRACTOR]** (company number [] whose registered office is at [] (the “**Contractor**”).

RECITALS

Whereas:

First the Employer wishes to have the following work carried out: the remedial works to the existing heating distribution system at Southend YMCA Community Schol, Ticket House, 110 East Street, Prittlewell, Southend-on-Sea, Essex SS2 6LH (“the **Works**”) under the direction of the Architect/Contract Administrator referred to in Article 3 and has had work schedules prepared which show and describe the work to be done;

Second the Works include the design and construction of:

- (a) final connections; and
- (b) detailing

(the “**Contractor’s Designed Portion**”);

Third the Employer has had the following documents prepared which show and describe the work to be done:

- (a) the drawings numbered/listed in []¹ (the “**Contract Drawings**”);
- (b) Work Schedules;
- (d) other documents showing or describing or otherwise stating his requirements for the design and construction of the Contractor’s Designed Portion (the “**Employer’s Requirements**”),

which for identification have been signed or initialled by or on behalf of each Party and those documents together with this Agreement, the Conditions and, if applicable, a Schedule of Rates as referred to in the Fourth Recital (collectively “**Contract Documents**”) are annexed to this Contract;

Fourth the Contractor has supplied the Employer with a copy of the priced Contract Specification or Work Schedules or provided a Schedule of Rates;

¹ State the identifying numbers of the Contract Drawings or identify the schedule of drawings or other document listing them.

- Fifth** for the purposes of the Construction Industry Scheme (CIS) under the Finance Act 2004, the status of the Employer is, as at the Base Date, that stated in the Contract Particulars;
- Sixth** for the purposes of the Construction (Design and Management) Regulations 2015 (the “**CDM Regulations**”) the status of the project that comprises or includes the Works is stated in the Contract Particulars;
- Seventh** where so stated in the Contract Particulars, this Contract is supplemented by the DfE Construction Framework Agreement identified in those particulars;
- Eighth** whether any of Supplemental Provisions 1 to 8 apply is stated in the Contract Particulars.

ARTICLES

IT IS HEREBY AGREED as follows:

1. CONTRACTOR’S OBLIGATIONS

The Contractor shall carry out and complete the Works in accordance with the Contract Documents.

2. CONTRACT SUM

The Employer will pay the Contractor at the times and in the manner specified in the Conditions the VAT exclusive sum of [] pounds (£[]) (the “**Contract Sum**”) or such other sum as becomes payable under this Contract.

3. ARCHITECT/CONTRACT ADMINISTRATOR

For the purposes of this Contract the “**Architect/Contract Administrator**” is Stuart Wager of Arcadis LLP (company number OC368843) or, if he ceases to be the Architect/Contract Administrator, such other person as the Employer nominates (which person may, for the avoidance of doubt, be an employee of the Employer) within a reasonable time but in any case no later than 10 Business Days after such cessation, not being a person whom the Contractor no later than 5 Business Days after such nomination shall object to for reasons considered to be sufficient by a person appointed pursuant to the procedures under this Contract relevant to the resolution of disputes or differences. Provided always that no person subsequently appointed to be the Architect/Contract Administrator under this Contract shall be entitled to disregard or overrule any certificate, opinion, decision, approval or instruction given by any predecessor in that post, save to the extent that that predecessor if still in the post would then have had power under this Contract to do so.

4. PRINCIPAL DESIGNER

The “**Principal Designer**” for the purposes of the CDM Regulations is the Contractor or, such replacement as the Employer at any time appoints to fulfil that role and the person with responsibility for carrying out such role is [] or such other person as the Employer shall approve.

5. PRINCIPAL CONTRACTOR

The “**Principal Contractor**” for the purposes of the CDM Regulations is the Contractor, or such replacement as the Employer at any time appoints to fulfil that role.

6. ADJUDICATION

Notwithstanding anything else contained in this Contract, if any dispute or difference arises under this Contract, either Party may refer it to adjudication in accordance with clause 7.2.

7. LEGAL PROCEEDINGS

Subject to a referral pursuant to Article 6, if any dispute or difference as to any matter or thing of whatsoever nature arising under this Contract or out of or in connection therewith shall arise between the Contractor and the Employer either during the progress of the Works or after the completion or abandonment of the Works or after the determination of the employment of the Contractor it shall be determined by legal proceedings and the English courts shall have jurisdiction over any such dispute or difference.

8. SCHEDULE OF AMENDMENTS

The conditions of JCT Minor Works Building Contract with contractor's design 2016 including sections 1 to 7 and the Schedules annexed thereto ("**MWD 2016**") are intended to be and are hereby incorporated into and amended and supplemented by the Schedule of Amendments contained in Appendix A to this Contract ("**the Conditions**") and this Contract shall be read and construed accordingly.

9. COLLATERAL WARRANTIES, PARENT COMPANY GUARANTEE AND PERFORMANCE BOND: THE CONTRACTOR

9.1 The Contractor shall execute as deeds collateral warranties in the form set out in Schedule 4 to this Contract in favour of:

9.1.1 any freeholder or landlord of the Sites (where this is not the Employer);

9.1.2 the Governing Body of the School; and

9.1.3 Southend YMCA Community School (company number 07954295)

and deliver the same duly executed to the Employer:

a) on or before the date of this Contract, where such beneficiary's identity has been made known to the Contractor on or before the date of this Contract; and

b) within 10 Business Days of a written request from the Employer, where such beneficiary's identity has been made known to the Contractor after the date of this Contract.

9.2 Should the collateral warranties from the Contractor not be delivered to the Employer by the date of this Contract or within 10 Business Days of a written request from the Employer (as relevant) then the Employer shall be entitled to withhold all future payments to the Contractor until such time as the relevant collateral warranties have been provided to the Employer. The Employer's right to withhold payment shall not apply once the Contractor satisfies his obligations under this Article 9.2.

9.3 The Contractor shall procure the execution as a deed and delivery to the Employer by his parent company, within 10 Business Days of a written request from the Employer, a parent company guarantee in the form set out in Schedule 4 to this Contract with such amendments as the Employer may approve. Should the parent company guarantee not be delivered to the Employer in accordance with this Article 9.3 then the Employer shall be entitled to withhold all future payments to the Contractor until such time as the relevant parent company guarantee has been delivered. The Employer's right to withhold payment shall not apply once the Contractor satisfies his obligations under this Article 9.3.

9.4 Not used.

10. COLLATERAL WARRANTIES: PRINCIPAL SUB-CONTRACTORS

10.1 In this Article 10 'Principal Sub-Contractors' means any Sub-Contractor appointed by the Contractor in relation to the following elements of the Works:

[Ground improvement works];

[Piling];

[Structural steel frame/roof structure];

[Pre-cast concrete floors/stairs];

[Profile metal cladding/roofing];

[Mechanical, electrical and plumbing services] and

[Lifts]².

10.2 Without prejudice to clause 3.3, each of the Principal Sub-Contractors shall be appointed by deed, and within 5 Business Days of the appointment of a Principal Sub-Contractor the Contractor shall supply to the Employer a complete certified copy of the sub-contract, appointment or contract (as relevant).

10.3 The Contractor shall procure as deeds collateral warranties in the form of Schedule 4 to this Contract in favour of:

10.3.1 the Employer;

10.3.2 any freeholder or landlord of the Sites (where this is not the Employer);

10.3.3 the Governing Body of the School; and

10.3.4 Southend YMCA Community School (company number 07954295)

and deliver the same as deeds duly executed by the relevant Principal Sub-Contractor (and Contractor as relevant) to the Employer within 10 Business Days of a written request from the Employer.

10.4 The Contractor shall procure that each Principal Sub-Contractor takes out and maintains until the expiry of twelve (12) years after the date of Practical Completion PI Insurance which covers at a minimum all of the Principal Sub-Contractor's design and professional obligations under the relevant sub-contract, appointment, contract (as relevant) (including (to the extent applicable) professional advice and/or services, any defects and/or insufficiency of design) not less than the relevant limits of indemnity of the types and in amounts as set out in the table below:

² Sub-contract disciplines listed for illustration purposes only. Contractor to confirm which elements of the Works he proposes to sub-let for each school and Article 10.1 to be completed to reflect sub-contract works packages prior to completion of the Contract.

Principal Sub-Contractor	Level of PI Insurance
[Ground improvement works]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance
[Piling]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance
[Structural steel frame/roof structure]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance
[Pre-cast concrete floors/stairs]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic reinstatement of the aggregate indemnity limit in any one (1) year of insurance
[Profile metal cladding/roofing]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance
[Mechanical, electrical and plumbing services]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance
[Lifts]	a minimum of one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance

provided that such insurance is generally available in the market to members of the relevant Principal Sub-Contractor's trade at commercially reasonable rates and provided further that payment of any increased or additional premiums required by insurers by reason of the Principal Sub-Contractor's own claims record or other acts, omissions, matters or things peculiar to the relevant party will be deemed to be within the reasonable rates.

- 10.5 For the period beginning on the earlier of the Date of Possession or, the date of this Contract and ending twelve (12) years after the date of Practical Completion, the Contractor shall provide reasonable evidence to the Employer (as and when reasonably required by the Employer) that the PI Insurance of the relevant Principal Sub-Contractor complies with this Article 10.
- 10.6 Should the collateral warranties from the Principal Sub-Contractor, sub-contract, appointment or contract (as relevant) of the relevant Principal Sub-Contractor not be delivered to the Employer within 10 Business Days of a written request from the Employer (as relevant) then the Employer will be entitled to withhold all future payments to the Contractor in respect of that particular Principal Sub-Contractor's work until such time as the relevant collateral warranty, sub-contract, appointment or contract (as relevant) has been delivered.

- 10.7 The Employer's right to withhold payment under Article 10.6 shall not apply once the Contractor satisfies his obligations under Article 10.
- 10.8 The Contractor shall procure that each of the following Principal Sub-Contractors [list] takes out and maintains until the date of Practical Completion public and products liability insurance with a level of cover of not less than £10,000,000 each and every claim but in the aggregate for products liability³. The Contractor shall provide reasonable evidence to the Employer (as and when reasonably required by the Employer) that the public and products liability insurance of the relevant Principal Sub-Contractor complies with this Article 10.
- 11. DESIGN CONSULTANTS**
- 11.1 Not used.
- 11.2 Not used.
- 11.3 Within 15 Business Days of executing this Contract, the Contractor shall appoint the following consultants (or such other consultants as the Employer shall approve) for the purposes of the Works:
- [Architect];
- [Mechanical and Electrical];
- [Civil and Structural];
- [list any other consultants appointed by the Contractor]
- (together the "**Design Consultants**")
- 11.4 The Design Consultants shall be appointed by deed, such terms to be approved by the Employer.
- 11.5 Within 5 Business Days of the appointment of each Design Consultant the Contractor shall supply to the Employer a completed certified copy of the Design Consultant's deed of appointment.
- 11.6 The Contractor shall not dismiss any of the Design Consultants or vary the terms of their appointment without the written approval of the Employer.
- 11.7 If the employment of any Design Consultant is terminated or ceases its duties and/or obligations before the completion of the services allocated to him, the Contractor shall provide details of his proposed replacement to the Employer for his approval. Subject to the Employer's approval (which approval shall not be unreasonably withheld or delayed), the Contractor shall as soon as is reasonably practicable appoint such replacement consultant to complete those services. The foregoing provisions of this Article 11 shall apply to such replacement consultant.

³ Parties to confirm which Principal Sub-Contractors this may apply to, depending on value/risk associated with the package, extent to which goods and materials are manufactured or supplied by that sub-contractor and level of risk associated with products being defective. Products liability insurance is required in addition to public liability insurance for any contract where goods and materials are manufactured or supplied in the course of the services delivered under the contract. This will usually apply to all Principal Sub-Contractors in the list in the table at Article 10.4 save for ground improvement works.

- 11.8 The Contractor shall procure as deeds collateral warranties in the form of Schedule 4 to this Contract in favour of:
- 11.8.1 the Employer;
 - 11.8.2 any freeholder or landlord of the Sites (where this is not the Employer);
 - 11.8.3 the Governing Body of the School; and
 - 11.8.4 Southend YMCA Community Schoool (company number 07954295)
- and deliver the same as deeds duly executed by the relevant Design Consultant (and Contractor as relevant) to the Employer:
- a) on or before the date of this Contract, where such beneficiary's identity has been made known to the Contractor on or before the date of this Contract; and
 - b) within 10 Business Days of a written request from the Employer, where such beneficiary's identity has been made known to the Contractor after the date of this Contract.
- 11.9 Should the collateral warranties from the Design Consultant or appointment of the relevant Design Consultant not be delivered to the Employer by the date of this Contract or within 10 Business Days of a written request from the Employer (as relevant) then the Employer will be entitled to withhold all future payments to the Contractor in respect of that particular Design Consultant work until such time as the relevant collateral warranty or appointment has been delivered.
- 11.10 The Employer's right to withhold payment under Article 11.9 shall not apply once the Contractor satisfies his obligations under this Article 11.
- 11.11 The Contractor shall procure that each Design Consultant takes out and maintains until the expiry of twelve (12) years after the date of Practical Completion PI Insurance which covers at a minimum all of the Design Consultant's design and professional obligations under the relevant appointment (including (to the extent applicable) professional advice and/or services, any defects and/or insufficiency of design) not less than the relevant limits of indemnity of the types and in amounts as set out in the table below:

Design Consultant	Level of PI Insurance
Architect	a minimum of one million pounds (£1,000,000) each and every claim
Structural and civil engineer	a minimum of one million pounds (£1,000,000) each and every claim
Mechanical and electrical engineer	a minimum of one million pounds (£1,000,000) each and every claim
Any other Design Consultant	a minimum of one million pounds (£1,000,000) each and every claim

provided that such insurance is generally available in the market to members of the relevant consultant's profession at commercially reasonable rates and provided further that payment of any increased or additional premiums required by insurers by reason of the Design Consultant's own claims record or other acts, omissions, matters or things peculiar to the relevant party will be deemed to be within the reasonable rates.

- 11.12 For the period beginning on the earlier of the Date of Possession or, the date of this Contract and ending twelve (12) years after the date of Practical Completion, the Contractor shall provide reasonable evidence to the Employer (as and when reasonably required by the Employer) that the PI Insurance of the relevant Design Consultant complies with this Article 11.

12. ENTIRE AGREEMENT

- 12.1 The terms and conditions of this Contract and the obligations, warranties and undertakings which it contains are deemed to apply to all the Works both before and after the date of this Contract and this Contract supersedes any previous, agreements, promises, assurances, warranties, representations and understandings between the Parties, whether written or oral, relating to its subject matter between the Parties with regard to the same unless the Parties have expressly agreed to the contrary. For the avoidance of doubt the Contractor acknowledges that the terms and conditions of this Contract are deemed to apply to any Works undertaken under the Pre-Construction Services Agreement.
- 12.2 The Contractor confirms that in entering into this Contract he has not relied upon any warranty, representation, agreement, statement or undertaking other than as are expressly set out in this Contract and that (in the absence of fraud) he will not have any claim, right or remedy whatsoever arising out of such warranty, representation, agreement, statement or undertaking including, without limitation, any claim for rescission or damages in respect of innocent or negligent misrepresentation.
- 12.3 Notwithstanding any other provision of this Contract, the Contractor's obligations and/or liabilities under this Contract shall not be removed, reduced, qualified or limited by any enquiries, approvals, admissions, comments, consents, confirmations, sanctions, acknowledgement, advice, inspections, attendance at meetings or any failure in relation to the same by the Employer or his agents or representatives or persons authorised by the Employer to access the Sites including for the avoidance of doubt any comments and/or responses issued to the Contractor pursuant to clause 2.1 and/or any interim or final payments and/or any programme. Approval of drawings shall not constitute an acceptance of any variations incorporated in any drawings, and only variations specifically instructed or sanctioned by the Employer in accordance with clause 3.6 shall constitute a variation for the purposes of this Contract.

13. COUNTERPARTS

This Contract may be executed in any number of counterparts, each of which when executed and delivered shall constitute an original of this Contract, but all the counterparts shall together constitute the same Contract.

CONTRACT PARTICULARS

Clause, etc.	Subject	
Fifth Recital and Schedule 2 (paragraphs 1.1, 1.2, 1.5, 1.6, 2.1 and 2.2)	Base Date	The date of this Contract
Fifth Recital and clause 4.2	Construction Scheme (CIS)	Industry Employer at the Base Date is a “contractor” for the purposes of the CIS
Sixth Recital	CDM Regulations	The project is notifiable
Seventh Recital	Framework Agreement (State date, title and parties)	The Construction Framework established by the DfE pursuant to a contract notice published on 28 December 2020 in the Official Journal of the European Union under reference 2020/S 252-638043.
Eighth Recital and Schedule 3	Supplemental Provisions <i>(Where neither entry against one of Supplemental Provisions 1 to 6 below is deleted, that Supplemental Provision applies.)</i>	
	Collaborative working	Supplemental Provision 1 applies
	Health and safety	Supplemental Provision 2 applies
	Cost savings and value improvements	Supplemental Provision 3 applies
	Sustainable development and environmental considerations	Supplemental Provision 4 applies
	Performance Indicators and monitoring	Supplemental Provision 5 does not apply
	Notification and negotiation of disputes	Supplemental Provision 6 applies

	Where paragraph 6 applies, the respective nominees of the Parties are	Employer's nominee: Stuart Wagner of Arcadis LLP Contractor's nominee: [] or such replacement as each Party may notify to the other from time to time
	Transparency	Supplemental Provision 7 does not apply
	The Public Contracts Regulations 2015	Supplemental Provision 8 applies
1.1	BIM Protocol (where applicable) (<i>State title, edition, date or other identifiers of the relevant documents</i>).	Is the Project's Information Protocol (including the Information Particulars within the Project's Information Protocol) and the following documents – DfE's Exchange Information Requirements, DfE's Detailed Exchange Information Requirements, Project's Information Standard and Project's Information Production Methods and Procedures
1.6	Addresses for service of notices etc. by the Parties <i>(If none is stated, the address in each case, unless and until otherwise agreed and subject to clause 1.6.2, shall be that shown at the commencement of the Agreement.)</i>	Employer: Stuart Wager, Arcadis LLP, 80 Fenchurch Street, London, EC3M 4BY stuart.wager@arcadis.com Contractor: [insert postal address] [insert email]
2.3	Works commencement date	17 July 2023
2.3	Date for Completion	25 August 2023 or such later date for completion as is fixed under clause 2.8.
2.9	Liquidated damages	at the rate of £1,701.28 per week or pro rata part thereof
2.11	Rectification Period	Three months from the date of Practical Completion
2.29.1	Limit of Contractor's Liability	£[one and a half times Contract Sum].

4.3	Interim payments – Interim Valuation Dates <i>(Unless otherwise stated, the first Interim Valuation Date is one month after the Works commencement date specified in these Particulars (against the reference to clause 2.3) and thereafter at monthly intervals)</i>	The first Interim Valuation Date is one month after the Works commencement date and thereafter at intervals of one month
4.3	Payments due prior to Practical Completion - percentage of the total value of work etc. <i>(The percentage is 95 per cent unless a different rate is stated.)</i>	95 per cent
4.3	Payments becoming due on or after Practical Completion - percentage of the total amount to be paid to the Contractor <i>(The percentage is 97 ½ per cent unless a different rate is stated.)</i>	97 ½ per cent
4.3 and 4.8	Fluctuations provision <i>(Unless another provision or entry is selected, Schedule 2 applies.)</i>	No fluctuations provision applies
4.3 and 4.8	Percentage addition for Schedule 2 (paragraph 13) (if applicable)	No fluctuations provision applies
4.8.1	Supply of documentation for computation of amount to be finally certified	three months from the date of Practical Completion
5.3	Contractor's Public Liability insurance: injury to persons or property – the required level of cover is not less than	£10,000,000 for any one occurrence or series of occurrences arising out of one event but in the aggregate for products liability
5.4A, 5.4B and 5.4C	Insurance of the Works etc. alternative provisions	Clause 5.4C (Works and existing structures insurance by other means) applies (as amended in Appendix A)

5.4A and 5.4B	Percentage to cover professional fees <i>(If no other percentage is stated, it shall be 15 per cent)</i>	15 per cent
5.4C	Insurance arrangements – details of the required policy or policies	Are set out in the following document(s) Appendix A
5.6	PI Insurance – the required level of cover is not less than	£1,000,000 (one million pounds) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance
7.2	Adjudication Nominating body where no Adjudicator is named or where the named Adjudicator is unwilling or unable to act (whenever that is established) <i>(Where an Adjudicator is not named and a nominator has been selected, the nominator shall be one of the nominators listed opposite selected by the Party requiring the reference to adjudication.)</i>	The Chairman of the Technology and Construction Solicitors' Association

By signing below, the Contractor confirms that this Contract is irrevocably and unconditionally released to the Employer for completion.

This Contract has been executed as a deed and is delivered and takes effect on the date stated at the beginning of it.

THE CORPORATE SEAL of the)
SECRETARY OF STATE FOR)
EDUCATION herewith affixed is)
authenticated by:

.....
Authorised by the Secretary of State

.....
Full name (BLOCK CAPITALS)

EXECUTED AS A DEED by
[CONTRACTOR] acting by a Director and
its Secretary/two Directors:

Director

Director/Secretary

OR

EXECUTED as a deed by [CONTRACTOR]
acting by its duly authorised attorneys
under a power of attorney dated [
]

.....
Attorney Signature

.....
Full name (BLOCK CAPITALS)

.....

Attorney Signature

.....

Full name (BLOCK CAPITALS)

APPENDIX A

Schedule of Amendments to the Conditions of Contract

Based on printed version, published September 2016. Line references may vary in copies produced from the publisher's digital service.

CONDITIONS

Section 1 Definitions and Interpretation

1.1 Definitions

Amend existing definitions and **insert** new definitions, as follows:

Asbestos:	has the meaning given to it in the Control of Asbestos Regulations 2012 SI 2012/632;
Asbestos Survey:	the Asbestos survey(s) set out at Schedule 7 to this Contract;
Barred Lists:	the barred lists provided for under the Safeguarding Vulnerable Groups Act 2006 as amended by the Protection of Freedoms Act 2012 (as may be amended or re-enacted from time to time);
CBO:	a criminal behaviour order as defined in the Anti-social Behaviour, Crime and Policing Act 2014;
CDM Regulations:	the Construction (Design and Management) Regulations 2015 and any modification or replacement of the same;
Commercially Sensitive Information:	the information agreed between the Parties (if any) comprising the information of a commercially sensitive nature relating to the Contractor, the charges for the Works, his Intellectual Property Rights or his business or which the Contractor has indicated to the Employer that, if disclosed by the Employer, would cause the Contractor significant commercial disadvantage or material financial loss, but excluding always the Contract Sum;
Conditions:	delete the definition and substitute " see Article 8 ";
Confidential Information:	the Employer's Confidential Information and/or the Contractor's Confidential Information;
Consents:	any Employer Necessary Consents, Employer Planning Conditions, any planning permissions referred to in the Contract Documents or any other planning permissions relating to the Works, the approvals of reserved matters relating to the conditions attaching to any planning permissions referred to in the Contract Documents or any other planning permissions relating to the Works, and all other permissions, consents, approvals, licences, certificates, authorisations, and permits whether of a public or private nature as may be necessary lawfully to commence, carry out and complete the Works and if they are destroyed or damaged the reinstatement of the Works;
Construction Programme:	the programme for carrying out the completion of the Works in accordance with the terms of this Contract as set out in Schedule 6 to this Contract;
Contamination:	all or any pollutants or contaminants, including any chemical or

industrial, radioactive, dangerous, toxic or hazardous substance, waste or residue (whether in solid, semi-solid or liquid form or a gas or vapour and which, for the avoidance, shall include Asbestos);

Contract: the Contract Documents and any other document forming part of this Contract;

Contractor's Confidential Information: any information (excluding the Contract Sum), however it is conveyed, that relates to the business, affairs, developments, trade secrets, know-how, personnel and contractors of the Contractor, including Intellectual Property Rights, together with all information derived from the above, and any other information clearly designated as being confidential (whether or not it is marked as "confidential") or which ought reasonably to be considered to be confidential, including the Commercially Sensitive Information;

Contractor's Design Documents: the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Contractor in relation to the Works (including any updates, amendments, additions and revisions), together with, where applicable, any other design documents or information to be provided by him under the BIM Protocol;

Convictions: other than in relation to any minor road traffic offences, any previous or pending prosecutions, convictions, cautions and binding overs (including any spent convictions as contemplated by section 1(1) of the Rehabilitation of Offenders Act 1974 by virtue of the exemptions specified in Part II of Schedule 1 of the Rehabilitation of Offenders Act 1974 (Exemptions) Order 1975 (SI 1975/1023) or any replacement or amendment to that Order);

Crown Body: any department, office or agency of the Crown;

Disclosure and Barring Scheme: the disclosure and barring scheme operated by the Disclosure and Barring Service;

Disclosure and Barring Service: the non-departmental public body established pursuant to the Protection of Freedoms Act 2012;

DOTAS: the Disclosure of Tax avoidance Schemes rules which require a promoter of tax schemes to tell HM Revenue & Customs of any specified notable arrangements or proposals and to provide prescribed information on those arrangements or proposals within set time limits as contained in Part 7 of the Finance Act 2004 and in secondary legislation made under vires contained in Part 7 of the Finance Act 2004 and as extended to National Insurance Contributions by the National Insurance Contributions (Application of Part 7 of the Finance Act 2004) Regulations 2012, SI 2012/1868 made under s.132A Social Security Administration Act 1992;

DPA 2018: Data Protection Act 2018;

Educational Services:	the provision of teaching and pastoral support for school age children, the provision of careers advice, liaison with parents and guardians of pupils and the carrying on of extra-curricular activities for pupils and the use of educational accommodation by the local community;
Employer's Confidential Information:	all Personal Data and any information, however it is conveyed, that relates to the business, affairs, developments, trade secrets, know-how, personnel, and contractors of the Employer, including all Intellectual Property Rights, together with all information derived from any of the above, and any other information clearly designated as being confidential (whether or not it is marked "confidential") or which ought reasonably be considered to be confidential;
Employer Necessary Consents:	the Consents listed in Schedule 9;
Employer Planning Conditions:	the planning conditions listed in Schedule 11;
Employer's Policies:	the policies notified to the Contractor by the Employer and set out in Schedule 8 to this Contract;
Enhanced with Lists Check:	the check carried out by the Disclosure and Barring Service that also includes a check of the Barred Lists;
Environmental Information Regulations:	the Environmental Information Regulations 2004 together with any guidance and/or codes of practice issued by the Information Commissioner or relevant Government Department in relation to such regulations;
Existing Buildings:	the buildings at the School listed in Schedule 12 (Existing Buildings) prior to the relevant Completion Date but excluding any new facilities comprising the Works;
FOIA:	the Freedom of Information Act 2000 and any subordinate legislation made under this Act from time to time together with any guidance and/or codes of practice issued by the Information Commissioner in relation to such legislation;
General Anti-Abuse Rule:	<p>(a) the legislation in Part 5 of the Finance Act 2013; and</p> <p>(b) any future legislation introduced into parliament to counteract tax advantages arising from abusive arrangements and to avoid national insurance contributions;</p>
Good Industry Practice:	that degree of skill, care, prudence and foresight which would ordinarily be expected from time to time from a skilled and experienced building contractor under the same or similar circumstances;
Halifax Abuse Principle:	the principle explained in the CJEU Case C-255/02 Halifax and others;
Intellectual Property Rights:	<p>(a) copyright, rights related to or affording protection similar to copyright, rights in databases, patents and rights in inventions, semi-conductor topography rights, trade marks, rights in internet domain names and website addresses and other rights in trade names, designs,</p>

	Know-How, trade secrets and other rights in Confidential Information;
	<ul style="list-style-type: none"> (a) applications for registration, and the right to apply for registration, for any of the rights listed at (a) that are capable of being registered in any country or jurisdiction; (b) all other rights having equivalent or similar effect in any country or jurisdiction; and (c) all or any goodwill relating or attached thereto;
Joint Names Policy:	after “Contractor” insert: “and any one or more third persons specified in writing by the Employer to the Contractor, being persons having or acquiring an interest in or an organisation providing finance in connection with the Sites or the Works”;
Named Employee:	as set out in clause 2.17.1 of this Contract;
New Buildings:	any buildings constructed pursuant to this Contract;
Occasion of Tax Non-Compliance:	<ul style="list-style-type: none"> a) where any tax return of the Contractor submitted to a Relevant Tax Authority on or after 1 October 2012 is found on or after 1 April 2013 to be incorrect as a result of: <ul style="list-style-type: none"> i. a Relevant Tax Authority successfully challenging the Contractor under the General Anti-Abuse Rule or the Halifax Abuse Principle or under any tax rules or legislation that have an effect equivalent or similar to the General Anti-Abuse Rule or the Halifax Abuse Principle; ii. the failure of an avoidance scheme which the Contractor was involved in, and which was, or should have been, notified to a Relevant Tax Authority under DOTAS or any equivalent or similar regime; and/or b) where any tax return of the Contractor submitted to a Relevant Tax Authority on or after 1 October 2012 gives rise, on or after 1 April 2013, to a criminal conviction in any jurisdiction for tax related offences which is not spent at the date of this Contract or to a civil penalty for fraud or evasion;
Personal Data:	the meaning given to it in the Data Protection Act 2018;
PI Insurance:	professional indemnity insurance;
Post Practical Completion Activities:	those activities to be carried out and completed by the Contractor following Practical Completion and as further set out in the Contract Documents;
Practical Completion:	<p>a stage of completeness of the Works has been reached which allows the Sites to be occupied and used and in which</p> <ul style="list-style-type: none"> (a) there are no apparent deficiencies or defects and no incomplete items of work which would or could <ul style="list-style-type: none"> (i) compromise the health and safety of persons entering and/or occupying the completed Works; and/or

- (ii) given their cumulative number and/or nature, have more than a negligible impact on the beneficial occupation and use of the completed Works, by reason of their rectification or completion; and
- (b) the Site has been substantially cleared of all temporary buildings, builders' plant and equipment, unused materials and rubbish

provided that where the Contract Documents expressly state that the commissioning, testing and/or adjustment of any mechanical or electrical services installations forming part of the Works is to be completed before practical completion of the Works is to be regarded for the purposes of this Contract as achieved, then the Works shall not be considered to have achieved practical completion for the purposes of this Contract until such commissioning testing and/or adjustment is completed as the Contract Documents require;

Pre-Construction Services Agreement:

the pre-construction services agreement between the Employer and the Contractor dated [] relating to the provision of pre-construction services;

Prohibited Act:

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

Refurbished Buildings:

the Existing Buildings listed in Schedule 12 to be refurbished or remodelled (including any demolition) pursuant to this Contract;

Relevant Requirements:

all applicable laws relating to bribery, corruption and fraud,

including the Bribery Act 2010 and any guidance issued by the Secretary of State for Justice pursuant to section 9 of the Bribery Act 2010;

Relevant Tax Authority:	HM Revenue & Customs, or, if applicable, a tax authority in the jurisdiction in which the Contractor is established;
Request for Information:	a request for information or an apparent request under the Code of Practice on Access to Government Information, FOIA or the Environmental Information Regulations;
Schedule of Amendments:	the schedule of additional amendments, modifications and changes to the Conditions as set out in this Appendix A to this Contract;
School:	Southend YMCA Community School;
Sensitive Works:	the carrying out of any part of the Works (including the making good of any defects) in or on any part or parts of the Sites which may allow direct access to premises occupied or used, or likely to be occupied or used, during the course of the Works (including the making good of any defects) by pupils attending the School;
Site Plan(s):	the plan or plans of the Sites set out in Schedule 5 to this Contract;
Site Surveys:	the surveys of the Sites dated set out at Schedule 8;
Sites:	Ticket House, 110 East Street, Prittlewell, Southend-on-Sea, Essex, SS2 6LH upon which the Works are to be carried out and the extent of which is shown, for identification purposes only, edged red on the plan annexed at Schedule 5 to this Contract and all references in this Contract to "the site" shall be read and construed as references to "the Sites";.
Snagging Items:	minor defects, deficiencies or omissions identified pursuant to clause 2.10A which do not materially impair the School's use or enjoyment of the New Buildings or the relevant parts of the New Buildings and all of which are together capable of being rectified within twenty (20) Business Days;
Sub-Contractor:	any person engaged as an independent contractor, consultant or supplier by the Contractor to carry out and complete all or any part of the Works;
UK GDPR:	the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (United Kingdom General Data Protection Regulation), as it forms part of the law of England and Wales, Scotland and Northern Ireland by virtue of section 3 of the European Union (Withdrawal) Act 2018;
Works Insurance Policy:	Delete "under whichever of clauses 5.4A, 5.4B and 5.4C applies" and replace with "by the Contractor under this Contract";
VAT:	delete the definition and substitute "value added tax chargeable under the Value Added Tax Act 1994 (as amended, extended or re-enacted) and any similar or replacement tax".

Agreement to be read as a whole

1.2A **Insert** new clause 1.2A:

“1.2A Without prejudice to clause 1.2 the documents comprising this Contract are and shall be construed in the following order of precedence in the event of any inconsistency or ambiguity not dealt with by another clause:

- First the Recitals as contained in the Agreement;
- Second the Articles as contained in the Agreement;
- Third the Contract Particulars as contained in the Agreement;
- Fourth the Schedule of Amendments excluding the annexed Schedules;
- Fifth Schedules annexed to the Schedule of Amendments;
- Sixth the conditions of MWD 2016;
- Seventh the Employer’s Requirements;
- Eighth the priced Contract Specification/priced Work Schedules;
- Ninth the Contract Drawings;
- Tenth a Schedule of Rates (if any).”

Contracts (Rights of Third Parties) Act 1999

1.5 **Insert** the following in lieu of existing clause 1.5:

“A person who is not a party to this Contract shall have no right under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this Contract. This clause does not affect any right or remedy of a person which exists or is available otherwise than pursuant to that Act.”

Notices and other communications

1.6.2 In line 3 **delete** “Agreement” and **insert** “Contract Particulars”.

1.6.3 **Insert** new clause 1.6.3:

“1.6.3 Any notice sent by post in accordance with clause 1.6.2 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.”

1.9 **Insert** new clause 1.9:

“Rights and Remedies

1.9 Where this Contract provides specifically for any right of a Party on breach of the other Party’s obligations under this Contract, the entitlement to exercise (and conferring of) that right will be to the exclusion of all other rights of the first mentioned Party howsoever arising at common law, under statute or in equity (other than specific performance of any obligation under this Contract or injunctive relief) in respect of the circumstances constituting such breach.”

1.10 **Insert** new clause 1.10:

“No double recovery

1.10 Notwithstanding any other provisions of this Contract, neither Party shall be entitled to recover compensation or make a claim under this Contract in respect of any loss that he has incurred to the extent that he has already been compensated in respect of that loss pursuant to this Contract or otherwise.”

1.11 **Insert** new clause 1.11:

“Severability

1.11 If any term, condition or provision of this Contract shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Contract.”

1.12 **Insert** new clause 1.12:

“Waiver

1.12.1 No term or provision of this Contract shall be considered as waived by any Party unless a waiver is given in writing by that Party.

1.12.2 No waiver under clause 1.12.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Contract unless (and only to the extent) expressly stated in that waiver.”

1.13 **Insert** new clause 1.13:

“UK GDPR

1.13 The Employer and the Contractor shall comply with the provisions of Schedule 10.”

Contractor’s obligations

2.1 In line 2 after “Plan” **insert** “, Consents,”.

In lines 3/4 after “and shall give all notices required by the Statutory Requirements.” **delete** the remainder of the clause and in lieu **insert**:

“In relation to the Contractor’s Designed Portion:

2.1.1 without prejudice to any other express or implied warranties in this Contract, the Contractor warrants and undertakes to the Employer that:

2.1.1.1 he has exercised and will continue to exercise in the design of the Contractor’s Designed Portion the professional skill, care and diligence reasonably to be expected of a properly qualified and competent designer of the appropriate discipline(s) for such design acting independently under a separate contract with the Employer and experienced in carrying out design such as that required under this Contract in relation to works of a similar size, scope, nature, complexity, location, timescale and value to the Contractor’s Designed Portion;

2.1.1.2 without derogation from any other provision in this Contract, he is fully responsible for the entire design of the Contractor’s Designed Portion

of the Works including any design contained in the Employer's Requirements (whether or not prepared by or on behalf of the Employer) (and will notify the Employer if the Employer's Requirements are inadequate or inconsistent immediately upon such inadequacy or inconsistency becoming apparent), all design contained in the Contractor's Proposals and all design which he prepares or has prepared on his behalf by the Design Consultants or any Sub-Contractors;

2.1.1.3 without derogation from sub-clause 2.1.1.1, the design of the Contractor's Designed Portion and each part thereof will, when completed, comply with any performance specification or performance-related requirement included or referred to in or forming part of the Employer's Requirements as varied (if at all) pursuant to the provisions of this Contract;

2.1.1.4 he shall comply with the directions of the Architect/Contract Administrator for the integration of the design of the Contractor's Designed Portion with the design of the Works as a whole and each part thereof will, when completed, be properly co-ordinated and integrated with the remainder of the Works;

2.1.1.5 he shall without charge and within 10 Business Days' of any request provide the Architect/Contract Administrator with two copies of such drawings or details and specification of materials, goods and workmanship and (if requested) related calculations and information, as are reasonably necessary to explain the Contractor's Designed Portion; and

2.1.1.6 he shall not commence any works to which the documents in clause 2.1.1.5 relate before the expiration of seven days from the date of their delivery.

2.1.2 The Contractor shall not be excused liability under the above-mentioned warranties, in clause 2.1, by reason of the fact that he may have exercised all due skill care and diligence in the selection of those to whom he has delegated his design responsibilities in relation to the Contractor's Designed Portion."

2.1A **Insert** new clause 2.1A:

"2.1A.1 In performing his obligations under this Contract, the Contractor shall, and shall ensure that each of his Sub-Contractors shall, comply with the Modern Slavery Act 2015 and have and maintain throughout the term of this Contract his own policies and procedures to ensure compliance.

2.1A.2 The Contractor shall notify the Employer as soon as he becomes aware of any actual or suspected slavery or human trafficking in a supply chain which has a connection with this Contract.

2.1A.3 In the event that the Contractor fails to comply with this clause 2.1A and/or does not provide details of proposed mitigating factors which in the reasonable opinion of the Employer are acceptable, then the Employer reserves the right to terminate the employment of the Contractor under this Contract in accordance with clause 6.4."

2.1B **Insert** new clause 2.1B:

“2.1B Subject to clause 2.1C, the Contractor shall:

- 2.1B.1 obtain and maintain all Consents;
- 2.1B.2 be responsible for implementing each Consent (which he is required to obtain pursuant to clause 2.1C.1) within the period of its validity in accordance with its terms;
- 2.1B.3 supply to the Employer a copy of any application for a Consent (with a copy of all accompanying drawings and other documents) and a copy of any Consent obtained;
- 2.1B.4 comply with the conditions attached to any Consents and procure that no such Consent is breached by him or any person under his control and use all reasonable endeavours to procure that no Consent is revoked and that all Consents continue in full force and effect for such time as is necessary for the Contractor to carry out the Works; and
- 2.1B.5 not (and shall use all reasonable endeavours to procure that any other person over whom he has control shall not) without the prior consent of the Employer (which consent shall not be unreasonably withheld or delayed) apply for or agree to any change, relaxation or waiver of any Consent (whether obtained before or after the date of this Contract) or of any condition attached to it but, subject to the compliance by the Contractor with his obligations under this clause

and references in this Contract to Consents shall be construed as referring to the Consents as from time to time varied, relaxed or waived.”

2.1C **Insert** new clause 2.1C:

- “2.1C.1 The Parties agree and acknowledge that the Contractor is not legally entitled to enter into the Employer Necessary Consents and/or discharge the Employer Planning Conditions.
- 2.1C.2 The Contractor agrees to undertake any negotiations with any third party and any preparation of documentation required to enable the Employer to enter into the Employer Necessary Consents, or where the Employer is not the landowner of the Sites, procure that the landowner of the Sites enters into the Employer Necessary Consents.
- 2.1C.3 Subject to the Contractor undertaking his obligations under clause 2.1C.2, the Employer shall enter into, or where the Employer is not the landowner of the Sites, the Employer shall procure that the landowner enters into, the Employer Necessary Consents by the dates set out in Schedule 9 to this Contract, provided always that:
 - 2.1C.3.1 the Employer Necessary Consents are in a form previously approved by the Contractor, the Employer and the third party (each acting reasonably);
 - 2.1C.3.2 the Employer shall pay the legal and surveyor’s costs reasonably and properly incurred in approving the Employer Necessary Consents and the Contractor shall pay and be responsible for all other costs in relation to the Employer Necessary Consents.
- 2.1C.4 The Contractor agrees to use reasonable endeavours to assist the Employer to discharge, or procure the discharge of, the Employer Planning Conditions.

2.1C.5 Subject to the Contractor undertaking his obligations under clause 2.1C.4, the Employer shall discharge, or procure the discharge of, the Employer Planning Conditions.”

2.1D **Insert** new clause 2.1D:

“2.1D The Contractor shall in relation to the services and utilities required or affected as a result of the carrying out of the Works:

2.1D.1 be responsible for determining the location of such services and utilities as may be at the Sites and for the maintenance of access to such services and utilities at the Sites;

2.1D.2 make and rely upon all necessary investigations and surveys as to such services and utilities at the Sites;

2.1D.3 make provision for lawfully diverting, disconnecting or otherwise dealing as may be necessary with any services and utilities not within the Sites;

2.1D.4 pay to all relevant authorities or undertakings all costs and expenses incurred in diverting, disconnecting or otherwise carrying out works in respect of such services and utilities within the Sites;

2.1D.5 make connection into services and utilities outside the Sites; and

2.1D.6 otherwise do all that is required in relation to the utilities required for the purpose of carrying out of the Works.”

Materials, goods and workmanship

2.2.1 **Delete** the existing clause 2.2.1 and in lieu **insert**:

“2.2.1 Unless otherwise specified in the Contract Documents or agreed between the Parties:

2.2.1.1 all materials and goods for the Works shall be new, appropriate for use in the Works, of a satisfactory quality and fit for the purpose or purposes stated or otherwise reasonably to be inferred from the Contract Documents; and

2.2.1.2 workmanship for the Works shall be of a satisfactory quality and standard appropriate for the Works.”

2.2.3 **Insert** new clause 2.2.3:

“2.2.3 The Contractor shall not use in connection with the Works and, subject to the standard of skill, care and diligence set out in clause 2.1.1.1, nor permit, specify or approve for use in connection with the CDP Works, any materials which at the time of use:

2.2.3.1 are known to be deleterious (either to health and safety or to the durability of the Works); or

2.2.3.2 contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or

2.2.3.3 do not accord with the guidelines contained in the edition of the publication *Good Practice in Selection of Construction Materials* (British Council for Offices (BCO)),

current at the date of use.”

Correction of inconsistencies

- 2.5.1 In lines 1 and 2 **delete** “, the Work Schedules and the Employer’s Requirements” and substitute “and the Work Schedules”; and at the end of the clause **insert** “and in the event of any inconsistency in the Employer’s Requirements or between the Employer’s Requirements and any other Contract Document the Architect/Contract Administrator shall decide how to deal with the inconsistency and the Contractor shall be obliged to comply with the decision without any additional payment nor any extension of time.”
- 2.5.2 In line 2 after “expense” **insert** “and without any extension of time”.
- 2.5.3 **Insert** new clause 2.5.3:
- “2.5.3 The Employer will not be liable for any error, omission, defect, inadequacy, deficiency, omission, unavailability or otherwise whatsoever in or of any information, detail, design, drawing, goods, materials or specification forming part of the Employer’s Requirements (whether or not prepared by on behalf of the Employer)”.
- 2.6.2 In line 4 **delete** “Contract Documents” and substitute “Contract Drawings, Contract Specification, Work Schedules and/or Schedule of Rates.”

Extension of time

- 2.8 At the end of the second sentence, after “notify the Parties accordingly” **insert** “Provided always that the Contractor shall use constantly his best endeavours to prevent or minimise any disruption or delay and shall do all that may be reasonably required to the satisfaction of the Architect/Contract Administrator to proceed with the Works and to mitigate any loss or expense incurred by him.”

At the beginning of the third sentence, after the words “Reasons within the control of the Contractor include any”, **insert** “negligence or”.

Damages for non-completion

- 2.9.1 In line 4, **delete** “practical completion” and **replace** with “Practical Completion”.
- 2.9.2 In line 3, **delete** “or” before “recover” and in lieu **insert** “and/or”.

Practical completion

- 2.10 **Change** the heading from “Practical completion” to “Practical Completion”.
- 2.10 In line 2, **delete** “practical completion” and **replace** with “Practical Completion”.
- 2.10A **Insert** new clause 2.10A:

“Snagging items

- 2.10A.1 The Architect/Contract Administrator may at his discretion certify Practical Completion notwithstanding that there are any Snagging Items. Where there are Snagging Items, the Architect/Contract Administrator shall, within five (5) Business Days of the date of certification of Practical Completion, issue a notice specifying the Snagging Items together with an estimate of the cost of rectifying such Snagging Items.

- 2.10A.2 The Contractor shall, in consultation with the Architect/Contract Administrator and in such manner as to cause as little disruption as reasonably practicable to any ongoing commissioning and the Employer's use of the School, rectify all Snagging Items within a reasonable period not exceeding twenty (20) Business Days from the date of certification of practical completion.
- 2.10A.3 If, by the end of the period referred to in clause 2.10A.2, the Contractor has failed to rectify the Snagging Items to the reasonable satisfaction of the Employer, the Employer may, by himself, or by the engagement of others, carry out the works necessary to rectify the Snagging Items, at the risk and cost of the Contractor."

Defects

- 2.11 **Insert** a new second paragraph to clause 2.11 as follows: "Any such defects, shrinkages or faults shall be notified by the Architect/Contract Administrator to the Contractor in writing at any time or from time to time no later than 10 Business Days after the expiry of the Rectification Period and the Contractor shall make good the same within a reasonable period not later than 10 Business Days, or such longer period as the Parties may, acting reasonably agree, after the date of such notification; save that the Architect/Contract Administrator may in cases of urgency require any matter notified under this clause 2.11 to be made good within such period of time specified by the Employer as the circumstances require."
- 2.11A **Insert** new clause 2.11A:
- "2.11A The provisions of clause 2.11 apply to any defects, shrinkages or other faults and to any items of incomplete work and/or omissions remaining at practical completion. If the Contractor does not make good any defects, shrinkages and other faults and any items of incomplete work and/or omissions in accordance with clause 2.11, the Employer may employ and pay other persons to execute any work whatsoever as may be necessary to remedy such defects, shrinkages and other faults. The Contractor shall be liable for all additional costs incurred by the Employer in connection with such employment, which for the avoidance of doubt shall include all costs and losses incurred by the Employer in rectifying and making good any such defects, shrinkages, other faults or incomplete works, and an appropriate deduction shall be made from the Contract Sum or the Employer may recover the same from the Contractor as a debt."
- 2.11B **Insert** new clause 2.11B:
- "2.11B Notwithstanding any other provision of this Contract, the Contractor shall carry out and complete the Post Practical Completion Activities. To the extent that the Contractor is unable to or fails to complete all or any part of the Post Practical Completion Activities as required by the Contract Documents, then such Post Practical Completion Activities, or any incomplete part of the Post Practical Completion Activities, shall be deemed to be defects, shrinkages, other faults or incomplete works as referred to in clauses 2.11 and 2.11A. For the avoidance of doubt matters referred to in this clause 2.11B shall not prevent the release of the applicable retention at Practical Completion, but shall apply to the remaining retention to be released upon the issue of the certificate of making good in accordance with clause 2.12."

Insert new clauses 2.13 to 2.35:

"Nuisance and trespass

- 2.13.1 Without prejudice to the generality of clause 5.2, the Contractor shall:

- 2.13.1.1 at all times prevent any trespass, public or private nuisance (including, without limitation, any such nuisance caused by noxious fumes, noisy working operations or the deposit of any material or debris on a public highway) or other interference with the rights of any adjoining or neighbouring land owner, tenant or occupier or any local authority or statutory undertaker arising out of the carrying out of the Works or out of any other obligations pursuant to section 2 or section 3 of the Conditions;
 - 2.13.1.2 defend or at the Employer's option assist the Employer in defending any action or proceedings which may be instituted in relation thereto howsoever such action may arise; and
 - 2.13.1.3 be responsible for and liable to the Employer for all reasonably foreseeable expenses, liabilities, losses, claims and proceedings whatsoever and howsoever arising resulting from any such nuisance or interference, save only where such nuisance or interference is a consequence of an instruction of the Architect/Contract Administrator (which is not itself the result of any negligence, default or breach of contract by or on behalf of the Contractor or any Sub-Contractor or supplier) and which could not have been avoided by the Contractor using all reasonable and practical means to avoid the same.
- 2.13.2 Without prejudice to the Contractor's obligations under clause 2.13.1, if the carrying out of the Works or out of any other obligations pursuant to section 2 or section 3 of the Conditions is likely to necessitate any interference (including the oversail of any tower crane jib) with the right of adjoining or neighbouring land owners, tenants or occupiers, then the Contractor shall without cost to the Employer obtain the prior written agreement of such land owners, tenants or occupiers and such agreement shall be subject to the approval of the Employer before execution. The Contractor shall comply in every respect with any conditions contained in any such agreement without cost to the Employer.

Work not forming part of the Contract

- 2.14.1 The Contractor shall permit the execution of work not forming part of this Contract by the Employer and/or any persons authorised or licensed by the Employer to carry out such work on those parts of the Sites in the Contractor's possession (including statutory undertakers and any other authorities) and the Employer and/or any such persons may at any time re-enter the Sites for the purposes of executing such work or to install any goods equipment or other articles for fitting-out provided always that the Employer shall use reasonable endeavours to procure that the execution of such work does not obstruct, interfere with or delay the Contractor in carrying out the Works.
- 2.14.2 The Contractor shall use all reasonable endeavours not to interfere with or impede the progress of any works being carried out by the Employer and/or any person authorised or licensed by the Employer to carry out such works and shall observe all reasonable requirements of the Employer in relation to the carrying out of such works.
- 2.14.3 Every person referred to in clause 2.14.1 shall for the purposes of clauses 5.1 and 5.4A or 5.4B as applicable be deemed to be a person for whom the Employer is responsible and not to be a sub-contractor of the Contractor.
- 2.14.4 For the avoidance of doubt the execution of any works pursuant to clause 2.14 shall not constitute the taking of possession by the Employer nor that practical completion of the Works or part of the same has been achieved.

Inspection, tests, etc.

- 2.15.1 Where under this Contract the Contractor is to provide to the Architect/the Contract Administrator drawings details or other documents (including any such drawings details or other documents to be supplied to the Contractor by his Sub-Contractors) for review comment on and/or approval by the Architect/the Contract Administrator the Contractor shall provide such drawings details or other documents to the Architect/the Contract Administrator in sufficient time to allow the Architect/Contract Administrator to properly review comment on and/or approve the same without any delay being caused to the carrying out of the Works.

Copyright and use

- 2.16.1 The Intellectual Property Rights in the Contractor's Design Documents prepared by or on behalf of the Contractor in relation to this Contract and the work executed by him remains the property of the Contractor. The Contractor hereby grants to the Employer an irrevocable, royalty free, non-exclusive licence to use and reproduce the Contractor's Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Sites. Such licence entitles the Employer to grant sub-licences to third parties in the same terms as this licence provided always that the Contractor shall not be liable to any licensee for any use of the Contractor's Design Documents or the use of the Intellectual Property Rights in the Contractor's Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Contractor.
- 2.16.2 The Employer may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 2.16.1 to a Crown Body or to any body (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Employer.
- 2.16.3 In the event that the Contractor does not own the copyright or any Intellectual Property Rights in any Contractor's Design Document the Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Employer to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Contractor is unable to procure the right to grant to the Employer in accordance with the foregoing the Contractor shall procure that the third party grants a direct licence to the Employer on industry acceptable terms.
- 2.16.4 The Contractor waives any moral right to be identified as author of the Contractor's Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Contractor's Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Employer or any licensee or assignee of the Employer.
- 2.16.5 In the event that any act unauthorised by the Employer infringes a moral right of the Contractor in relation to the Contractor's Design Documents the Contractor undertakes, if the Employer so requests and at the Employer's expense, to institute proceedings for infringement of the moral rights.
- 2.16.6 The Contractor warrants to the Employer that he has not granted and shall not (unless authorised by the Employer) grant any rights to any third party to use or otherwise exploit the Contractor's Design Documents.
- 2.16.7 The Contractor shall supply copies of the Contractor's Design Documents to the Architect/Contract Administrator and to the Employer's other contractors and consultants for no additional fee to the extent necessary to enable them to discharge their respective functions in relation to this Contract or related works.

- 2.16.8 After the termination or conclusion of the Contractor's employment hereunder, the Contractor shall supply the Architect/Contract Administrator with copies and/or computer discs of such of the Contractor's Design Documents as the Architect/Contract Administrator may from time to time request and the Employer shall pay the Contractor's reasonable costs for producing such copies or discs.
- 2.16.9 In carrying out the Works the Contractor shall not infringe any Intellectual Property Rights of any third party. The Contractor shall indemnify the Employer against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

Disclosure and Barring Service

- 2.17.1 The Contractor shall procure that in respect of all potential staff or persons (including Sub-Contractors) who will be carrying out any Sensitive Works (each a **"Named Employee"**) before a Named Employee begins to attend the Sites to perform any Sensitive Works:
- 2.17.1.1 each Named Employee is questioned as to whether he or she has any Convictions or CBOs;
 - 2.17.1.2 the results of an Enhanced with Lists Check is obtained from the Disclosure and Barring Service in respect of each Named Employee; and
 - 2.17.1.3 to the extent permitted by law a copy of the results of such checks by the Contractor as are referred to in clause 2.17.1.2 are notified to the Employer.
- 2.17.2 The Contractor shall procure that:
- 2.17.2.1 no person who appears on a Barred List following the results of the Enhanced with Lists Check referred to in clause 2.17.1.2 shall be employed or engaged in the performance of the Sensitive Works; and
 - 2.17.2.2 he shall and shall procure that all Sub-Contractors shall comply with all reporting requirements to the Disclosure and Barring Service.
- 2.17.3 The Contractor shall procure that no person who discloses any Convictions or CBOs, or who is found to have any Convictions following the results of the Enhanced with Lists Check referred to in clause 2.17.1.2, is employed or engaged in the carrying out any part of any Sensitive Works without the Employer's prior written consent.
- 2.17.4 Insofar as permitted by law, the Contractor shall procure that the Employer is kept advised at all times of any member of staff or employee of any Sub-Contractor engaged in the provision of the Sensitive Works:
- 2.17.4.1 who subsequent to his/her commencement of employment as a member of staff receives a Conviction or CBO which becomes known to the Contractor or any Sub-Contractor or whose previous Convictions or CBOs become known to the Contractor or any Sub-Contractor (or any employee of the Contractor or Sub-Contractor involved in the provision of the Sensitive Works); or
 - 2.17.4.2 in respect of whom information is referred to the Disclosure and Barring Service pursuant to the Disclosure and Barring Scheme (as appropriate); or
 - 2.17.4.3 whom the Disclosure and Barring Service is "minded to bar" or who is placed

on a Barred List pursuant to the Disclosure and Barring Scheme which becomes known to the Contractor or a Sub-Contractor.

- 2.17.5 In the event that any member of staff of the Contractor or a Sub-Contractor is added to a Barred List, the Contractor shall procure that such member of staff or employee is removed from the Sites and shall cease to be engaged in the Sensitive Works.
- 2.17.6 Save to the extent prescribed otherwise pursuant to the Disclosure and Barring Service, this clause 2.17 shall not apply to those individuals who shall be required by the Contractor to attend on the site to provide emergency reactive services. In the case of such individuals, the Contractor shall ensure that such individuals are accompanied at all times while on the site by a member of the Contractor's Persons' staff who has been properly employed or engaged in accordance with this clause 2.17.

Conduct of Staff and Security Arrangements

- 2.18.1 Whilst engaged at the Sites the Contractor shall and shall procure that his staff and the staff of any Sub-Contractor shall comply with any Employer's Policies relating to the conduct of staff and security arrangements.
- 2.18.2 The Employer (acting reasonably) may:
 - 2.18.2.1 instruct the Contractor that disciplinary action is taken against any employee of the Contractor or any Sub-Contractor involved in the provision of the Works (in accordance with the terms and conditions of employment of the employee concerned) where such employee misconducts himself or is incompetent or negligent in his duties (in which case the Employer shall co-operate with any disciplinary proceedings and shall be advised in writing of the outcome); or
 - 2.18.2.2 where the Employer has reasonable grounds for considering that the presence of conduct of any employee at any location relevant to the performance of the Works is undesirable, require the exclusion of the relevant employee from the relevant location(s).

Admission to the Sites

- 2.19.1 Subject to the remainder of this clause 2.19.1, the Contractor shall at least 20 Business Days before the date on which the Contractor first carries out any Sensitive Works provide the Employer with a written list of the names and addresses of all employees or other persons who it expects may require admission to the Sites in connection with the carrying out of any Sensitive Works, specifying the capacities in which those employees or other persons are concerned with any Sensitive Works and giving such other particulars as the Employer may require. The Contractor shall update this information as and when any such individuals are replaced or complemented by others, not less than 20 Business Days before their inclusion. The decision of the Employer on whether any person is to be refused admission to the Sites shall be final and conclusive and the Employer shall not be obliged to give reasons for its decision.
- 2.19.2 Where the Contractor is unable (acting reasonably) to comply with clause 2.19.1 by the time period specified in it then the Contractor shall comply with his obligations under that clause as soon as reasonably practicable and by no later than the end of the day on which the relevant individual first goes on the Sites. Until such time as the Contractor has complied with its obligations in respect of that individual, he or she shall at all times be accompanied on the Sites by a member of the Contractor or Contractor's Persons' staff who has been properly notified to the Employer in accordance with clause 2.19.1.

- 2.19.3 This clause 2.19 shall not apply to those individuals who shall be required by the Contractor or Contractor's Person to attend the Sites to provide emergency reactive services. In the case of such individuals, the Contractor shall, or shall procure that any Contractor's Person shall ensure that such individuals are accompanied at all times while on the Sites by a member of the Contractor or Contractor's Person's staff who has been properly notified to the Employer in accordance with clause 2.19.1.

Refusal of Admission

- 2.20 The Employer reserves the right to refuse to admit to the Sites any person employed or engaged by the Contractor or any Sub-Contractor of any tier, whose admission would, in the opinion of the Employer, present a risk to themselves or any pupil, or to the Employer's property and shall not be obliged to give any reasons for such refusal.

Decision to Refuse Admission

- 2.21 The decision of the Employer as to whether any person is to be refused admission to the Sites pursuant to clause 2.20 shall be final and conclusive.

Removal from Sites

- 2.22 The Contractor shall comply with and/or procure compliance with any notice issued by the Employer from time to time requiring the removal from the Sites of any person employed thereon who in the opinion of the Employer acting reasonably is not acceptable on the grounds of risk to themselves or any pupil, or any Employer related party or property and that such persons shall not be employed again in connection with the Works without the written consent of the Employer.

Minimising Disruption to the Provision of Educational Services

- 2.23 Insofar as the carrying out of the Works affects or may affect the provision of Educational Services at the School, the Contractor shall procure that (subject to the terms of this Contract) the Works are carried out:
- 2.23.1 so as to minimise any disruption to the provision of Educational Services; and
- 2.23.2 so as to ensure that no disruption is caused during the carrying out of examinations at the School during any examination period;
- 2.23.3 in compliance, to the extent reasonably practicable, with the Construction Programme.

Operations on Sites

- 2.24.1 The Contractor shall provide to the Architect/Contract Administrator if and as the Architect/Contract Administrator requests in writing, details of the Contractor's proposals for the means of access to the Sites during the construction period, vehicle parking facilities on the Sites, loading and unloading areas for materials, site compounds, temporary warning and direction signs on adjacent highways and any other similar information as to the Contractor's working arrangements. If necessary the Contractor shall amend such details to obtain the approval of the local planning authority or other relevant public authority having jurisdiction with respect to the Works.
- 2.24.2 The Contractor shall be wholly responsible for the design, adequacy, stability and safety of all temporary works required in and about the construction of the Works, save insofar as it is provided in any Contract Document that the design of any temporary works is to be

provided by any member of the Employer's design team, in which case the Contractor shall not be responsible for the production or the adequacy of such design.

- 2.24.3 In and about the execution of the Works the Contractor shall maintain and not cause any interference to any support enjoyed by any adjoining land or any structures, other than any structures which are to be demolished as part of the Works.
- 2.24.4 The Contractor shall:
- 2.24.4.1 keep all enclosures around the Sites clear of graffiti, posters and other unauthorised attachments, so far as is practicable;
 - 2.24.4.2 implement measures for the regulation of traffic to and from the Sites including wheel-washing procedures and street cleaning and comply with any requirements of the police or highway authorities with regard to local traffic arriving at and departing from the Sites;
 - 2.24.4.3 obtain for himself any licences required to oversail any land outside the Sites' boundaries; and
 - 2.24.4.4 make good or meet the cost of making good all damage caused to roads, footpaths and property adjoining the Sites and to any services, arising from the carrying out of the Works.

As-built data and energy performance

- 2.25.1 At or before Practical Completion of the Works, the Contractor shall without charge provide to the Employer an energy performance certificate and a recommendation report for the Works, in conformity with regulation 29 of the Building Regulations 2010 and any modification or replacement of the same.
- 2.25.2 At or before Practical Completion of the Works, the Contractor shall without charge provide to the Architect/Contract Administrator draft as-built or final issue drawings, specifications (in 3 copies) and draft operating and maintenance manuals (in 3 copies) and other documents and such details (in 3 copies) as specified in the Contract Documents, containing sufficient information to enable the Works to be properly maintained and operated.
- 2.25.3 Within 4 weeks after Practical Completion of the whole of the Works, the Contractor shall without charge provide to the Architect/Contract Administrator 3 copies of all as-built or final issue drawings, specifications and such other details and service manuals as are specified in the Contract Documents.

Notwithstanding any provision to the contrary in this Contract the Contractor shall not be entitled to any payment of any retention that would, but for this provision, become due and payable under this Contract until the provisions of this clause 2.25 have been complied with.

Confidentiality and Information Sharing

- 2.26.1 Except to the extent set out in this clause or where disclosure is expressly permitted elsewhere in this Contract, each party shall:
- 2.26.1.1 treat the other party's Confidential Information as confidential and safeguard it accordingly;

- 2.26.1.2 not disclose the other party's Confidential Information to any other person without prior written consent;
 - 2.26.1.3 immediately notify the other Party if it suspects unauthorised access, copying, use or disclosure of the Confidential Information; and
 - 2.26.1.4 notify the Serious Fraud Office where the recipient Party has reasonable grounds to believe that the other Party is involved in activity that may be a criminal offence under the Bribery Act 2010.
- 2.26.2 Clause 2.26.1 shall not apply to the extent that:
- 2.26.2.1 such disclosure is a requirement of the law of the contract placed upon the party making the disclosure, including any requirements for disclosure under the FOIA or the Environmental Information Regulations pursuant to clause 2.32 (Freedom of Information);
 - 2.26.2.2 such information was in the possession of the party making the disclosure without obligation of confidentiality prior to its disclosure by the information owner;
 - 2.26.2.3 such information was obtained from a third party without obligation of confidentiality;
 - 2.26.2.4 such information was already in the public domain at the time of disclosure otherwise than by a breach of this Contract; or
 - 2.26.2.5 it is independently developed without access to the other party's Confidential Information.
- 2.26.3 The Contractor may only disclose the Employer's Confidential Information to Contractor's Persons who are directly involved in the carrying out of the Works and who need to know the information, and shall ensure that such Contractor's Persons are aware of and shall comply with these obligations as to confidentiality.
- 2.26.4 The Contractor shall not, and shall procure that the Contractor's Persons do not, use any of the Employer's Confidential Information received otherwise than for the purposes of this Contract.
- 2.26.5 The Contractor may only disclose the Employer's Confidential Information to Contractor's Persons who need to know the information, and shall ensure that such Contractor's Persons are aware of, acknowledge the importance of, and comply with these obligations as to confidentiality. In the event that any default, act or omission of any Contractor's Persons causes or contributes (or could cause or contribute) to the Contractor breaching his obligations as to confidentiality under or in connection with this Contract, the Contractor shall take such action as may be appropriate in the circumstances, including the use of disciplinary procedures in serious cases. To the fullest extent permitted by his own obligations of confidentiality to any Contractor's Persons, the Contractor shall provide such evidence to the Employer as the Employer may reasonably require (though not so as to risk compromising or prejudicing the case) to demonstrate that the Contractor is taking appropriate steps to comply with this clause 2.26, including copies of any written communications to and/or from Contractor's Persons, and any minutes of meetings and any other records which provide an audit trail of any discussions or exchanges with Contractor's Persons in connection with obligations as to confidentiality.

- 2.26.6 At the written request of the Employer, the Contractor shall procure that those members of the Contractor's Persons identified in the Employer's notice sign a confidentiality undertaking prior to commencing any work in accordance with this Contract.
- 2.26.7 Nothing in this Contract shall prevent the Employer from disclosing the Contractor's Confidential Information:
- 2.26.7.1 to any Crown Body. All Crown Bodies receiving such Confidential Information shall be entitled to further disclose the Confidential Information to other Crown Bodies on the basis that the information is confidential and is not to be disclosed to a third party which is not part of any Crown Body;
 - 2.26.7.2 to a professional adviser, contractor, consultant, supplier or other person engaged by the Employer or any Crown Body (including any benchmarking organisation) for any purpose connected with this Contract or any person conducting a review in respect of this Contract on behalf of a public body;
 - 2.26.7.3 for the purpose of the examination and certification of the Employer's accounts;
 - 2.26.7.4 for any examination pursuant to Section 6(1) of the National Audit Act 1983 of the economy, efficiency and effectiveness with which the Employer has used his resources;
 - 2.26.7.5 for the purpose of the exercise of his rights under this Contract; or
 - 2.26.7.6 to a proposed successor body of the Employer in connection with any assignment, novation or disposal of any of its rights, obligations or liabilities under this Contract,
- and for the purposes of the foregoing, disclosure of the Contractor's Confidential Information shall be on a confidential basis and subject to a confidentiality agreement or arrangement containing terms no less stringent than those placed on the Employer under this clause 2.26.
- 2.26.8 The Employer shall use all reasonable endeavours to ensure that any government department, employee, third party or sub-contractor to whom the Contractor's Confidential Information is disclosed pursuant to the above clause is made aware of the Employer's obligations of confidentiality.
- 2.26.9 Nothing in this clause shall prevent either party from using any techniques, ideas or know-how gained during the performance of the Contract in the course of his normal business to the extent that this use does not result in a disclosure of the other party's Confidential Information or an infringement of Intellectual Property Rights.
- 2.26.10 The Employer may disclose the Confidential Information of the Contractor:
- 2.26.10.1 to Parliament and Parliamentary Committees or if required by any Parliamentary reporting requirement;
 - 2.26.10.2 to the extent that the Employer (acting reasonably) deems disclosure necessary or appropriate in the course of carrying out its public functions.
- 2.26.11 The Contractor shall not by himself, his employees or agents, and shall procure that his sub-contractors shall not, communicate with representatives of the press, television, radio or other communications media on any matter concerning this Contract or the Works

without the prior written approval of the Employer.

- 2.26.12 No facilities to photograph or film in or upon any property used in relation to the Works shall be given or permitted by the Contractor unless the Employer has given his prior written approval.
- 2.26.13 The Contractor shall not exhibit or attach to any part of the Sites any notice or advertisement without the prior written permission of the Employer, save where otherwise required to comply with legislation.

Audit

- 2.27 The Contractor shall cooperate fully and in a timely manner with any request from time to time of any auditor (whether internal or external) of the Employer and to provide documents, or to procure the provision of documents, and to provide, or to procure the provision of, any oral or written explanation relating to the same.

Construction Programme

- 2.28.1 The Contractor shall produce the Construction Programme and deliver the same to the Employer prior to the Works commencement date and shall thereafter revise the Construction Programme as appropriate from time to time (and if and whenever there is any material delay to the execution of the Works) so as to minimise or avoid any anticipated delay or disruption to the carrying out of the Works, and shall provide the Employer with the revised Construction Programme.
- 2.28.2 Each month the Contractor shall report to the Employer in writing comparing the progress of the Works with the Construction Programme current at that time, and promptly advise the Employer of any delay or disruption to the Works, setting out the measures he is taking or proposes to take to minimise or make good such delay or disruption.
- 2.28.3 Without prejudice to clause 2.1B, where the Employer's authorisation or completion of a document in respect of the Consents is required the Contractor shall furnish the relevant documentation to the Employer and take account in his programme that the Employer may require a period of 20 Business Days to authorise or complete it as appropriate.

Limitation on Liability

- 2.29.1 The aggregate liability of the Contractor to the Employer for any matters arising in connection with the performance of his obligations under this Contract shall not except as set out below at clause 2.29.2 exceed the amount, if any, stated in the Contract Particulars.
- 2.29.2 The Contractor shall not exclude or restrict his liability for any of the following and no liability for the same shall be taken into account in determining whether the limit of liability under clause 2.29.1 has been reached or exceeded:
 - 2.29.2.1 losses which are recovered pursuant to the insurance policies required to be effected and maintained in accordance with section 5 of this Contract (other than PI Insurance) and/or payments made by the Contractor to the extent corresponding payments are either received and/or recovered by the Contractor pursuant to the insurance policies required to be effected and maintained in accordance with section 5 of this Contract (other than PI Insurance) or which would have been received, recovered and/or recoverable but for the failure of the Contractor to maintain or to make a claim under such policies;

- 2.29.2.2 the Contractor's liability under clause 2.9;
- 2.29.2.3 the Contractor's liability in the event he abandons the Works;
- 2.29.2.4 the Contractor's liability in the event of any fraud, wilful misconduct of direct employees of the Contractor or of his Design Consultants and Sub-Contractors, in each case to the extent employed or directed by the Contractor, fraudulent misrepresentation, abandonment, corruption or criminal conduct on the part of the Contractor;
- 2.29.2.5 the Contractor's liability in respect of any employer's liability; and
- 2.29.2.6 the Contractor's liability in respect of personal injury or death.

2.30 Not Used

Freedom of information

- 2.31.1 The Contractor acknowledges that unless the Employer has notified the Contractor that the Employer is exempt from the provisions of the FOIA, the Employer is subject to the requirements of the Code of Practice on Government Information, FOIA and the Environmental Information Regulations. The Contractor shall co-operate with and assist the Employer so as to enable the Employer to comply with his information disclosure obligations.
- 2.31.2 The Contractor shall:
 - 2.31.2.1 transfer to the Employer all Requests for Information that it receives as soon as practicable and in any event within 2 Business Days of receiving a Request for Information;
 - 2.31.2.2 provide the Employer with a copy of all information in his possession, or power in the form that the Employer shall require within 5 Business Days (or such other period as the Employer may specify) of the Employer's request;
 - 2.31.2.3 provide all necessary assistance as reasonably requested by the Employer to enable the Employer to respond to the Request for Information within the time for compliance set out in section 10 of the FOIA or regulation 5 of the Environmental Information Regulations; and
 - 2.31.2.4 procure that his sub-contractors do likewise.
- 2.31.3 The Employer is responsible for determining in his absolute discretion whether any information is exempt from disclosure in accordance with the provisions of the Code of Practice on Government Information, FOIA or the Environmental Information Regulations.
- 2.31.4 The Contractor shall not respond directly to a Request for Information unless authorised to do so by the Employer.
- 2.31.5 The Contractor acknowledges that the Employer may, acting in accordance with the Department of Constitutional Affairs' Code of Practice on the Discharge of the Functions of Public Authorities under Part 1 of the Freedom of information Act 2000, be obliged to disclose information without consulting or obtaining consent from the Contractor or despite the Contractor having expressed negative views when consulted.

- 2.31.6 The Contractor shall ensure that all information is retained for disclosure for twelve (12) years and shall permit the Employer to inspect such records as and when reasonably

Prevention of Fraud and Bribery

- 2.32.1 The Contractor represents and warrants that neither he, nor to the best of his knowledge any of his employees, have at any time on or before the date of this Contract:

2.32.1.1 committed a Prohibited Act or been formally notified that he is subject to an investigation or prosecution which relates to an alleged Prohibited Act; and/or

2.32.1.2 been listed by any government department or agency as being debarred, suspended, proposed for suspension or debarment, or otherwise ineligible for participation in government procurement programmes or contracts on the grounds of a Prohibited Act.

- 2.32.2 During the carrying out of the Works the Contractor shall not:

2.32.2.1 commit a Prohibited Act; and/or

2.32.2.2 do or suffer anything to be done which would cause the Employer or any of the Employer's employees, consultants, contractors, sub-contractors or agents to contravene any of the Relevant Requirements or otherwise incur any liability in relation to the Relevant Requirements.

- 2.32.3 During the carrying out of the Works the Contractor shall:

2.32.3.1 establish, maintain and enforce, and require that his sub-contractors establish, maintain and enforce, policies and procedures which are adequate to ensure compliance with the Relevant Requirements and prevent the occurrence of a Prohibited Act;

2.32.3.2 keep appropriate records of his compliance with this Contract and make such records available to the Employer on request; and

2.32.3.3 provide and maintain and where appropriate enforce an anti-bribery policy (which shall be disclosed to the Employer on request) to prevent him and any Contractor's Persons or any person acting on the Contractor's behalf from committing a Prohibited Act.

- 2.32.4 The Contractor shall notify the Employer immediately in writing if he becomes aware of any breach of clause 2.32.1, or has reason to believe that he has or any of his employees or Sub-Contractors have:

2.32.4.1 been subject to an investigation or prosecution which relates to an alleged Prohibited Act;

2.32.4.2 been listed by any government department or agency as being debarred, suspended, proposed for suspension or debarment, or otherwise ineligible for participation in government procurement programmes or contracts on the grounds of a Prohibited Act; and/or

2.32.4.3 received a request or demand for any undue financial or other advantage of any kind in connection with the performance of this Contract or otherwise suspects that any person or Party directly or indirectly connected with this

Contract has committed or attempted to commit a Prohibited Act.

- 2.32.5 If the Contractor shall make a notification to the Employer pursuant to clause 2.32.4, the Contractor shall respond promptly to the Employer's enquiries, co-operate with any investigation, and allow the Employer to audit any books, records and/or any other relevant documentation in accordance with this Contract.
- 2.32.6 If the Contractor breaches clause 2.32.3, the Employer may by notice require the Contractor to remove from carrying out the Works any Contractor's Person whose acts or omissions have caused the Contractor's breach.

Tax compliance

- 2.33.1 The Contractor represents and warrants that as at the date of this Contract, he has notified the Employer in writing of any Occasions of Tax Non-Compliance or any litigation that he is involved in that is in connection with any Occasions of Tax Non-Compliance.
- 2.33.2 If, at any point prior to the end of the Rectification Period, an Occasion of Tax Non-Compliance occurs, the Contractor shall:
 - 2.33.2.1 notify the Employer in writing of such fact within 5 Business Days of its occurrence; and
 - 2.33.2.2 promptly provide to the Employer:
 - 2.33.2.2.1 details of the steps which the Contractor is taking to address the Occasions of Tax Non-Compliance and to prevent the same from recurring, together with any mitigating factors that it considers relevant; and
 - 2.33.2.2.2 such other information in relation to the Occasion of Tax Non-Compliance as the Employer may reasonably require.

Contractor's records

- 2.34.1 The Contractor shall maintain, or procure that detailed records relating to the performance of the Works are maintained, in accordance with Good Industry Practice and any applicable legislation.
- 2.34.2 Without prejudice to clause 2.34.1, the Contractor shall maintain or procure that the following are maintained:
 - 2.34.2.1 a full record of all incidents relating to health, safety and security which occur during the term of this Contract; and
 - 2.34.2.2 full records of all maintenance procedures carried out during the term of this Contract as part of the Works,and the Contractor shall have the items referred to in clauses 2.34.2.1 and 2.34.2.2 available for inspection by the Employer upon reasonable notice, and shall present a report of them to the Employer as and when requested.
- 2.34.3 The records referred to in this clause 2.34 shall be retained for a period of at least five (5) years after the Contractor's obligations under this Contract have come to an end.

Assignment

3.1 **Delete** existing clause 3.1 and **insert**:

- “3.1.1 The Contractor may not assign or charge the benefit of this Contract or any right arising under it without the written consent of the Employer.
- 3.1.2 The Employer’s rights under this Contract may be assigned without the consent of the Contractor by absolute assignment on 2 occasions.
- 3.1.3 The Contractor shall not be entitled to contend that any person to whom this Contract is assigned in accordance with clause 3.1.2 is precluded from recovering under this Contract any loss incurred by such assignee resulting from any breach of this Contract (whenever happening), by reason that such person is an assignee and not a named promisee under this Contract.”

Sub-contracting

3.3.2.3 **Insert** “;” in lieu of “.” at the end of clause 3.3.2.3.

3.3.2.4 **Insert** new clause 3.3.2.4:

“3.3.2.4 the sub-contract shall include:

- 3.3.2.4.1 a period for payment of the amount due to the Sub-Contractor not greater than 5 days after the final date for payment in this Contract. The amount due shall, but shall not be limited to, payment for work which the Sub-Contractor has completed from the previous application date up to the current application date in this Contract;
- 3.3.2.4.2 a provision requiring the Sub-Contractor to include in each subsubcontract the same requirement (including this requirement to flow down), except that the period for payment is to be not greater than 9 days after the final date for payment in this Contract;
- 3.3.2.4.3 a provision requiring the Sub-Contractor to assess the amount due to a subsubcontractor without taking into account the amount paid by the Contractor; and
- 3.3.2.4.4 terms and conditions that are no less favourable than those of this Contract. The Employer shall be entitled to reject sub-contract conditions proposed by the Contractor that are unduly disadvantageous to the Sub-Contractor.”

3.3.3 **Insert** new clause 3.3.3:

“3.3.3 the Contractor shall procure that the sub-contracts for the Sub-Contractors shall in all respects be compatible with the terms of this Contract and in a form previously approved by the Employer.”

Architect/Contract Administrator’s Instruction

3.4.2 **Insert** “Not Used” in lieu of existing clause 3.4.2.

Variations

- 3.6.1 In line 2 **insert** “order” after “or period”.
- 3.6.3 In line 1 **insert** “(and save where the instruction is an instruction pursuant to clause 2.11 to remedy any defect, shrinkage or other fault outside the normal working hours of the Contractor which instruction shall be complied with by the Contractor at his own cost)” after “Failing any agreement under clause 3.6.2”.
- 3.6.4 **Insert** new clause 3.6.4:
- “3.6.4 There shall be no addition to the Contract Sum in respect of any variation to the extent that the same is required by reason of any breach of this Contract by the Contractor or any negligence or default of the Contractor, or his servants or agents, the Design Consultants or any Sub-Contractor or their respective servants or agents save where a variation is necessary as a result of the occurrence of a Specified Peril which is covered by the Specified Perils insurance policy taken out pursuant to clause 5.4C of this Contract.”

Provisional Sums

- 3.7 In lines 2/3 **delete** “failing agreement on price, such instructions shall be valued on the basis set out in clause 3.6.3” and in lieu **insert** “such instructions shall be valued in accordance with the methodology set out in the Contract Documents or, where no methodology is included in the Contract Documents, shall be valued on the basis set out in clause 3.6.3.”

CDM Regulations

- 3.9 **Insert** new clause 3.9A:
- “3.9A Where the Contractor is not the Principal Designer but is the Principal Contractor and the Principal Designer’s appointment concludes before Practical Completion of the Works, the Contractor shall review, update and revise the health and safety file in accordance with regulations 12(8) to (10) of the CDM Regulations without charge.”

VAT

- 4.1A **Insert** new clause 4.1A:
- 4.1A.1 In this clause 4.1A, the following definitions shall apply:
- 4.1A.1.1 HMRC means HM Revenue & Customs;
- 4.1A.1.2 Order means the Value Added Tax (Section 55A) (Specified Services and Excepted Supplies) Order 2019 (SI 2019 No. 892);
- 4.1A.1.3 Reverse Charge means, in relation to a supply, that under section 55A(6) of the Value Added Tax Act 1994 it is for the recipient, on the supplier’s behalf, to account for and pay VAT on the supply and not for the supplier; and
- 4.1A.1.4 Supply means a supply made for VAT purposes under or in connection with this Contract by the Contractor and Supplies shall be construed accordingly.
- 4.1A.1.5 Tax Point means the time of supply for VAT purposes as defined in Regulation 93 of Part XI of the VAT Regulations 1995.

- 4.1A.2 In respect of the Supplies made with a Tax Point, for VAT purposes, before 1 March 2021, the provisions of clauses 4.1A.1 to 4.1A.4 (inclusive) only of this clause 4.1A shall apply. In respect of Supplies made with a Tax Point on or after 1 March 2021, the provisions of clauses 4.1A.1 to 4.1A.6 (inclusive) of this clause 4.1A shall apply.
- 4.1A.3 The Parties agree and confirm that the procedure for the payment of VAT (if any) by either Party to the other shall be governed entirely and exclusively by the provisions of this clause 4.1A notwithstanding any other provision of this Contract.
- 4.1A.4 Any consideration (whether monetary consideration or non-monetary consideration) paid or provided under or in connection with this Contract is to be treated as exclusive of any VAT. If the person making the supply (or the representative member of the VAT group of which it is a member) is required to account for VAT on any supply, the recipient of the supply shall pay (in addition to paying or providing any other consideration) an amount equal to the amount of that VAT upon the later of:
- 4.1A.4.1 the time for payment or provision of the consideration; and
 - 4.1A.4.2 the receipt by the recipient of the supply of a VAT invoice in respect of that VAT.
- 4.1A.5 The Employer confirms that the requirements specified in article (8)(1)(b) of the Order will be satisfied in respect of any Supply and the Parties consider that the Reverse Charge will not apply to the Supplies so that it is for the Contractor to account for and pay VAT to HMRC.
- 4.1A.6 Where the Contractor has accounted for VAT on Supplies (on the understanding that the Reverse Charge did not apply) but HMRC notifies the Employer in writing that:
- 4.1A.6.1 the Reverse Charge did apply in respect of those Supplies; and
 - 4.1A.6.2 notwithstanding that the Contractor has accounted for VAT to HMRC in respect of those Supplies, the Employer has to account for VAT under the Reverse Charge on those Supplies,
- the Employer shall provide written notification to the Contractor of HMRC's decision that the supply should have been treated as subject to the reverse charge. Any amount of overcharged VAT shall be refunded by the Contractor to the Employer within 28 days following repayment to the Contractor of the overcharged VAT by HMRC (either via a correction in the VAT return or via a voluntary disclosure).

Interim payments – dates and certificates

- 4.3.2 In line 2 **insert** “and in respect of which the Contractor has provided the Architect/Contract Administrator reasonable evidence that property in such materials or goods is vested in the Contractor and that no third party has validly retained title to the same and that the property in the same will pass to the Employer” after “casualties”.
- 4.3 In line 16 **insert** “21 days” in lieu of “14 days”.

Contractor's applications and payment notices

- 4.4.3 **Insert** new clause 4.4.3:

- “4.4.3 A payment application may be an electronic invoice provided it complies with the European standard and any of the syntaxes published in Commission Implementing Decision (EU) 2017/1870.”

Failure to pay amount due

- 4.6.1 At the end of the sub-clause **insert**: “The Parties agree that this clause 4.6 constitutes a substantial remedy for late payment of any sum payable under this Contract in accordance with the provisions of section 8(2) of the Late Payment of Commercial Debts (Interest) Act 1998.”
- 4.6.3 **Insert** new clause 4.6.3:
- “4.6.3 Neither the issue by the Employer of any valuation nor the payment of any amount by the Employer to the Contractor under any valuation shall:
- 4.6.3.1 prejudice or adversely affect the right of either the Contractor or the Employer to contend that the Works have not been properly valued and that any amount has been improperly paid or withheld. In making any evaluation the Employer shall be entitled to reconsider and if necessary adjust the assessments made in arriving at any previous valuation; and/or
- 4.6.3.2 constitute or imply or be evidence of the Employer’s approval or acceptance of any design, work, materials or equipment forming part of the Works nor shall in any way lessen or otherwise affect the Contractor’s responsibilities and liabilities under this Contract.”

Final certificate and final payment

- 4.8.1 In line 1 **insert** “Practical Completion” in lieu of “practical completion”.
- 4.10 **Insert** new clause 4.10:

“Retention

- 4.10 The Employer’s interest in the percentage of total value not included in the amounts of interim payments to be certified under clause 4.3 shall be as beneficial owner and shall not be fiduciary as trustee and the Employer shall be under no obligation to set aside the same in a separate account.”

Contractor’s liability - personal injury or death

- 5.1 In line 3 **insert** “or of any other obligations pursuant to section 2 or section 3 of the Conditions” after “Works”.

Contractor’s liability – loss, injury or damage to property

- 5.2 In line 1 **delete** “Subject to clauses 5.2.1 to 5.2.3, the” and in lieu **insert** “The”.
- In line 3 **insert** “(including any expense, liability, loss or claim arising from but not limited to obstruction, trespass, nuisance or interference with any right of way, light, air or water)” after “personal”.
- In line 5 **insert** after “Works”, insert “or of any other obligations pursuant to section 2 or section 3 of the Conditions”.
- In lines 6/7 **delete** “In respect of existing structures and their contents.”

- 5.2.1 **Delete** clause 5.2.1 and in lieu **insert** “The Contractor’s liability and indemnity under clause 5.2 in respect of any property real or personal shall include any loss or damage to existing structures and to any of their contents”.
- 5.2.2 **Delete** clause 5.2.2 and in lieu **insert** “Not used”.
- 5.2.3 **Delete** clause 5.2.3 and in lieu **insert** “Not used”.
- 5.3.2 In lines 3 and 4 **delete** “for any one occurrence or series of occurrences arising out of one event”.
- In line 4 **insert** “of the type and” before “sum”.

Joint Names Insurance of the Works by Contractor

- 5.4A **Delete** clause 5.4A and in lieu **insert** “Not used”.

Joint Names Insurance of the Works and existing structures by Employer

- 5.4B **Delete** clause 5.4B and in lieu **insert** “Not used”.

Insurance of the Works and existing structures by other means

- 5.4C **Delete** clause 5.4C and in lieu **insert**:
- “5.4C.1 In respect of the existing structures together with the contents of them owned by the Employer or for which he is responsible, the Employer shall procure that cover is effected (but without the obligation to insure) for the full cost of reinstatement or repair of loss or damage due to any of the Specified Perils up to and including the date of Practical Completion or (if earlier) the date of termination of the Contractor’s employment (whether or not the validity of that termination is contested).
- 5.4C.2 The Contractor shall effect and up to the date of Practical Completion, maintain a Joint Names Policy for All Risks Insurance with insurers approved by the Employer for the full reinstatement value of the Works plus 15% to cover professional fees.
- 5.4C.3 The Contractor shall send to the Architect/Contract Administrator for deposit with the Employer the Joint Names Policy referred to in clause 5.4C.2, each premium receipt for it and any relevant endorsements of it. If the Contractor defaults in taking out or maintaining the Joint Names Policy as required by clause 5.4C.2, the Employer may himself take out and maintain a Joint Names Policy against any risk in respect of which the default has occurred and the amount paid or payable by him in respect of premiums may be deducted by him from any sums due to the Contractor under this Contract or shall be recoverable from the Contractor as a debt.

Use of Contractor’s annual policy – as alternative

- 5.4C.4 If and so long as the Contractor independently of this Contract maintains an annual insurance policy which in respect of the Works:
1. provides (inter alia) All Risks Insurance with cover and in amounts no less than those specified in clause 5.4C.2; and
 2. is a Joint Names Policy,

then that policy shall satisfy the Contractor's obligations under clause 5.4C.2. The annual renewal date of the policy, as supplied by the Contractor, is stated in the Contract Particulars."

Evidence of insurance

5.5 In line 2 **delete** "clause 5.3" and in lieu **insert** "clauses 5.3 and 5.8".

Loss or damage – insurance claims and reinstatement

5.6.3 In lines 2/3 **delete** ", and from any policies covering existing structures or their contents that are effected by the Employer".

5.6.5 **Delete** "Where clause 5.4A applies or where clauses 5.4C applies and the Contractor is responsible for effecting the Works information Policy" and replace with "In respect of the Works Insurance Policy:".

5.6.6 **Delete** "clause 5.4B applies, where clause 5.4C applies and the Employer is responsible for effecting the Works Insurance Policy or where".

Loss or damage to existing structures – right of termination

5.7 In line 2 **delete** "either Party may, if it is just and equitable" and in lieu **insert** "the Employer may".

In line 3 **delete** "other" and in lieu **insert** "Contractor".

At the end of the clause **insert** "and the provisions of clause 6.11 (except clause 6.11.2.3) shall apply".

5.7.1 Delete clause 5.7.1 and in lieu **insert** "Not used".

5.7.2 Delete clause 5.7.2 and in lieu **insert** "Not used".

5.8 **Insert** new clause 5.8:

"Professional indemnity insurance

5.8.1 The Contractor warrants that he has taken out PI Insurance covering all of his design and professional obligations under this Contract (including in connection with any errors or omissions in the performance of his professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with licensed insurers lawfully carrying on such insurance business in the United Kingdom, with a limit of indemnity of the type and amount not less than that stated in the Contract Particulars and shall maintain the same until the expiry of twelve (12) years after the date of Practical Completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Contractor must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof.

5.8.2 Any increased or additional premium or more onerous terms required by insurers by

reason of the Contractor's own claims record or other acts, omissions, matters or things peculiar to the Contractor shall be deemed to be within commercially reasonable rates.

- 5.8.3 The Contractor shall immediately inform the Employer if such insurance ceases to be available at commercially reasonable rates or is no longer and/or if for any other reason the Contractor is unable to maintain and/or is not maintaining such insurance in which case the Contractor shall take out and maintain a PI Insurance policy having the maximum limit of indemnity and the widest cover which is available to the Contractor upon, subject to clause 5.8.2, commercially reasonable rates and give notice of the same to the Employer and shall further discuss means of best protecting the respective positions of the Employer and the Contractor in respect of the Works.
- 5.8.4 The Contractor shall fully co-operate with any measures reasonably required by the Employer, including (without limitation) completing any proposals for insurance and associated documents, maintaining such insurance at rates above commercially reasonable rates if the Employer undertakes in writing to reimburse the Contractor in respect of the net cost of such insurance to the Contractor above commercially reasonable rates or, if the Employer effects such insurance at rates at or above commercially reasonable rates, reimbursing the Employer in respect of what the net cost of such insurance to the Employer would have been at commercially reasonable rates.
- 5.8.5 As and when reasonably required to do so by the Employer, the Contractor shall:
- 5.8.5.1 produce for inspection documentary evidence that his PI Insurance is being maintained in accordance with this clause 5.8; and
 - 5.8.5.2 provide confirmation that any occurrence or claim, or of circumstances likely to give rise to a claim, have been properly notified to his insurer in accordance with the requirements of his policy."

Meaning of insolvency

- 6.1.3 **Delete** "entering into an arrangement, compromise or composition in satisfaction of his debts" and replace with:
"commencing negotiations with all or any class of his creditors with a view to rescheduling any of his debts, or makes a proposal for or enters into any compromise or arrangement with any of his creditors".
- 6.1.4 At the end of sub-clause 6.1.4, **delete** the full stop and **replace** with "; or".
- 6.1.5 **Insert** a new clause 6.1.5:
"6.1.5 he applies to court for, or obtains, a moratorium under Part A1 of the Insolvency Act 1986."

Default by Contractor

- 6.4.1.4 **Insert** new clause 6.4.1.4:
"6.4.1.4 fails to comply with Articles 9, 10 and/or 11 and/or clause 2.1.6."

Insolvency of Contractor

- 6.5.1 **Delete** and **substitute**: "If the Contractor is or becomes insolvent, the Contractor shall so notify the Employer forthwith and either Party may at any time by notice to the other, terminate the Contractor's employment under this Contract."
- 6.5.2 **Delete** "the Employer" and in lieu **insert** "either Party".

6.5.2.2 **Delete** “suspended” and in lieu **insert** “terminated”.

Consequences of termination under clauses 6.4 to 6.6

6.7.4 **Insert** at the end of clause 6.7.4: “Provided that if the Employer elects not to procure the completion of the Works, then the amount to be allowed under clause 6.7.3.3 shall be the portion of the Contract Sum earned by the Contractor.”

Termination by either Party and regulations 73(1)(a) and 73(1)(c) of the PC Regulations

Termination at will

6.10A **Insert** new clause 6.10A as follows:

“6.10A.1 The Employer may terminate the Contractor’s employment under this Contract at any time by complying with his obligations under clause 6.10A.2.

6.10A.2 If the Employer wishes to terminate the Contractor’s employment under this Contract under this clause 6.10A he must provide written notice (hereinafter called a Termination Notice) to the Contractor stating:

6.10A.2.1 that the Employer is terminating the Contractor’s employment under this Contract under this clause 6.10A.1; and

6.10A.2.2 that the Contractor’s employment under this Contract will terminate on the date specified in the Termination Notice which must be a minimum of twenty (20) Business Days after the date of the Termination Notice.

6.10A.2 The Contractor’s employment under this Contract will terminate on the date specified in the Termination Notice referred to in clause 6.10A.2.”

Consequences of Termination under Clauses 6.8 to 6.10A, etc.

6.11.1 In the first line **insert** “6.10A” in lieu of “6.10”.

Adjudication

7.2 **Insert** at the end of clause 7.2:

“and provided that:

7.2.1 the Adjudicator shall have power to determine more than one dispute at the same time, and if requested to do so by either Party shall determine any matter raised by such Party in the nature of set-off, abatement or counterclaim at the same time as he determines any other matter referred to him; and

7.2.2 the Adjudicator shall give reasons for his decision in writing and shall deliver his decision to the Parties as soon as practicable and within 2 Business Days of making his decision.”

Arbitration

7.3 **Delete** existing clause and **insert** “Not Used.”

Section 8 Sites Conditions

8 **Insert** new clause 8:

“Sites conditions

- 8.1 Subject to clauses 8.2, 9 and 10, the conditions of the Sites shall be the sole responsibility of the Contractor and the Contractor shall not be entitled to additional payment and/or extensions of time arising out of or in connection with the same and accordingly (but without prejudice to any other obligation of the Contractor under this Contract) the Contractor:
- 8.1.1 shall be deemed to have carried out a ground physical and geophysical investigation and to have inspected and examined the Sites and their surroundings and (where applicable) any existing structures or works on, over or under the Sites;
 - 8.1.2 shall be deemed to have satisfied himself as to the nature of the site conditions, the ground and the subsoil, the form and nature of the Sites, the load bearing and other relevant properties of the Sites, the risk of injury or damage to property affecting the Sites, the nature of the materials (whether natural or otherwise) to be excavated and the nature of the design, works and materials necessary for the execution of the Works;
 - 8.1.3 shall be deemed to have satisfied himself as to the adequacy of the means and rights of access to and through the Sites and any accommodation he may require for the purposes of fulfilling his obligations under this Contract (such as additional land or buildings outside the Sites);
 - 8.1.4 shall be deemed to have satisfied himself as to the possibility of interference by persons of any description whatsoever (other than the Employer) with access to or use of the Sites and shall ensure that the Sites are properly secured at all times;
 - 8.1.5 shall be deemed to have satisfied himself as to the precautions, times and methods of working necessary to prevent any trespass, nuisance or interference, whether public or private, being caused to third parties;
 - 8.1.6 shall not be entitled to rely on any survey, report, document or other information (including, without limitation, ground surveys, soil investigation reports), prepared by or on behalf of the Employer regarding any matter referred to in this clause 8.1 that is not expressly warranted. The Employer makes no representation or warranty as to the accuracy or completeness of any such survey, report or document; and
 - 8.1.7 shall be responsible for, and hold the Employer harmless from, cleaning up or otherwise dealing with any Contamination on the Sites in accordance with and so that he shall at all times comply with his obligations under this Contract.
- 8.2 To the extent that unforeseeable ground conditions and/or Contamination exist in any parts of the Sites which are under Existing Buildings as at the Base Date, the Contractor shall not be responsible for them, unless they were discovered by the Site Survey or would have been discovered had the Contractor carried out such additional surveys as it would have been reasonable to expect an experienced contractor to have carried out in the circumstances. If the Contractor is not responsible for such ground conditions and/or Contamination under this clause 8.2 then the Employer shall be so responsible.
- 8.3 Any work which is instructed by the Employer to be carried out in consequence of the discovery of any unforeseeable ground conditions and/or Contamination for which the Employer is responsible pursuant to clause 8.2 shall be deemed, without double counting, to be a variation for the purposes of clause 3.6."

SECTION 9 - ASBESTOS

9 **Insert** new clause 9:

"Asbestos

- 9.1 The Contractor accepts, in relation to any New Buildings, entire responsibility (including any financial and other consequences which result whether directly or indirectly) for any Asbestos.
- 9.2 Unless the exposure arises directly or indirectly as a result of any act or omission of the Contractor or any Contractor's Person, the Employer accepts, in relation to Buildings other than the New Buildings, full responsibility (including any financial or other consequences which arise directly or indirectly) for death and personal injury in respect of exposure to Asbestos in such Buildings, where exposure takes place prior to the date on which the Contractor takes control of the Sites.
- 9.3 The Contractor accepts, in relation to the Refurbished Buildings entire responsibility (including any financial and other consequences which result whether directly or indirectly) for:
- 9.3.1 any Asbestos identified in the Asbestos Survey; and
- 9.3.2 unless access to carry out additional surveys was denied and then only to the extent access was denied, any Asbestos that would have been identified had the Contractor carried out such additional surveys as it would have been reasonable to expect an experienced contractor to have carried out in the circumstances.
- 9.4 In the event any work is instructed by the Architect/Contract Administrator to be carried out in consequence of the discovery of any Asbestos in the Refurbished Buildings which has not been identified in the Asbestos Surveys (other than liabilities and matters referred to in clause 9.3.2) such work shall be deemed, without double counting, to be a variation for the purposes of clause 3.6."

Section 10 Defects in Existing Buildings

10 **Insert** new clause 10:

"Defects in Existing Buildings

- 10.1 The Contractor accepts, in relation to the New Buildings and the Refurbished Buildings, entire responsibility (including any financial and other consequences which result either directly or indirectly) for any defects caused by the Contractor carrying out the Works.

Section 11 Set off and other remedies

11 **Insert** new clause 11:

"Set off and other remedies

- 11.1 Nothing contained in this Contract (other than as to the giving of notices) shall oust or limit any right of the Employer under any statute or rule of law or of equity in the nature of set-off or abatement of price.
- 11.2 If the Contractor fails to comply with any requirement of clause 5.8 or if the Contractor becomes insolvent so that his covenant is impaired, then without prejudice to any other remedies the Employer may have, the Employer shall be entitled to recover from the Contractor any premiums reasonably incurred to effect insurance (such as inherent defects insurance or other suitable cover) in order to arrange suitable alternative protection."

Schedules

Schedule 1 Arbitration

Insert "Not Used" in lieu of existing Schedule 1.

Insert "Not Used" in lieu of existing Schedule 2.

Schedule 2 Fluctuations Option - contribution, levy and tax changes

Delete and **insert** "Not Used."

Insert new schedules:

Schedule 4 Forms of Collateral Warranties, Parent Company Guarantee and Bond

Schedule 5 Sites Plan

Schedule 6 Construction Programme

Schedule 7 Novation

Schedule 8 Employer's Policies

Schedule 9 Employer Necessary Consents

Schedule 10 UK GDPR

Schedule 11 Employer Planning Conditions

**SCHEDULE 4: FORMS OF COLLATERAL WARRANTIES, PARENT COMPANY GUARANTEE
AND BOND**

Part 1 – Contractor’s Collateral Warranty

CONTRACTOR WARRANTY

DATED _____ 20[]

[CONTRACTOR]

and

[]

DUTY OF CARE DEED

relating to []

THIS DEED is dated
20[] BETWEEN:

- (1) [CONTRACTOR] (Company Number []) whose registered office is at [] (the “**Contractor**”); and
- (2) [] of [] (the “**Beneficiary**”, which expression includes its successors in title and permitted assigns).

BACKGROUND

- (A) By a building contract dated [] (the “**Building Contract**”) the Employer has appointed the Contractor to carry out and complete the Works in relation to the Sites.
- (B) The Contractor is obliged under the Building Contract to enter into this Deed in favour of the Beneficiary.
- (C) The Contractor has agreed to duly execute and deliver this Deed in favour of the Beneficiary.

1. DEFINITIONS AND INTERPRETATIONS

In this Deed unless the context otherwise requires, any defined term in this Deed shall have the same meaning given to such term in the Building Contract.

2. OPERATIVE PROVISIONS

This Deed is made in consideration of the payment of one pound (£1.00) by the Beneficiary to the Contractor, receipt of which the Contractor acknowledges.

3. CONTRACTOR’S WARRANTIES AND LIABILITIES

3.1 The Contractor warrants to the Beneficiary that:

- 3.1.1 it has carried out and completed and will continue to carry out and complete the Works and its duties and obligations under the Building Contract in accordance with the Building Contract;
- 3.1.2 where there is a Contractor’s Designed Portion, in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in the design of the Works the professional skill, care and diligence reasonably to be expected of a properly qualified and competent designer of the appropriate discipline(s) acting independently under a separate contract with the Employer and experienced in carrying out design such as that required under the Building Contract in relation to works of a similar size, scope, nature, complexity, location, timescale and value to the Works in relation to:
- (a) any design of the Works;
 - (b) the selection and standards of all goods, materials, equipment or plant for the Works;
- 3.1.3 it has not and shall not use in connection with the Works and, subject to the standard of skill, care and diligence set out in clause 3.1.2, nor permit, specify or

approve for use in connection with the CDP Works, any materials which at the time of use:

- (a) are known to be deleterious (either to health and safety or to the durability of the Works); or
- (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
- (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use.

3.2 The Contractor shall have no liability under this clause 3 that is greater or of longer duration than it would have had and shall be entitled in any action or proceedings by the Beneficiary to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Beneficiary had been a party to the Building Contract as joint employer.

3.3 For the avoidance of doubt the Contractor warrants to the Beneficiary that the Contractor shall not raise any defence to a claim by the Beneficiary under this Deed on the grounds that the losses in respect of which the Beneficiary seeks damages, compensation or other relief are not losses suffered or to be suffered by the Employer or that the Employer has suffered no loss. The Contractor shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Employer of any monies due under the Contract.

4. **COPYRIGHT**

4.1 The Intellectual Property Rights in the Contractor's Design Documents prepared by or on behalf of the Contractor in relation to the Building Contract and the work executed by him remains the property of the Contractor. The Contractor hereby grants to the Beneficiary an irrevocable, royalty free, non-exclusive licence to use and reproduce the Contractor's Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Beneficiary to grant sub-licences to third parties in the same terms as this licence provided always that the Contractor shall not be liable to any licensee for any use of the Contractor's Design Documents or the use of the Intellectual Property Rights in the Contractor's Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Contractor.

4.2 The Beneficiary may assign, novate or otherwise transfer its rights and obligations under the licence granted pursuant to clause 4.1 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Beneficiary.

4.3 In the event that the Contractor does not own the copyright or any Intellectual Property Rights in any of the Contractor's Design Documents the Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Beneficiary to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Contractor is unable to procure the right to grant to the Beneficiary in accordance with the foregoing the Contractor shall procure that the third party grants a direct licence to the Beneficiary on industry acceptable terms.

4.4 The Contractor waives any moral right to be identified as author of the Contractor's Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and

any right not to have the Contractor's Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Beneficiary or any licensee or assignee of the Beneficiary.

- 4.5 In the event that any act unauthorised by the Beneficiary infringes a moral right of the Contractor in relation to the Contractor's Design Documents the Contractor undertakes, if the Beneficiary so requests and at the Beneficiary's expense, to institute proceedings for infringement of the moral rights.
- 4.6 The Contractor warrants to the Beneficiary that he has not granted and shall not (unless authorised by the Beneficiary) grant any rights to any third party to use or otherwise exploit the Contractor's Design Documents.
- 4.7 The Contractor shall supply copies of the Contractor's Design Documents to the Beneficiary upon paying a reasonable copying charge.
- 4.8 In carrying out the Works the Contractor shall not infringe any Intellectual Property Rights of any third party. The Contractor shall indemnify the Beneficiary against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. **PROFESSIONAL INDEMNITY INSURANCE**

- 5.1 Where there is a Contractor's Designed Portion, in relation to the CDP Works the Contractor hereby covenants with the Beneficiary that it:
 - 5.1.1 has taken out PI Insurance covering its design and professional obligations under the Contract (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with licensed insurers lawfully carrying on such insurance business in the United Kingdom, with a limit of indemnity not less than one million pounds (£1,000,000) each and every claim and shall maintain the same until the expiry of twelve (12) years after the date of Practical Completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Contractor must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and
 - 5.1.2 will provide evidence (as and when reasonably required to do so by the Beneficiary) documentary evidence that its PI Insurance is being maintained in accordance with this clause 5 and details of cover.
- 5.2 Any increased or additional premium or more onerous terms required by insurers by reason of the Contractor's own claims record or other acts, omissions, matters or things peculiar to the Contractor shall be deemed to be within commercially reasonable rates.
- 5.3 The Contractor shall immediately inform the Beneficiary if such insurance ceases to be available at commercially reasonable rates and/or if for any other reason the Contractor is unable to maintain and/or is not maintaining such insurance in which case the Contractor shall take out and maintain a PI Insurance policy having the maximum limit of indemnity

and the widest cover which is available to the Contractor upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Beneficiary and shall further discuss means of best protecting the respective positions of the Beneficiary and the Contractor in respect of the Works.

6. **ASSIGNMENT**

6.1 The benefit of and the rights of the Beneficiary under this Deed may be assigned without the consent of the Contractor on two (2) occasions only and the Beneficiary will notify the Contractor in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.

6.2 The Contractor will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

7. **NOTICES**

7.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

7.1.1 Contractor: [e-mail address]⁴

7.1.2 Beneficiary: [e-mail address]⁵

or as otherwise specified by the relevant party by notice in writing to the other party.

7.2 Any notice sent by hand or by post in accordance with clause 7.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

8. **BENEFICIARY'S REMEDIES**

The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies it may have against the Contractor including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. **INSPECTION OF DOCUMENTS**

The Contractor's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Contractor or provided to the Beneficiary or attendance at site meetings or other enquiry or inspection which the Beneficiary may make or procure to be made for its benefit or on its behalf.

⁴ Insert e-mail address

⁵ Insert e-mail address

10. **SUB-CONTRACTORS**

Following a written request from the Beneficiary the Contractor will (unless it has already done so) and/or shall procure that its sub-contractors shall execute a deed of collateral warranty in the relevant form specified in the Building Contract in favour of any person in whose favour the Building Contract obliges the Contractor to give or procure the giving of such a warranty.

11. **SEVERABILITY**

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Deed.

12. **WAIVER**

12.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.

12.2 No waiver under clause 12.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

13. **THIRD PARTY RIGHTS**

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed provided always that this clause 13 shall not affect any right or remedy which exists or is available to any person apart from such Act..

14. **GOVERNING LAW AND JURISDICTION**

This Deed and the parties' non contractual duties and/or obligations shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of in connection with this Deed.

15. **COUNTERPARTS**

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by

CONTRACTOR acting by a Director

and its Secretary/two Directors:

Director

Director/Secretary

EXECUTED AS A DEED by

[BENEFICIARY] acting by

acting by a Director and

its Secretary/two Directors

Director

Secretary/Director

OR

EXECUTED AS A DEED by

affixing the Common Seal of [BENEFICIARY]

in the presence of:

Authorised Signatory

Part 2 – Design Consultant Collateral Warranty
[Contractor appointed and novated Consultants]
Consultant Warranty in favour of Employer

DATED _____ 20[]

[CONSULTANT]

and

[EMPLOYER]

and

[CONTRACTOR]

DUTY OF CARE DEED

relating to []

THIS DEED is dated
BETWEEN:

- (1) THE PARTNERS IN [*insert name of partnership*] (being the persons listed in the schedule hereto) whose principal place of business is at [] OR [] LIMITED/PLC (Company Number []) whose registered office is at [] (the “**Consultant**”);
- (2) [EMPLOYER] of [] (the “**Employer**”, which expression includes its successors in title and permitted assigns); and
- (3) [CONTRACTOR] (registered in England and Wales under company number []) whose registered office is at [] (the “**Contractor**”).

- (A) The Employer has appointed the Contractor under a building contract (the “**Building Contract**”) to carry out and complete the Works in relation to the Sites.
- (B) The Consultant has been appointed by the Contractor under an appointment (the “**Appointment**”) to provide [] services (“**Services**”) in relation to the Works.
- (C) The Consultant is obliged under the Appointment to enter into this Deed in favour of the Employer.
- (D) The Consultant and the Contractor have agreed to duly execute and deliver this Deed in favour of the Employer.

Unless expressly defined otherwise in this Deed, any defined term in this Deed shall have the same meaning given to such term in the Building Contract.

This Deed is made in consideration of the payment of one pound (£1.00) by the Employer to the Consultant, receipt of which the Consultant acknowledges:

- 3.1 The Consultant warrants to the Employer that:
- 3.1.1 it has carried out and completed and will continue to carry out and complete its duties and obligations under the Appointment in accordance with the Appointment;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in the performance of the Services the professional skill, care and diligence to be expected of a properly qualified and competent member of the Consultant's profession experienced in carrying out duties the like of those undertaken by the Consultant under the Appointment for works of a similar size, scope, nature, complexity, location, timescale and value to the Works;

3.1.3 subject to the standard of skill, care and diligence set out in clause 3.1.2, it has not and shall not permit, specify or approve for use in connection with the Works any materials which at the time of use:

- (a) are known to be deleterious (either to health and safety or to the durability of the Works); or
- (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
- (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use;

3.1.4 if in the performance of its duties under the Appointment the Consultant becomes aware that it or any other person has specified or used, or authorised or approved the specification or use by others of any such products or materials the Consultant will notify the Employer in writing forthwith. This clause does not create any additional duty for the Consultant to inspect or check the work of others which is not required by the Appointment.

3.2 The Consultant shall have no liability under this clause 3 than is greater or of longer duration than it would have had and shall be entitled in any action or proceedings by the Employer to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Employer had been a party to the Appointment as joint employer.

3.3 For the avoidance of doubt the Consultant warrants to the Employer that the Consultant shall not raise any defence to a claim by the Employer under this Deed on the grounds that the losses in respect of which the Employer seeks damages, compensation or other relief are not losses suffered or to be suffered by the Contractor or that the Contractor has suffered no loss. The Consultant shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Contractor of any monies due under the Appointment.

4. **COPYRIGHT**

4.1 In this clause 4 “**Consultant’s Design Documents**” means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Consultant in relation to the Works (including any updates, amendments, additions and revisions), together with, where applicable, any other design documents or information to be provided by it under the BIM Protocol.

4.2 The Intellectual Property Rights in the Consultant’s Design Documents prepared by or on behalf of the Consultant in relation to the Appointment and the work executed by it remains the property of the Consultant. The Consultant hereby grants to the Employer an irrevocable, royalty free, non-exclusive licence to use and reproduce the Consultant’s Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Employer to grant sub-licences to third parties in the same terms as this licence provided always that the Consultant shall not be liable to any licensee for any use of the Consultant’s Design Documents or the use of the Intellectual Property Rights in the Consultant’s Design

Documents for purposes other than those for which the same were originally prepared by or on behalf of the Consultant.

- 4.3 The Employer may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 4.2 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Employer.
- 4.4 In the event that the Consultant does not own the copyright or any Intellectual Property Rights in any of the Consultant's Design Documents the Consultant shall use all reasonable endeavours to procure the right to grant such rights to the Employer to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Consultant is unable to procure the right to grant to the Employer in accordance with the foregoing the Consultant shall procure that the third party grants a direct licence to the Employer on industry acceptable terms.
- 4.5 The Consultant waives any moral right to be identified as author of the Consultant's Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Consultant's Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Employer or any licensee or assignee of the Employer.
- 4.6 In the event that any act unauthorised by the Employer infringes a moral right of the Consultant in relation to the Consultant's Design Documents the Consultant undertakes, if the Employer so requests and at the Employer's expense, to institute proceedings for infringement of the moral rights.
- 4.7 The Consultant warrants to the Employer that he has not granted and shall not (unless authorised by the Employer) grant any rights to any third party to use or otherwise exploit the Consultant's Design Documents.
- 4.8 The Consultant shall supply copies of the Consultant's Design Documents to the Employer upon paying a reasonable copying charge.
- 4.9 In carrying out the Services the Consultant shall not infringe any Intellectual Property Rights of any third party. The Consultant shall indemnify the Employer against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. PROFESSIONAL INDEMNITY INSURANCE

- 5.1 The Consultant hereby covenants with the Employer that it:

- 5.1.1 has taken out PI Insurance covering all its design and professional obligations under the Appointment (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with licensed insurers lawfully carrying on such insurance business in the United Kingdom, with a limit of indemnity not less than one million pounds (£5,000,000) each and every claim and shall maintain the same until the expiry of twelve (12) years after the date of Practical Completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Consultant must discharge any liability before being

entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and

5.1.2 will provide (as and when reasonably required to do so by the Employer) documentary evidence that its PI Insurance is being maintained in accordance with this clause 5 and details of cover.

5.2 Any increased or additional premium or more onerous terms required by insurers by reason of the Consultant's own claims record or other acts, omissions, matters or things peculiar to the Consultant shall be deemed to be within commercially reasonable rates.

5.3 The Consultant shall immediately inform the Employer if such insurance ceases to be available at commercially reasonable rates or is no longer available and/or if for any other reason the Consultant is unable to maintain and/or is not maintaining such insurance in which case the Consultant shall take out and maintain a PI Insurance policy having the maximum limit of indemnity and the widest cover which is available to the Consultant upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Employer and shall further discuss means of best protecting the respective positions of the Employer and the Consultant in respect of the Works.

6. **NOTICES**

6.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

6.1.1 Consultant: [e-mail address]⁶

6.1.2 Employer: [e-mail address]⁷

6.1.3 Contractor: [e-mail address]⁸

or as otherwise specified by the relevant party by notice in writing to the other parties.

6.2 Any notice sent by hand or by post in accordance with clause 6.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

7. **ASSIGNMENT**

7.1 The benefit of and the rights of the Employer under this Deed may be assigned without the consent of the Consultant on two (2) occasions only and the Employer will notify the Consultant in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.

7.2 The Consultant will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason

⁶ Insert e-mail address

⁷ Insert e-mail address

⁸ Insert e-mail address

only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

8. **EMPLOYER'S REMEDIES**

The rights and benefits conferred upon the Employer by this Deed are in addition to any other rights and remedies it may have against the Consultant including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. **INSPECTION OF DOCUMENTS**

The Consultant's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Consultant or provided to the Employer or attendance at site meetings or other enquiry or inspection which the Employer may make or procure to be made for its benefit or on its behalf.

10. **STEP-IN RIGHTS IN FAVOUR OF THE EMPLOYER**

10.1 Without prejudice to the Consultant's statutory rights the Consultant will not exercise or seek to exercise any right which may be or become available to it to:

10.1.1 terminate or treat as terminated or repudiated the Appointment or its engagement under it without first giving to the Employer not less than 30 Business Days' prior written notice; or

10.1.2 discontinue or suspend the performance of any duties or obligations under the Appointment without first giving to the Employer not less than 7 Business Days' prior written notice.

10.2 Any notice given by the Consultant pursuant to clause 10.1 above shall:

10.2.1 specify the Consultant's ground for terminating or treating as terminated or repudiated the Appointment or its engagement under it or for discontinuing or suspending its performance under it (as applicable);

10.2.2 specify any other breaches by the Contractor; and

10.2.3 state the amount (if any) of monies outstanding under the Appointment (whether or not such amounts result from a breach entitling the Consultant to terminate or treat as terminated or repudiated the Appointment or to discontinue or suspend the performance of any duties or obligations under the Appointment (as applicable)).

10.3 Within the period of any notice given by the Consultant pursuant to clause 10.1:

10.3.1 the Employer may give written notice to the Consultant that the Employer will henceforth become the client under the Appointment to the exclusion of the Contractor and thereupon the Consultant will admit that the Employer is its client under the Appointment and the Appointment will be and remain in full force and effect notwithstanding any of the said grounds but subject always to clause 10.3.2 below;

- 10.3.2 if the Employer has given such notice as aforesaid or under clause 10.5 below, the Employer shall accept liability for the Contractor's obligations under the Appointment and will as soon as practicable thereafter remedy any outstanding breach by the Contractor which is properly specified and which is capable of remedy by the Employer; and
- 10.3.3 if the Employer has given such notice as aforesaid or under clause 10.5, the Employer will from the service of such notice become responsible for all sums properly payable to the Consultant under the Appointment accruing due after the service of such notice but the Employer will in paying such sums be entitled to the same rights of set-off and deduction as would have applied to the Contractor under the Appointment.
- 10.4 Notwithstanding anything contained in this Deed and notwithstanding any payments which may be made by the Employer to the Consultant, the Employer will not be under any obligation to the Consultant nor will the Consultant have any claim or cause of action against the Employer unless and until the Employer has given written notice to the Consultant pursuant to clause 10.3.1 or clause 10.5 of this Deed.
- 10.5 The Consultant further covenants with the Employer that if employment of the Contractor under the Building Contract is determined or the Building Contract is terminated, the Consultant, if requested by the Employer by notice in writing and subject to clause 10.3.2 and clause 10.3.3, will accept the instructions of the Employer to the exclusion of the Contractor in respect of its duties under the Appointment upon the terms and conditions of the Appointment and will if so requested in writing to enter into a novation agreement whereby the Employer is substituted for the Contractor under the Appointment.
- 10.6 If the Consultant is requested to enter into a novation agreement pursuant to clause 10.5 above, the Contractor agrees to enter into the same at the request of the Employer.
- 10.7 The Contractor acknowledges that the Consultant will be entitled to rely on a notice given to the Consultant and the Contractor by the Employer under clause 10.5 as conclusive evidence that the employment of the Contractor under the Building Contract has been determined or the Building Contract is terminated.
- 10.8 The Employer may by notice in writing to the Consultant and the Contractor appoint another person to exercise its right under this clause 10 subject to the Employer remaining liable to the Contractor as guarantor for its appointee in respect of its obligations under this Deed.
- 10.9 Upon request by the Employer the Consultant agrees to co-operate with the Employer in determining the duties performed or to be performed by the Consultant and to provide a copy of the Appointment and any variations thereto and details of all monies paid and due under the Appointment and the Building Contract.
- 10.10 As from the date of service of notice under clause 10.3.1 or 10.5 to the extent that the Appointment operates by reference to the existence and application of the Building Contract, the Appointment shall be administered and construed as though the Building Contract was continuing and the Appointment shall therefore continue, subject to amendment only as necessary to reflect the fact that the Building Contract have in fact terminated and the Employer has undertaken the obligations set in clause 10.3.2.

11. **SUB-CONSULTANTS**

Following a written request from the Employer the Consultant will (unless it has already done so) procure that its sub-consultants execute a deed of collateral warranty in the

relevant form specified in the Appointment in favour of any person in whose favour the Appointment obliged the Consultant to give or procure the giving of such a warranty.

12. **SEVERABILITY**

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Deed.

13. **WAIVER**

13.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.

13.2 No waiver under clause 13.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

14. **LIABILITY OF PARTNERS**

Where the Consultant is a partnership, references in this Deed to the "Consultant" will be deemed to include reference to each and every present and future partner of such partnership and the liability of each and every such partner under this Deed will be deemed to be joint and several.

15. **THIRD PARTY RIGHTS**

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed provided always that this clause 15 shall not affect any right or remedy which exists or is available to any person apart from such Act.

16. **GOVERNING LAW AND JURISDICTION**

This Deed and the parties' non contractual duties and/or obligations shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed.

17. **CONTRACTOR ACKNOWLEDGEMENT**

The Contractor has entered into this Deed in order to acknowledge the arrangements effected hereby and undertakes to each of the Employer and the Consultant to observe the provisions of this Deed at all times and not in any way to prejudice or affect the enforcement hereof or to do or permit to be done anything which would be a breach hereof.

18. **COUNTERPARTS**

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by

[CONSULTANT] acting by

a Director and its Secretary/two Directors:

Director

Director/Secretary

[THE CORPORATE SEAL of the)
SECRETARY OF STATE FOR)
EDUCATION] herewith affixed is)
authenticated by:)

.....
Authorised by the Secretary of State

.....
Full name (BLOCK CAPITALS)

OR

EXECUTED AS A DEED by [EMPLOYER]
acting by a Director and its Secretary/two
Directors:

Director

Director/Secretary

OR

EXECUTED AS A DEED by affixing the
Common Seal of [EMPLOYER] in the
presence of:

Authorised Signatory

EXECUTED AS A DEED by
[CONTRACTOR] acting by a Director and
its Secretary/two Directors:

Director

Director/Secretary

Consultant Warranty in favour of a third party

DATED _____ 20[]]

[CONSULTANT]

and

[BENEFICIARY]

DUTY OF CARE DEED

relating to []

THIS DEED is dated
BETWEEN:

- (1) THE PARTNERS IN [insert name of partnership] (being the persons listed in the schedule hereto) whose principal place of business is at [] OR [] LIMITED/PLC (Company Number []) whose registered office is at [] (the “**Consultant**”); and
- (2) [BENEFICIARY] of [] (the “**Beneficiary**”, which expression includes its successors in title and permitted assigns).

- (A) The Employer has appointed the Contractor under a building contract (the “**Building Contract**”) to carry out and complete the Works in relation to the Sites.
- (B) The Consultant has been appointed by the Contractor under an appointment (the “**Appointment**”) to provide [] services (“**Services**”) in relation to the Works.
- (C) The Consultant is obliged under the Appointment to enter into this Deed in favour of the Beneficiary.
- (D) The Consultant and the Contractor have agreed to duly execute and deliver this Deed in favour of the Beneficiary.

Unless expressly defined otherwise in this Deed, any defined term in this Deed shall have the same meaning given to such term in the Building Contract.

This Deed is made in consideration of the payment of one pound (£1.00) by the Beneficiary to the Consultant, receipt of which the Consultant acknowledges:

- 3.1 The Consultant warrants to the Beneficiary that:
- 3.1.1 it has carried out and completed and will continue to carry out and complete its duties and obligations under the Appointment in accordance with the Appointment;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in the performance of the Services the professional skill, care and diligence to be expected of a properly qualified and competent member of the Consultant's profession experienced in carrying out duties the like of those undertaken by the Consultant under the Appointment for works of a similar size, scope, nature, complexity, location, timescale and value to the Works;
- 3.1.3 subject to the standard of skill, care and diligence set out in clause 3.1.2, it has not and shall not permit, specify or approve for use in connection with the Works any materials which at the time of use:

- (a) are known to be deleterious (either to health and safety or to the durability of the Works); or
- (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
- (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use;

3.1.4 if in the performance of its duties under the Appointment the Consultant becomes aware that it or any other person has specified or used, or authorised or approved the specification or use by others of any such products or materials the Consultant will notify the Beneficiary in writing forthwith. This clause does not create any additional duty for the Consultant to inspect or check the work of others which is not required by the Appointment.

3.2 The Consultant shall have no liability under this clause 3 than is greater or of longer duration than it would have had and shall be entitled in any action or proceedings by the Beneficiary to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Beneficiary had been a party to the Appointment as joint employer.

3.3 For the avoidance of doubt the Consultant warrants to the Beneficiary that the Consultant shall not raise any defence to a claim by the Beneficiary under this Deed on the grounds that the losses in respect of which the Beneficiary seeks damages, compensation or other relief are not losses suffered or to be suffered by the Contractor or that the Contractor has suffered no loss. The Consultant shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Contractor of any monies due under the Appointment.

3.4 The parties agree that:

3.4.1 notwithstanding the Limitation Act 1980 (including the method of execution and/or whether or not this Deed is executed as a deed), any action or proceedings (whether in contract, tort, statutory duty or otherwise) arising from, touching upon or concerning this Deed may be brought or commenced under this Deed at any time until the expiry of 12 (twelve) years from the date of Practical Completion;

3.4.2 they will not rely upon a defence pleading Section 5 of the Limitation Act 1980 (including any amendment, extension or re-enactment) in any proceedings commenced under this Deed; and

3.4.3 any statutory defence provided by the Limitation Act 1980 shall not commence until the expiry of 12 (twelve) years from the date of Practical Completion and no action or proceedings (whether in contract, tort, statutory duty or otherwise) arising from or touching or concerning this Deed may be brought or commenced under this Deed at any time after the expiry of 12 (twelve) years from the date of Practical Completion.

4. **COPYRIGHT**

4.1 In this clause 4 “**Consultant’s Design Documents**” means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding

internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Consultant in relation to the Works (including any updates, amendments, additions and revisions), together with, where applicable, any other design documents or information to be provided by it under the BIM Protocol.

- 4.2 The Intellectual Property Rights in the Consultant's Design Documents prepared by or on behalf of the Consultant in relation to the Appointment and the work executed by it remains the property of the Consultant. The Consultant hereby grants to the Beneficiary an irrevocable, royalty free, non-exclusive licence to use and reproduce the Consultant's Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Beneficiary to grant sub-licences to third parties in the same terms as this licence provided always that the Consultant shall not be liable to any licensee for any use of the Consultant's Design Documents or the use of the Intellectual Property Rights in the Consultant's Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Consultant.
- 4.3 The Beneficiary may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 4.2 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Beneficiary.
- 4.4 In the event that the Consultant does not own the copyright or any Intellectual Property Rights in any of the Consultant's Design Documents the Consultant shall use all reasonable endeavours to procure the right to grant such rights to the Beneficiary to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Consultant is unable to procure the right to grant to the Beneficiary in accordance with the foregoing the Consultant shall procure that the third party grants a direct licence to the Beneficiary on industry acceptable terms.
- 4.5 The Consultant waives any moral right to be identified as author of the Consultant's Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Consultant's Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Beneficiary or any licensee or assignee of the Beneficiary.
- 4.6 In the event that any act unauthorised by the Beneficiary infringes a moral right of the Consultant in relation to the Consultant's Design Documents the Consultant undertakes, if the Beneficiary so requests and at the Beneficiary's expense, to institute proceedings for infringement of the moral rights.
- 4.7 The Consultant warrants to the Beneficiary that he has not granted and shall not (unless authorised by the Beneficiary) grant any rights to any third party to use or otherwise exploit the Consultant's Design Documents.
- 4.8 The Consultant shall supply copies of the Consultant's Design Documents to the Beneficiary upon paying a reasonable copying charge.
- 4.9 In carrying out the Services the Consultant shall not infringe any Intellectual Property Rights of any third party. The Consultant shall indemnify the Beneficiary against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. PROFESSIONAL INDEMNITY INSURANCE

- 5.1 The Consultant hereby covenants with the Beneficiary that it:
- 5.1.1 has taken out PI Insurance covering all its design and professional obligations under the Appointment (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with licensed insurers lawfully carrying on such insurance business in the United Kingdom, with a limit of indemnity not less than one million pounds (£1,000,000) each and every claim and shall maintain the same until the expiry of twelve (12) years after the date of Practical Completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Consultant must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and
- 5.1.2 will provide (as and when reasonably required to do so by the Beneficiary) documentary evidence that its PI Insurance is being maintained in accordance with this clause 5 and details of cover.
- 5.2 Any increased or additional premium or more onerous terms required by insurers by reason of the Consultant's own claims record or other acts, omissions, matters or things peculiar to the Consultant shall be deemed to be within commercially reasonable rates.
- 5.3 The Consultant shall immediately inform the Beneficiary if such insurance ceases to be available at commercially reasonable rates or is no longer available and/or if for any other reason the Consultant is unable to maintain and/or is not maintaining such insurance in which case the Consultant shall take out and maintain a PI Insurance policy having the maximum limit of indemnity and the widest cover which is available to the Consultant upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Beneficiary and shall further discuss means of best protecting the respective positions of the Beneficiary and the Consultant in respect of the Works.
6. **NOTICES**
- 6.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:
- 6.1.1 Consultant: [e-mail address]⁹
- 6.1.2 Beneficiary: [e-mail address]¹⁰
- or as otherwise specified by the relevant party by notice in writing to the other party.
- 6.2 Any notice sent by hand or by post in accordance with clause 6.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date

⁹ Insert e-mail address

¹⁰ Insert e-mail address

of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

7. **ASSIGNMENT**

7.1 The benefit of and the rights of the Beneficiary under this Deed may be assigned without the consent of the Consultant on two (2) occasions only and the Beneficiary will notify the Consultant in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.

7.2 The Consultant will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

8. **BENEFICIARY'S REMEDIES**

The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies it may have against the Consultant including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. **INSPECTION OF DOCUMENTS**

The Consultant's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Consultant or provided to the Beneficiary or attendance at site meetings or other enquiry or inspection which the Beneficiary may make or procure to be made for its benefit or on its behalf.

10. **SUB-CONSULTANTS**

Following a written request from the Beneficiary the Consultant will (unless it has already done so) procure that its sub-consultants execute a deed of collateral warranty in the relevant form specified in the Appointment in favour of any person in whose favour the Appointment obliged the Consultant to give or procure the giving of such a warranty.

11. **SEVERABILITY**

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Deed.

12. **WAIVER**

12.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.

12.2 No waiver under clause 12.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

13. **LIABILITY OF PARTNERS**

Where the Consultant is a partnership, references in this Deed to the "Consultant" will be deemed to include reference to each and every present and future partner of such partnership and the liability of each and every such partner under this Deed will be deemed to be joint and several.

14. **THIRD PARTY RIGHTS**

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed provided always that this clause 14 shall not affect any right or remedy which exists or is available to any person apart from such Act.

15. **GOVERNING LAW AND JURISDICTION**

This Deed and the parties' non contractual duties and/or obligations shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed.

16. **COUNTERPARTS**

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by

[CONSULTANT] acting by

a Director and its Secretary/two Directors:

Director

Director/Secretary

EXECUTED AS A DEED by

affixing the Common Seal of

[BENEFICIARY] in the presence of:

Authorised Signatory

OR

EXECUTED AS A DEED by
[BENEFICIARY] acting by a Director
and its Secretary/two Directors:

Director

Director/Secretary

Part 3 – Sub-Contractor Collateral Warranty to Employer

DATED _____ 20[]

[PRINCIPAL SUB-CONTRACTOR]

and

[EMPLOYER]

and

[CONTRACTOR]

DUTY OF CARE DEED
relating to []

THIS DEED is made on
BETWEEN:

20[]

- (1) [PRINCIPAL SUB-CONTRACTOR] (Company Number []) whose registered office is at [] (the “**Principal Sub-Contractor**”);
- (2) [EMPLOYER] of [] (the “**Employer**”, which expression includes its successors in title and permitted assigns); and
- (3) [CONTRACTOR] (registered in England and Wales under Company Number []) whose registered office is at [] (the “**Contractor**”).

BACKGROUND

- (A) The Employer has appointed the Contractor under a building contract (the “**Building Contract**”) to carry out and complete the Works in relation to the Sites.
- (B) The Principal Sub-Contractor has been appointed by the Contractor under a subcontract (the “**Subcontract**”) in relation to the [] element of the Works (the “**Subcontract Works**”).¹¹
- (C) The Principal Sub-Contractor is obliged under the Subcontract to enter into this Deed in favour of the Employer.
- (D) The Principal Sub-Contractor and the Contractor have agreed to duly execute and deliver this Deed in favour of the Employer.

1. DEFINITIONS AND INTERPRETATIONS

Unless expressly defined otherwise in this Deed, any defined term in this Deed shall have the same meaning given to such term in the Building Contract.

2. OPERATIVE PROVISIONS

This Deed is made in consideration of the payment of one pound (£1.00) by the Employer to the Principal Sub-Contractor, receipt of which the Principal Sub-Contractor acknowledges:

3. PRINCIPAL SUB-CONTRACTOR’S WARRANTIES AND LIABILITIES

3.1 The Principal Sub-Contractor warrants to the Employer that:

- 3.1.1 it has carried out and completed and will continue to carry out and complete the Subcontract Works and its duties and obligations under the Subcontract in accordance with the Subcontract;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in any design of the Subcontract Works the professional skill, care and diligence reasonably to be expected of a properly qualified and competent designer of the appropriate discipline(s) for such design experienced in carrying out works of a similar size, scope, nature, complexity, location, timescale and value to the Subcontract Works in relation to:

¹¹ Insert details of relevant sub-contract package.

- (a) any design of the Subcontract Works;
 - (b) the selection and standards of all goods, materials, equipment or plant for the Subcontract Works;
- 3.1.3 it has not and shall not use and subject to the standard of skill, care and diligence set out in clause 3.1.2 nor permit to be used specify or approve for use in connection with the Subcontract Works any materials which at the time of use:
 - (a) are known to be deleterious (either to health and safety or to the durability of the Subcontract Works); or
 - (b) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
 - (c) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use.
- 3.2 The Principal Sub-Contractor shall have no liability under this clause 3 than is greater or of longer duration than it would have had and shall be entitled in any action or proceedings by the Employer to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Employer had been a party to the Subcontract as joint employer.
- 3.3 For the avoidance of doubt the Principal Sub-Contractor warrants to the Employer that the Principal Sub-Contractor shall not raise any defence to a claim by the Employer under this Deed on the grounds that the losses in respect of which the Employer seeks damages, compensation or other relief are not losses suffered or to be suffered by the Contractor or that the Contractor has suffered no loss. The Principal Sub-Contractor shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Contractor of any monies due under the Subcontract.
- 3.4 The parties agree that:
 - 3.4.1 notwithstanding the Limitation Act 1980 (including the method of execution and/or whether or not this Deed is executed as a deed), any action or proceedings (whether in contract, tort, statutory duty or otherwise) arising from, touching upon or concerning this Deed may be brought or commenced under this Deed at any time until the expiry of 12 (twelve) years from the date of Practical Completion;
 - 3.4.2 they will not rely upon a defence pleading Section 5 of the Limitation Act 1980 (including any amendment, extension or re-enactment) in any proceedings commenced under this Deed; and
 - 3.4.3 any statutory defence provided by the Limitation Act 1980 shall not commence until the expiry of 12 (twelve) years from the date of Practical Completion and no action or proceedings (whether in contract, tort, statutory duty or otherwise) arising from or touching or concerning this Deed may be brought or commenced under this Deed at any time after the expiry of 12 (twelve) years from the date of Practical Completion.

4. **COPYRIGHT**

- 4.1 In this clause 4 “**Principal Sub-Contractor’s Design Documents**” means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Principal Sub-Contractor in relation to the Subcontract Works (including any updates, amendments, additions and revisions), together with, where applicable, any other design documents or information to be provided by it under the BIM Protocol.
- 4.2 The Intellectual Property Rights in the Principal Sub-Contractor’s Design Documents prepared by or on behalf of the Principal Sub-Contractor in relation to the Subcontract and the work executed by it remains the property of the Principal Sub-Contractor. The Principal Sub-Contractor hereby grants to the Employer an irrevocable, royalty free, non-exclusive licence to use and reproduce the Principal Sub-Contractor’s Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Employer to grant sub-licences to third parties in the same terms as this licence provided always that the Principal Sub-Contractor shall not be liable to any licensee for any use of the Principal Sub-Contractor’s Design Documents or the use of the Intellectual Property Rights in the Principal Sub-Contractor’s Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Principal Sub-Contractor.
- 4.3 The Employer may assign, novate or otherwise transfer his rights and obligations under the licence granted pursuant to clause 4.2 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Employer.
- 4.4 In the event that the Principal Sub-Contractor does not own the copyright or any Intellectual Property Rights in any of the Principal Sub-Contractor’s Design Documents the Principal Sub-Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Employer to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Principal Sub-Contractor is unable to procure the right to grant to the Employer in accordance with the foregoing the Principal Sub-Contractor shall procure that the third party grants a direct licence to the Employer on industry acceptable terms.
- 4.5 The Principal Sub-Contractor waives any moral right to be identified as author of the Principal Sub-Contractor’s Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Principal Sub-Contractor’s Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Employer or any licensee or assignee of the Employer.
- 4.6 In the event that any act unauthorised by the Employer infringes a moral right of the Principal Sub-Contractor in relation to the Principal Sub-Contractor’s Design Documents the Principal Sub-Contractor undertakes, if the Employer so requests and at the Employer’s expense, to institute proceedings for infringement of the moral rights.
- 4.7 The Principal Sub-Contractor warrants to the Employer that he has not granted and shall not (unless authorised by the Employer) grant any rights to any third party to use or otherwise exploit the Principal Sub-Contractor’s Design Documents.
- 4.8 The Principal Sub-Contractor shall supply copies of the Principal Sub-Contractor’s Design Documents to the Employer upon paying a reasonable copying charge.

- 4.9 In carrying out the Subcontract Works the Principal Sub-Contractor shall not infringe any Intellectual Property Rights of any third party. The Principal Sub-Contractor shall indemnify the Employer against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. **PROFESSIONAL INDEMNITY INSURANCE**

- 5.1 The Principal Sub-Contractor hereby covenants with the Employer that it:

5.1.1 has taken out PI Insurance covering all its design and professional obligations under the Subcontract (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with licensed insurers lawfully carrying on such insurance business in the United Kingdom, with a limit of indemnity not less than one million pounds (£1,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance and shall maintain the same until the expiry of twelve (12) years after the date of Practical Completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Principal Sub-Contractor must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and

5.1.2 will provide (as and when reasonably required to do so by the Employer) documentary evidence that its PI Insurance is being maintained in accordance with this clause 5 and details of cover.

- 5.2 Any increased or additional premium or more onerous terms required by insurers by reason of the Principal Sub-Contractor's own claims record or other acts, omissions, matters or things peculiar to the Principal Sub-Contractor shall be deemed to be within commercially reasonable rates.

- 5.3 The Principal Sub-Contractor shall immediately inform the Employer if such insurance ceases to be available at commercially reasonable rates and/or if for any other reason the Principal Sub-Contractor is unable to maintain and/or is not maintaining such insurance in which case the Principal Sub-Contractor shall take out and maintain a PI Insurance policy having the maximum limit of indemnity and the widest cover which is available to the Principal Sub-Contractor upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Employer and shall further discuss means of best protecting the respective positions of the Employer and the Principal Sub-Contractor in respect of the Subcontract Works.

6. **NOTICES**

- 6.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

6.1.1 Principal Sub-Contractor: [e-mail address]¹²

6.1.2 Employer: [e-mail address]¹³

6.1.3 Contractor: [e-mail address]¹⁴

or as otherwise specified by the relevant party by notice in writing to the other parties.

- 6.2 Any notice sent by hand or by post in accordance with clause 6.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

7. **ASSIGNMENT**

- 7.1 The benefit of and the rights of the Employer under this Deed may be assigned without the consent of the Principal Sub-Contractor on two (2) occasions only and the Employer will notify the Principal Sub-Contractor in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.

- 7.2 The Principal Sub-Contractor will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

8. **EMPLOYER'S REMEDIES**

The rights and benefits conferred upon the Employer by this Deed are in addition to any other rights and remedies it may have against the Principal Sub-Contractor including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. **INSPECTION OF DOCUMENTS**

The Principal Sub-Contractor's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Principal Sub-Contractor or provided to the Employer or attendance at site meetings or other enquiry or inspection which the Employer may make or procure to be made for its benefit or on its behalf.

10. **STEP-IN RIGHTS IN FAVOUR OF THE EMPLOYER**

- 10.1 Without prejudice to the Principal Sub-Contractor's statutory rights the Principal Sub-Contractor will not exercise or seek to exercise any right which may be or become available to it to:

¹² Insert e-mail address

¹³ Insert e-mail address

¹⁴ Insert e-mail address

- 10.1.1 terminate or treat as terminated or repudiated the Subcontract or its engagement under it without first giving to the Employer not less than 30 Business Days' prior written notice; or
 - 10.1.2 discontinue or suspend the performance of any duties or obligations under the Subcontract without first giving to the Employer not less than 7 Business Days' prior written notice.
- 10.2 Any notice given by the Principal Sub-Contractor pursuant to clause 10.1 above shall:
 - 10.2.1 specify the Principal Sub-Contractor's ground for terminating or treating as terminated or repudiated the Subcontract or its engagement under it or for discontinuing or suspending its performance under it (as applicable);
 - 10.2.2 specify any other breaches by the Contractor; and
 - 10.2.3 state the amount (if any) of monies outstanding under the Subcontract (whether or not such amounts result from a breach entitling the Principal Sub-Contractor to terminate or treat as terminated or repudiated the Subcontract or to discontinue or suspend the performance of any duties or obligations under the Subcontract (as applicable)).
- 10.3 Within the period of any notice given by the Principal Sub-Contractor pursuant to clause 10.1:
 - 10.3.1 the Employer may give written notice to the Principal Sub-Contractor that the Employer will henceforth become the client under the Subcontract to the exclusion of the Contractor and thereupon the Principal Sub-Contractor will admit that the Employer is its client under the Subcontract and the Subcontract will be and remain in full force and effect notwithstanding any of the said grounds but subject always to clause 10.3.2 below;
 - 10.3.2 if the Employer has given such notice as aforesaid or under clause 10.5 below, the Employer shall accept liability for the Contractor's obligations under the Subcontract and will as soon as practicable thereafter remedy any outstanding breach by the Contractor which is properly specified and which is capable of remedy by the Employer; and
 - 10.3.3 if the Employer has given such notice as aforesaid or under clause 10.5, the Employer will from the service of such notice become responsible for all sums properly payable to the Principal Sub-Contractor under the Subcontract accruing due after the service of such notice but the Employer will in paying such sums be entitled to the same rights of set-off and deduction as would have applied to the Contractor under the Subcontract.
- 10.4 Notwithstanding anything contained in this Deed and notwithstanding any payments which may be made by the Employer to the Principal Sub-Contractor, the Employer will not be under any obligation to the Principal Sub-Contractor nor will the Principal Sub-Contractor have any claim or cause of action against the Employer unless and until the Employer has given written notice to the Principal Sub-Contractor pursuant to clause 10.3.1 or clause 10.5 of this Deed.
- 10.5 The Principal Sub-Contractor further covenants with the Employer that if employment of the Contractor under the Building Contract is determined or the Building Contract is terminated, the Principal Sub-Contractor, if requested by the Employer by notice in writing and subject

to clause 10.3.2 and clause 10.3.3, will accept the instructions of the Employer to the exclusion of the Contractor in respect of its duties under the Subcontract upon the terms and conditions of the Subcontract and will if so requested in writing to enter into a novation agreement whereby the Employer is substituted for the Contractor under the Subcontract.

- 10.6 If the Principal Sub-Contractor is requested to enter into a novation agreement pursuant to clause 10.5 above, the Contractor agrees to enter into the same at the request of the Employer.
- 10.7 The Contractor acknowledges that the Principal Sub-Contractor will be entitled to rely on a notice given to the Principal Sub-Contractor and the Contractor by the Employer under clause 10.5 as conclusive evidence that the employment of the Contractor under the Building Contract has been determined or the Building Contract is terminated.
- 10.8 The Employer may by notice in writing to the Principal Sub-Contractor and the Contractor appoint another person to exercise its right under this clause 10 subject to the Employer remaining liable to the Contractor as guarantor for its appointee in respect of its obligations under this Deed.
- 10.9 Upon request by the Employer the Principal Sub-Contractor agrees to co-operate with the Employer in determining the duties performed or to be performed by the Principal Sub-Contractor and to provide a copy of the Subcontract and any variations thereto and details of all monies paid and due under the Subcontract and the Building Contract.
- 10.10 As from the date of service of notice under clause 10.3.1 or 10.5 to the extent that the Subcontract operates by reference to the existence and application of the Building Contract, the Subcontract shall be administered and construed as though the Building Contract was continuing and the Subcontract shall therefore continue, subject to amendment only as necessary to reflect the fact that the Building Contract have in fact terminated and the Employer has undertaken the obligations set in clause 10.3.2.

11. **SUB-CONTRACTORS**

Following a written request from the Employer the Principal Sub-Contractor will (unless it has already done so) procure that its sub-contractors execute a deed of collateral warranty in the relevant form specified in the Subcontract in favour of any person in whose favour the Subcontract obliged the Principal Sub-Contractor to give or procure the giving of such a warranty.

12. **SEVERABILITY**

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Deed.

13. **WAIVER**

- 13.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.
- 13.2 No waiver under clause 13.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

14. **THIRD PARTY RIGHTS**

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed provided always that this clause 14 shall not affect any right or remedy which exists or is available to any person apart from such Act.

15. **GOVERNING LAW AND JURISDICTION**

This Deed and the parties' non contractual duties and/or obligations shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed.

16. **CONTRACTOR ACKNOWLEDGEMENT**

The Contractor has entered into this Deed in order to acknowledge the arrangements effected hereby and undertakes to each of the Employer and the Principal Sub-Contractor to observe the provisions of this Deed at all times and not in any way to prejudice or affect the enforcement hereof or to do or permit to be done anything which would be a breach hereof.

17. **COUNTERPARTS**

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by
[PRINCIPAL SUB-CONTRACTOR] acting by
a Director and its Secretary/two Directors:

Director
Director/Secretary

THE CORPORATE SEAL of the)
SECRETARY OF STATE FOR)
EDUCATION herewith affixed is)
authenticated by:

.....
Authorised by the Secretary of State

.....
Full name (BLOCK CAPITALS)

OR

EXECUTED AS A DEED (but not delivered until the date hereof) by affixing the Common Seal of [EMPLOYER] in the presence of:

Authorised Signatory

OR

EXECUTED AS A DEED by [EMPLOYER] acting by a Director and its Secretary/two Directors:

Director
Director/Secretary

EXECUTED AS A DEED by [CONTRACTOR] acting by a Director and its Secretary/two Directors:

Director
Director/Secretary

Part 4 – Sub-Contractor Collateral Warranty to Third Party

DATED _____ 20[]

[PRINCIPAL SUB-CONTRACTOR]

and

[BENEFICIARY]

DUTY OF CARE DEED
relating to []

THIS DEED is made on
BETWEEN:

20[]

- (1) [PRINCIPAL SUB-CONTRACTOR] (Company Number []) whose registered office is at [] (the “**Principal Sub-Contractor**”); and
- (2) [BENEFICIARY] of [] (the “**Beneficiary**”, which expression includes its successors in title and permitted assigns).

BACKGROUND

- (A) The Employer has appointed the Contractor under a building contract (the “**Building Contract**”) to carry out and complete the Works in relation to the Sites.
- (B) The Principal Sub-Contractor has been appointed by the Contractor under a subcontract (the “**Subcontract**”) in relation to the [] element of the Works (the “**Subcontract Works**”).¹⁵
- (C) The Principal Sub-Contractor is obliged under the Subcontract to enter into this Deed in favour of the Beneficiary.
- (D) The Principal Sub-Contractor and the Contractor have agreed to duly execute and deliver this Deed in favour of the Beneficiary.

1. DEFINITIONS AND INTERPRETATIONS

Unless expressly defined otherwise in this Deed, any defined term in this Deed shall have the same meaning given to such term in the Building Contract.

2. OPERATIVE PROVISIONS

This Deed is made in consideration of the payment of one pound (£1.00) by the Beneficiary to the Principal Sub-Contractor, receipt of which the Principal Sub-Contractor acknowledges:

3. PRINCIPAL SUB-CONTRACTOR’S WARRANTIES AND LIABILITIES

3.1 The Principal Sub-Contractor warrants to the Beneficiary that:

- 3.1.1 it has carried out and completed and will continue to carry out and complete the Subcontract Works and its duties and obligations under the Subcontract in accordance with the Subcontract;
- 3.1.2 in addition to and without derogation to clause 3.1.1, it has exercised and will continue to exercise in any design of the Subcontract Works the professional skill, care and diligence reasonably to be expected of a properly qualified and competent designer of the appropriate discipline(s) for such design experienced in carrying out works of a similar size, scope, nature, complexity, location, timescale and value to the Subcontract Works in relation to:
- (c) any design of the Subcontract Works;

¹⁵ Insert details of relevant sub-contract package.

- (d) the selection and standards of all goods, materials, equipment or plant for the Subcontract Works;
 - (e) the satisfaction of any performance requirement or specification of or for the whole or any portion of the Subcontract Works;
- 3.1.3 it has not and shall not use and subject to the standard of skill, care and diligence set out in clause 3.1.2 nor permit to be used specify or approve for use in connection with the Subcontract Works any materials which at the time of use:
 - (d) are known to be deleterious (either to health and safety or to the durability of the Subcontract Works); or
 - (e) contravene the Statutory Requirements, any relevant standard or code of practice issued from time to time by the BSI Group relating to standards or Good Industry Practice; or
 - (f) do not accord with the guidelines contained in the edition of the publication Good Practice in Selection of Construction Materials (British Council for Offices (BCO)), current at the date of use.
- 3.2 The Principal Sub-Contractor shall have no liability under this clause 3 than is greater or of longer duration that it would have had and shall be entitled in any action or proceedings by the Beneficiary to raise equivalent rights in defence of liability (except for set-off or counterclaim) if in lieu of this Deed the Beneficiary had been a party to the Subcontract as joint employer.
- 3.3 For the avoidance of doubt the Principal Sub-Contractor warrants to the Beneficiary that the Principal Sub-Contractor shall not raise any defence to a claim by the Beneficiary under this Deed on the grounds that the losses in respect of which the Beneficiary seeks damages, compensation or other relief are not losses suffered or to be suffered by the Contractor or that the Contractor has suffered no loss. The Principal Sub-Contractor shall not be entitled to rely upon set off, counterclaim or defence arising from non-payment by the Contractor of any monies due under the Subcontract.
- 3.4 The parties agree that:
 - 3.4.1 notwithstanding the Limitation Act 1980 (including the method of execution and/or whether or not this Deed is executed as a deed), any action or proceedings (whether in contract, tort, statutory duty or otherwise) arising from, touching upon or concerning this Deed may be brought or commenced under this Deed at any time until the expiry of 12 (twelve) years from the date of Practical Completion;
 - 3.4.2 they will not rely upon a defence pleading Section 5 of the Limitation Act 1980 (including any amendment, extension or re-enactment) in any proceedings commenced under this Deed; and
 - 3.4.3 any statutory defence provided by the Limitation Act 1980 shall not commence until the expiry of 12 (twelve) years from the date of Practical Completion and no action or proceedings (whether in contract, tort, statutory duty or otherwise) arising from or touching or concerning this Deed may be brought or commenced under this Deed at any time after the expiry of 12 (twelve) years from the date of Practical Completion.

4. **COPYRIGHT**

- 4.1 In this clause 4 “**Principal Sub-Contractor’s Design Documents**” means the drawings, designs, charts, specifications, plans, models including building information models, design details, photographs, reports and other documents or materials in its native format (excluding internal memoranda, internal documents, working papers and templates) created, amended and/or developed by or for the Principal Sub-Contractor in relation to the Subcontract Works (including any updates, amendments, additions and revisions), together with, where applicable, any other design documents or information to be provided by it under the BIM Protocol.
- 4.2 The Intellectual Property Rights in the Principal Sub-Contractor’s Design Documents prepared by or on behalf of the Principal Sub-Contractor in relation to the Subcontract and the work executed by him remains the property of the Principal Sub-Contractor. The Principal Sub-Contractor hereby grants to the Beneficiary an irrevocable, royalty free, non-exclusive licence to use and reproduce the Principal Sub-Contractor’s Design Documents for any and all purposes connected with the construction, use, alterations or demolition of the Site. Such licence entitles the Beneficiary to grant sub-licences to third parties in the same terms as this licence provided always that the Principal Sub-Contractor shall not be liable to any licensee for any use of the Principal Sub-Contractor’s Design Documents or the use of the Intellectual Property Rights in the Principal Sub-Contractor’s Design Documents for purposes other than those for which the same were originally prepared by or on behalf of the Principal Sub-Contractor.
- 4.3 The Beneficiary may assign, novate or otherwise transfer its rights and obligations under the licence granted pursuant to clause 4.2 to a Crown Body or to anybody (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Beneficiary.
- 4.4 In the event that the Principal Sub-Contractor does not own the copyright or any Intellectual Property Rights in any of the Principal Sub-Contractor’s Design Documents the Principal Sub-Contractor shall use all reasonable endeavours to procure the right to grant such rights to the Beneficiary to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the Principal Sub-Contractor is unable to procure the right to grant to the Beneficiary in accordance with the foregoing the Principal Sub-Contractor shall procure that the third party grants a direct licence to the Beneficiary on industry acceptable terms.
- 4.5 The Principal Sub-Contractor waives any moral right to be identified as author of the Principal Sub-Contractor’s Design Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Principal Sub-Contractor’s Design Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the Beneficiary or any licensee or assignee of the Beneficiary.
- 4.6 In the event that any act unauthorised by the Beneficiary infringes a moral right of the Principal Sub-Contractor in relation to the Principal Sub-Contractor’s Design Documents the Principal Sub-Contractor undertakes, if the Beneficiary so requests and at the Beneficiary’s expense, to institute proceedings for infringement of the moral rights.
- 4.7 The Principal Sub-Contractor warrants to the Beneficiary that he has not granted and shall not (unless authorised by the Beneficiary) grant any rights to any third party to use or otherwise exploit the Principal Sub-Contractor’s Design Documents.
- 4.8 The Principal Sub-Contractor shall supply copies of the Principal Sub-Contractor’s Design Documents to the Beneficiary upon paying a reasonable copying charge.

- 4.9 In carrying out the Subcontract Works the Principal Sub-Contractor shall not infringe any Intellectual Property Rights of any third party. The Principal Sub-Contractor shall indemnify the Beneficiary against claims, proceedings, compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

5. **PROFESSIONAL INDEMNITY INSURANCE**

- 5.1 The Principal Sub-Contractor hereby covenants with the Beneficiary that it:

5.1.1 has taken out PI Insurance covering all its design and professional obligations under the Subcontract (including in connection with any errors or omissions in the performance of its professional services, including but not limited to design professional advice and/or services, any defects and/or insufficiency of design) upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with licensed insurers lawfully carrying on such insurance business in the United Kingdom, with a limit of indemnity not less than one million pounds (£5,000,000) in the aggregate with a minimum of one (1) automatic full reinstatement of the aggregate indemnity limit in any one (1) year of insurance and shall maintain the same until the expiry of twelve (12) years after the date of Practical Completion of the Works, provided always that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the Principal Sub-Contractor must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 2010, or any amendment or re-enactment thereof; and

5.1.2 will provide evidence (as and when reasonably required to do so by the Beneficiary) documentary evidence that its PI Insurance is being maintained in accordance with this clause 5 and details of cover.

- 5.2 Any increased or additional premium or more onerous terms required by insurers by reason of the Principal Sub-Contractor's own claims record or other acts, omissions, matters or things peculiar to the Principal Sub-Contractor shall be deemed to be within commercially reasonable rates.

- 5.3 The Principal Sub-Contractor shall immediately inform the Beneficiary if such insurance ceases to be available at commercially reasonable rates and/or if for any other reason the Principal Sub-Contractor is unable to maintain and/or is not maintaining such insurance in which case the Principal Sub-Contractor shall take out and maintain a PI Insurance policy having the maximum limit of indemnity and the widest cover which is available to the Principal Sub-Contractor upon, subject to clause 5.2, commercially reasonable rates and give notice of the same to the Beneficiary and shall further discuss means of best protecting the respective positions of the Beneficiary and the Principal Sub-Contractor in respect of the Subcontract Works.

6. **NOTICES**

- 6.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

6.1.1 Principal Sub-Contractor: [e-mail address]¹⁶

6.1.2 Beneficiary: [e-mail address]¹⁷

or as otherwise specified by the relevant party by notice in writing to the other party.

- 6.2 Any notice sent by hand or by post in accordance with clause 6.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

7. **ASSIGNMENT**

- 7.1 The benefit of and the rights of the Beneficiary under this Deed may be assigned without the consent of the Principal Sub-Contractor on two (2) occasions only and the Beneficiary will notify the Principal Sub-Contractor in writing following any such assignment specifying the name and address of the assignee and the date of the assignment.

- 7.2 The Principal Sub-Contractor will not contend that any such assignee is precluded from recovering any loss resulting from any breach of this Deed (whatever the date of such breach) by reason only that that person is an assignee and not the original beneficiary hereunder or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Sites or that the original beneficiary or any intermediate beneficiary has not suffered any, or as much, loss.

8. **BENEFICIARY'S REMEDIES**

The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies it may have against the Principal Sub-Contractor including without prejudice to the generality of the foregoing any remedies in negligence and no provisions in this Deed are intended to exclude any obligation or liability which would otherwise be implied whether by statute, the law of contract, tort, equity or otherwise.

9. **INSPECTION OF DOCUMENTS**

The Principal Sub-Contractor's liabilities under this Deed will not be in any way reduced or extinguished by reason of any inspection or approval of any documents prepared by the Principal Sub-Contractor or provided to the Beneficiary or attendance at site meetings or other enquiry or inspection which the Beneficiary may make or procure to be made for its benefit or on its behalf.

10. **SUB-CONTRACTORS**

Following a written request from the Beneficiary the Principal Sub-Contractor will (unless it has already done so) procure that its sub-contractors execute a deed of collateral warranty in the relevant form specified in the Subcontract in favour of any person in whose favour the Subcontract obliged the Principal Sub-Contractor to give or procure the giving of such a warranty.

¹⁶ Insert e-mail address

¹⁷ Insert e-mail address

11. **SEVERABILITY**

If any term, condition or provision of this Deed shall be held to be invalid, unlawful or unenforceable to any extent, such term, condition or provision shall not affect the validity, legality and enforceability of the other provisions of or any other documents referred to in this Deed.

12. **WAIVER**

12.1 No term or provision of this Deed shall be considered as waived by any party to this Deed unless a waiver is given in writing by that party.

12.2 No waiver under clause 12.1 shall be a waiver of a past or future default or breach, nor shall it amend, delete or add to the terms, conditions or provisions of this Deed unless (and only to the extent) expressly stated in that waiver.

13. **THIRD PARTY RIGHTS**

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed provided always that this clause 13 shall not affect any right or remedy which exists or is available to any person apart from such Act.

14. **GOVERNING LAW AND JURISDICTION**

This Deed and the parties' non contractual duties and/or obligations shall be governed by and construed in all respects in accordance with the laws of England and Wales. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed.

15. **COUNTERPARTS**

This Deed may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the parties shall constitute a full and original instrument for all purposes.

IN WITNESS of which this document is executed as a Deed and is delivered on the date first before written.

EXECUTED AS A DEED by
[PRINCIPAL SUB-CONTRACTOR] acting by
a Director and its Secretary/two Directors:

Director
Director/Secretary

EXECUTED AS A DEED by
affixing the Common Seal of
[BENEFICIARY] in the presence of:

Authorised Signatory

OR

EXECUTED AS A DEED by
[BENEFICIARY] acting by a Director
and its Secretary/two Directors:

Director

Director/Secretary

Part 5 – Parent Company Guarantee

DATED _____ 20[]

[GUARANTOR]

and

[EMPLOYER]

PARENT COMPANY GUARANTEE

THIS AGREEMENT dated

20[] is made

BETWEEN:

(1) [] whose registered office is at []

] (the “**Guarantor**”); and

(2) [] of []

] (the “**Employer**” which expression shall include its successors in title and permitted assignees).

BACKGROUND

- (A) The Employer has entered into a Contract [] (the “**Contract**”) (which expression shall include all plans, specifications, bills of quantities and other documents incorporated therein) with [] whose registered office is at [] (the “**Contractor**”) in relation to the carrying out, construction and completion of certain works by the Contractor as more particularly described as the “**Works**” (and which expression has the same meaning in this Deed).
- (B) The Contractor is a wholly owned subsidiary company of the Guarantor under the Companies Act 2006.
- (C) The Guarantor has agreed to guarantee the performance of all of the Contractor’s obligations under the Contract in the manner appearing below.

IT IS AGREED as follows:

1. GUARANTEE

In consideration of the Employer entering into the Contract, the Guarantor HEREBY irrevocably COVENANTS AND GUARANTEES to the Employer and its successors and assigns, the full, faithful and punctual performance, observance and compliance respectively by the Contractor of each and every of the terms, provisions, conditions, obligations, undertakings and agreements on the part of the Contractor to be performed, observed or carried out by the Contractor as contained or referred to in the Contract as such Contract may, from time to time, be amended (hereinafter called the “**Obligations**”).

2. PERFORMANCE OBLIGATIONS AND INSOLVENCY

2.1 If, at any time:

2.1.1 any default is made by the Contractor in the performance of any of the Obligations; or

2.1.2 the Contractor is Insolvent (as defined under the Contract),

the Guarantor will well and truly perform or cause to be so performed each and every one of the Obligations and/or will pay any sum or sums that may be payable in consequence of the Contractor's insolvency or any default made by the Contractor in the performance of any of the Obligations.

3. LIABILITY

- 3.1 As between the Guarantor and the Employer (but without affecting the Obligations), the Guarantor shall remain liable under this Guarantee as if he were the sole principal obligor and not merely a guarantor.
- 3.2 Subject to the provisions of clause 5, the Guarantor shall not be discharged nor shall its liability be affected by anything which would not discharge it or affect its liability if it was the sole principal obligor including, but not limited to:
 - 3.2.1 any amendment, modification, waiver, consent or variation, express or implied, to the scope of the Works or to the Contract or any related documentation;
 - 3.2.2 the granting of any extensions of time or forbearance, forgiveness or indulgences in relation to time to the Contractor;
 - 3.2.3 the enforcement, absence of enforcement or release of the Contract or of any security, right of action or other guarantee or indemnity;
 - 3.2.4 the dissolution, amalgamation, reconstruction, reorganisation of the Contractor;
 - 3.2.5 any defect in any provision of the Contract or any of the Obligations;
 - 3.2.6 any indulgence or additional or advanced payment, forbearance, payment or concession to the Contractor;
 - 3.2.7 any compromise of any dispute with the Contractor;
 - 3.2.8 any failure of supervision to detect or prevent any fault of the Contractor; or
 - 3.2.9 any assignment of the benefit of the Contract.

4. ASSIGNMENT

- 4.1 This Guarantee and the benefit conferred by it may be assigned by the Employer to any party to whom he assigns or novates its interest under the Contract, at any time and references to the Employer shall include its assigns.
- 4.2 Save for the provision of clause 4.1 above, this Guarantee and the benefit conferred by it may not be assigned by either party.
- 4.3 The Guarantor shall not contend that any assignee or person who receives the benefit of and the rights on the part of the Employer pursuant to clause 4.1 is precluded or prevented from recovering any loss resulting from any breach of this Guarantee (whatever the date of such breach) by reason that that person is an assignee or received the benefit of and the rights on the part of the Employer pursuant to clause

4.1 or is otherwise not the original beneficiary under this Guarantee or by reason that the original beneficiary or any intermediate beneficiary escaped any loss resulting from such breach by reason of the disposal of any interest in the Works or Contract or that the original beneficiary or any intermediate beneficiary has not suffered any or as much loss.

5. LIMIT OF LIABILITY

The Guarantor shall have no greater liability to the Employer under this Guarantee than he would have had had he been named as Contractor under the Contract and shall be entitled in any action or proceedings by the Employer to raise equivalent rights in defence of liability as if the Guarantor had been a party to the Contract as joint contractor.

6. THIRD PARTY RIGHTS

No term of this Deed is enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person who is not party to this Deed. This clause does not affect any right or remedy of any person which exists or is available otherwise than pursuant to that Act.

7. NOTICES

- 7.1 Any notice to be given by any party will be sufficiently served if sent by hand or by post to the registered office or if there is none the last known address of the party to be served or by e-mail to the addresses set out below:

7.1.1 Guarantor: [e-mail address]¹⁸

7.1.2 Employer: [e-mail address]¹⁹

or as otherwise specified by the relevant party by notice in writing to the other party.

- 7.2 Any notice sent by hand or by post in accordance with clause 7.1 shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after the date of posting and when sent by email, it shall, subject to proof to the contrary, be deemed to have been received on the second Business Day after being sent.

8. GOVERNING LAW

The construction, validity and performance of this Guarantee and the parties' non contractual duties and/or obligation is subject to English law and the courts of England and Wales shall have jurisdiction over any dispute or difference arising out of or in connection herewith.

9. COUNTERPARTS

¹⁸ Insert e-mail address

¹⁹ Insert e-mail address

This Guarantee may be executed in any number of counterparts, each of which when executed and delivered shall constitute an original of this Guarantee, but all the counterparts shall together constitute the same Guarantee.

Without prejudice to the validity of this Guarantee, each of the parties shall provide the other with the original of such counterpart as soon as reasonably practicable thereafter.

EXECUTED AS A DEED by
[GUARANTOR] acting by
a Director and its Secretary/two Directors:

Director
Director/Secretary

[THE CORPORATE SEAL of the)
SECRETARY OF STATE FOR)
EDUCATION] herewith affixed is)
authenticated by:

.....
Authorised by the Secretary of State

.....
Full name (BLOCK CAPITALS)

OR

[EXECUTED AS A DEED (but not
delivered until the date hereof) by affixing
the Common Seal of [EMPLOYER] in the
presence of:

.....
Authorised Signatory]

OR

EXECUTED AS A DEED by
[EMPLOYER]
acting by a Director and its Secretary/two
Directors:

.....
Director

.....
Director/Secretary

SCHEDULE 5 – SITE PLAN

[Insert plan of the Sites]

SCHEDULE 6 – CONSTRUCTION PROGRAMME

SCHEDULE 7 – ASBESTOS SURVEY

SCHEDULE 8 – SITE SURVEYS

SCHEDULE 9
[EMPLOYER NECESSARY CONSENTS]²⁰

Employer Necessary Consent	Date by which the Employer will execute (or shall procure that the landowner shall execute) and deliver the Employer Necessary Consent agreement to the Contractor
	Within 20 Business Days of receipt of the Employer Necessary Consent agreement from the Contractor
	Within 20 Business Days of receipt of the Employer Necessary Consent agreement from the Contractor
	Within 20 Business Days of receipt of the Employer Necessary Consent agreement from the Contractor

²⁰ This should list the Consents that the Contractor cannot legally obtain. Each Employer Necessary Consent should be clearly identified in Schedule 9.

SCHEDULE 10

UK GDPR

In this Schedule unless the context otherwise requires, defined terms shall, save where they are defined below, have the meanings ascribed to them in this Contract:

Controller, Processor, Data Subject, Personal Data, Personal Data Breach, Data Protection Officer:	take the meaning given in the UK GDPR;
Data Protection Impact Assessment:	an assessment by the Controller of the impact of the envisaged processing on the protection of Personal Data;
Data Protection Legislation:	(i) the UK GDPR and any applicable national implementing laws as amended from time to time (ii) the DPA 2018 to the extent that it relates to processing of personal data and privacy; (iii) all applicable law about the processing of personal data and privacy;
Data Loss Event:	any event that results, or may result, in unauthorised access to Personal Data held by the Processor under this Contract, and/or actual or potential loss and/or destruction of Personal Data in breach of this Contract, including any Personal Data Breach;
Data Subject Request:	a request made by, or on behalf of, a Data Subject in accordance with rights granted pursuant to the Data Protection Legislation to access their Personal Data;
Joint Controllers:	where two or more Controllers jointly determine the purposes and means of processing;
Law:	any law, statute, subordinate legislation within the meaning of section 21(1) of the Interpretation Act 1978, bye-law, enforceable right within the meaning of section 2 of the European Communities Act 1972, regulation, order, mandatory guidance or code of practice, judgment of a relevant court of law, or directives or requirements of any regulatory body with which the Contractor is bound to comply;
Processor Personnel:	means all directors, officers, employees, agents, consultants and contractors of the Processor and/or of any Sub-Processor engaged in the performance of his obligations under this Contract;
Protective Measures:	appropriate technical and organisational measures which may include: pseudonymising and encrypting Personal Data, ensuring confidentiality, integrity, availability and resilience of systems and services, ensuring that availability of and access to Personal Data can be restored in a timely manner after an incident, and regularly assessing and evaluating the effectiveness of the such measures adopted by it;

Sub-Processor: any third party appointed to process Personal Data on behalf of that Processor related to this Contract.

1. DATA PROTECTION

- 1.1 The Parties acknowledge that for the purposes of the Data Protection Legislation, the Employer is the Controller and the Contractor is the Processor unless otherwise specified in the Appendix to this Schedule. The only processing that the Processor is authorised to do is listed in the Appendix to this Schedule by the Controller and may not be determined by the Processor.
- 1.2 The Processor shall notify the Controller immediately if he considers that any of the Controller's instructions infringe the Data Protection Legislation.
- 1.3 The Processor shall provide all reasonable assistance to the Controller in the preparation of any Data Protection Impact Assessment prior to commencing any processing. Such assistance may, at the discretion of the Controller, include:
 - (a) a systematic description of the envisaged processing operations and the purpose of the processing;
 - (b) an assessment of the necessity and proportionality of the processing operations in relation to the services and Works;
 - (c) an assessment of the risks to the rights and freedoms of Data Subjects; and
 - (d) the measures envisaged to address the risks, including safeguards, security measures and mechanisms to ensure the protection of Personal Data.
- 1.4 The Processor shall, in relation to any Personal Data processed in connection with its obligations under this Contract:
 - (a) process that Personal Data only in accordance with the Appendix to this Schedule, unless the Processor is required to do otherwise by Law. If he is so required the Processor shall promptly notify the Controller before processing the Personal Data unless prohibited by Law;
 - (b) ensure that he has in place Protective Measures, are appropriate to protect against a Data Loss Event, which the Controller may reasonably reject (but failure to reject shall not amount to approval by the Controller of the adequacy of the Protective Measures), having taken account of the:
 - (i) nature of the data to be protected;
 - (ii) harm that might result from a Data Loss Event;
 - (iii) state of technological development; and
 - (iv) cost of implementing any measures;
 - (c) ensure that:

- (i) the Processor Personnel do not process Personal Data except in accordance with this Contract (and in particular the Appendix to this Schedule);
- (ii) it takes all reasonable steps to ensure the reliability and integrity of any Processor Personnel who have access to the Personal Data and ensure that they:
 - (A) are aware of and comply with the Processor's duties under this paragraph;
 - (B) are subject to appropriate confidentiality undertakings with the Processor or any Sub-Processor;
 - (C) are informed of the confidential nature of the Personal Data and do not publish, disclose or divulge any of the Personal Data to any third Party unless directed in writing to do so by the Controller or as otherwise permitted by this Contract; and
 - (D) have undergone adequate training in the use, care, protection and handling of Personal Data; and
- (d) not transfer Personal Data outside of the United Kingdom unless the prior written consent of the Controller has been obtained and the following conditions are fulfilled:
 - (i) the Controller or the Processor has provided appropriate safeguards in relation to the transfer as determined by the Controller;
 - (ii) the Data Subject has enforceable rights and effective legal remedies;
 - (iii) the Processor complies with his obligations under the Data Protection Legislation by providing an adequate level of protection to any Personal Data that is transferred (or, if it is not so bound, uses its best endeavours to assist the Controller in meeting his obligations); and
 - (iv) the Processor complies with any reasonable instructions notified to him in advance by the Controller with respect to the processing of the Personal Data;
- (e) at the written direction of the Controller, delete or return Personal Data (and any copies of it) to the Controller on termination of the Contractor's employment under this Contract unless the Processor is required by Law to retain the Personal Data.

1.5 Subject to clause 1.6, the Processor shall notify the Controller immediately if it:

- (a) receives a Data Subject Request (or purported Data Subject Request);
- (b) receives a request to rectify, block or erase any Personal Data;
- (c) receives any other request, complaint or communication relating to either Party's obligations under the Data Protection Legislation;

- (d) receives any communication from the Information Commissioner or any other regulatory authority in connection with Personal Data processed under this Contract;
 - (e) receives a request from any third Party for disclosure of Personal Data where compliance with such request is required or purported to be required by law; or
 - (f) becomes aware of a Data Loss Event.
- 1.6 The Processor's obligation to notify under clause 1.5 shall include the provision of further information to the Controller in phases, as details become available.
- 1.7 Taking into account the nature of the processing, the Processor shall provide the Controller with full assistance in relation to either Party's obligations under Data Protection Legislation and any complaint, communication or request made under clause 1.5 (and insofar as possible within the timescales reasonably required by the Controller) including by promptly providing:
- (a) the Controller with full details and copies of the complaint, communication or request;
 - (b) such assistance as is reasonably requested by the Controller to enable the Controller to comply with a Data Subject Request within the relevant timescales set out in the Data Protection Legislation;
 - (c) the Controller, at his request, with any Personal Data he holds in relation to a Data Subject;
 - (d) assistance as requested by the Controller following any Data Loss Event;
 - (e) assistance as requested by the Controller with respect to any request from the Information Commissioner's Office, or any consultation by the Controller with the Information Commissioner's Office.
- 1.8 The Processor shall maintain complete and accurate records and information to demonstrate its compliance with this clause. This requirement does not apply where the Processor employs fewer than 250 staff, unless:
- (a) the Controller determines that the processing is not occasional;
 - (b) the Controller determines the processing includes special categories of data as referred to in Article 9(1) of the UK GDPR or Personal Data relating to criminal convictions and offences referred to in Article 10 of the UK GDPR; or
 - (c) the Controller determines that the processing is likely to result in a risk to the rights and freedoms of Data Subjects.
- 1.9 The Processor shall allow for audits of his data processing activity by the Controller or the Controller's designated auditor.
- 1.10 Each Party shall designate his own Data Protection Officer if required by the Data Protection Legislation.

- 1.11 Before allowing any Sub-Processor to process any Personal Data related to this Contract, the Processor must:
- (a) notify the Controller in writing of the intended Sub-Processor and processing;
 - (b) obtain the written consent of the Controller;
 - (c) enter into a written agreement with the Sub-Processor which give effect to the terms set out in this paragraph 1.11 such that they apply to the Sub-Processor; and
 - (d) provide the Controller with such information regarding the Sub-Processor as the Controller may reasonably require.
- 1.12 The Processor shall remain fully liable for all acts or omissions of any of its Sub-Processors.
- 1.13 The Controller may, at any time on not less than 30 Working Days' notice, revise this paragraph by replacing it with any applicable controller to processor standard clauses or similar terms forming part of an applicable certification scheme (which shall apply when incorporated by attachment to this Contract).
- 1.14 The Parties agree to take account of any guidance issued by the Information Commissioner's Office. The Controller may on not less than 30 Working Days' notice to the Processor amend this Contract to ensure that it complies with any guidance issued by the Information Commissioner's Office.
- 1.15 Where the Parties include two or more Joint Controllers as identified in the Schedule in accordance with UK GDPR Article 26, those Parties shall enter into a Joint Controller Agreement based on the terms outlined in the Schedule in replacement of paragraphs 1.1-1.14 for the Personal Data under joint control.

Appendix 1: Schedule of Processing, Personal Data and Data Subjects

1. This Appendix shall be completed by the Controller, who may take account of the view of the Processors, however the final decision as to the content of this Appendix shall be with the Controller at its absolute discretion.
2. The contact details of the Controller's Data Protection Officer are: [Insert contact details]
3. The contact details of the Processor's Data Protection Officer are: [Insert contact details]
4. The Processor shall comply with any further written instructions with respect to processing by the Controller.

Any such further instructions shall be incorporated into this Appendix.

Description	Details
-------------	---------

Identity of the Controller and Processor	The Parties acknowledge that for the purposes of the Data Protection Legislation, the Employer is the Controller and the Contractor is the Processor in accordance with paragraph 1.1.
Subject matter of the processing	<p>[This should be a high level, short description of what the processing is about i.e. its subject matter of the contract.</p> <p>Example: The processing is needed in order to ensure that the Processor can effectively deliver the contract to provide a service to members of the public.]</p>
Duration of the processing	[Clearly set out the duration of the processing including dates]
Nature and purposes of the processing	<p>[Please be as specific as possible, but make sure that you cover all intended purposes.</p> <p>The nature of the processing means any operation such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction of data (whether or not by automated means) etc.</p> <p>The purpose might include: employment processing, statutory obligation, recruitment assessment etc]</p>
Type of Personal Data being processed	[Examples here include: name, address, date of birth, NI number, telephone number, pay, images, biometric data etc]
Categories of Data Subject	[Examples include: Staff (including volunteers, agents, and temporary workers), customers/ clients, suppliers, patients, students / pupils, members of the public, users of a particular website etc]
Plan for return and destruction of the data once the processing is complete UNLESS requirement under union or member	[Describe how long the data will be retained for, how it be returned or destroyed]

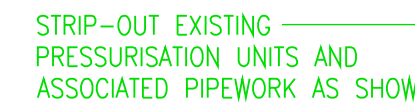
state law to preserve that type of data	
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SCHEDULE 11
[EMPLOYER PLANNING CONDITIONS]²¹

²¹ This should list any planning conditions that the Contractor cannot discharge. Each Employer Planning Condition should be clearly identified in Schedule 11. It is acknowledged that some planning conditions require both the Contractor's and the Employer's input in order to discharge them. In such circumstances, the responsibilities of each party should be clearly set out in the table in this Schedule 11.

SCHEDULE 12
EXISTING BUILDINGS

Appendix D – Drawings & Photos



DRAWING NUMBER:	REVISION:
22106-BVR-MEC-SCS 00-DR-M-1800	P01



THIS DRAWING MUST BE PRINTED IN COLOUR

HEALTH AND SAFETY ISSUES

1 SEE DESIGNERS RISK ASSESSMENT

NOTES

- DO NOT SCALE. CHECK ALL DIMENSIONS ON SITE.
- REFER TO SCHEMATIC FOR VALVE ARRANGEMENT.

KEY

- EXISTING TO BE RETAINED
- NEW WORKS

LEGEND

MWS	MAINS WATER SUPPLY
HTGF	HEATING FLOW
HTGR	HEATING RETURN
IV	ISOLATION VALVE
D/C	DRAIN COCK
AAV	AUTOMATIC AIR VENT
STR	STRAINER
SV	SOLENOID VALVE
CV	CONTROL VALVE
D/P	DOSING PUT
PU	PRESSURISATION UNIT
ASHP	AIR SOURCE HEAT PUMP
HG	HIGH GRADE HEATING
LG	LOW GRADE HEATING
PHX	PLATE HEAT EXCHANGER
DS	DIRT SEPARATOR
P	PRESSURE GAUGE
T	TEMPERATURE GAUGE

P01	TENDER ISSUE			
	C. GOVEY	27/01/2023	A. FOREMAN	27/01/2023

REV	DRAWN BY	DATE	CHECKED BY	DATE
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Beveridge Associates Consulting Engineers

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W: beveridge-associates.co.uk

PROJECT TITLE:
SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY:
C. GOVEY

DATE:
JANUARY 2023

APPROVED BY:
A. FOREMAN

SCALE:
1:20 @ A1

DRAWING TITLE:
PLANT ROOM LAYOUT AND SECTIONS
PROPOSED WORKS

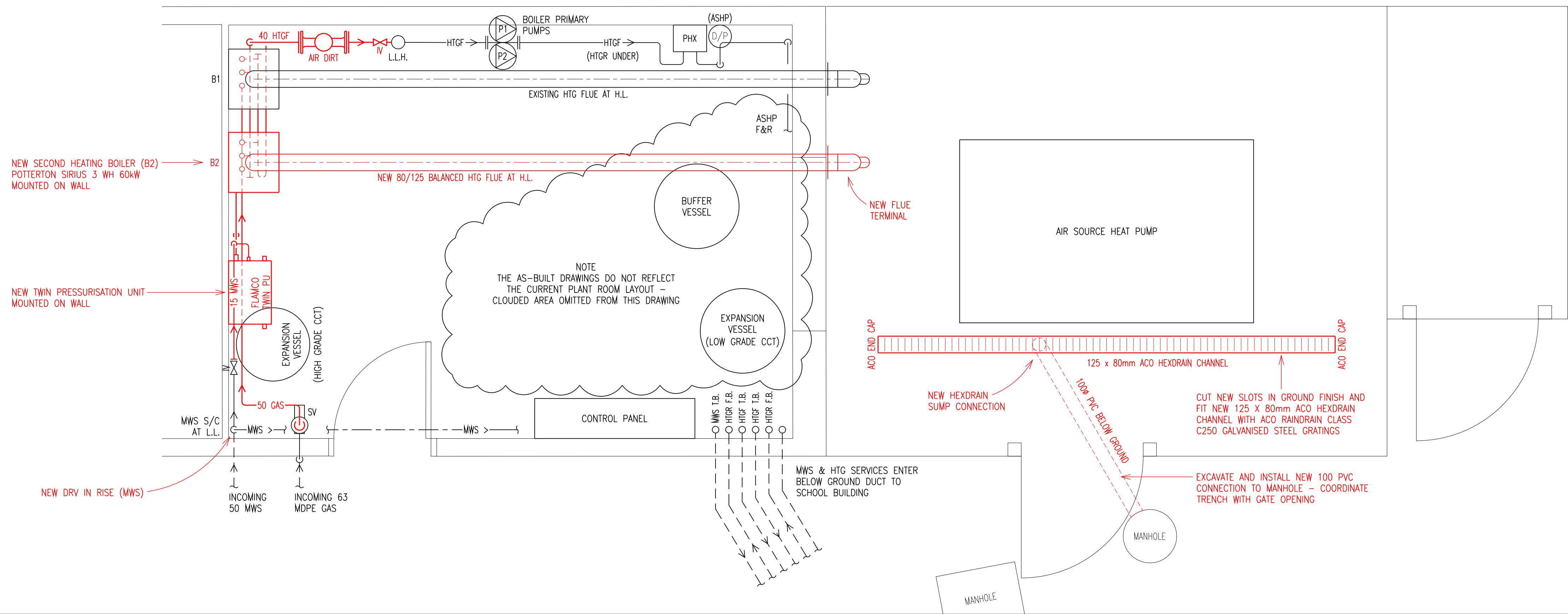
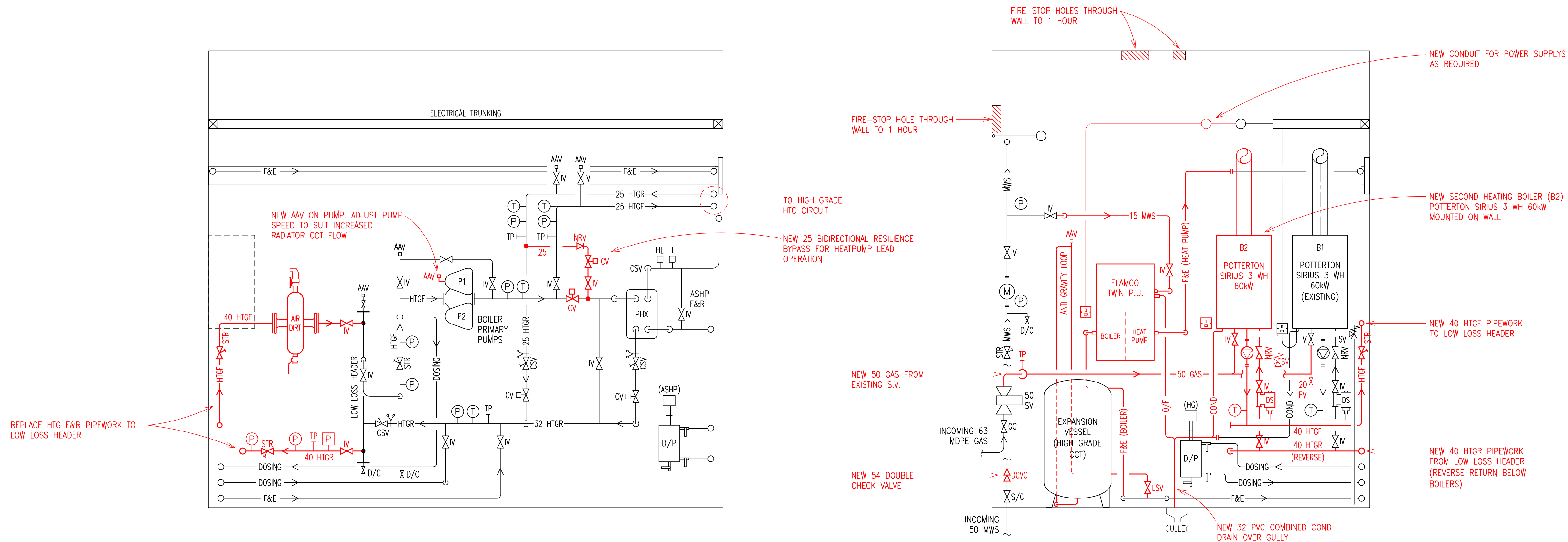
SYSTEM:
MECHANICAL

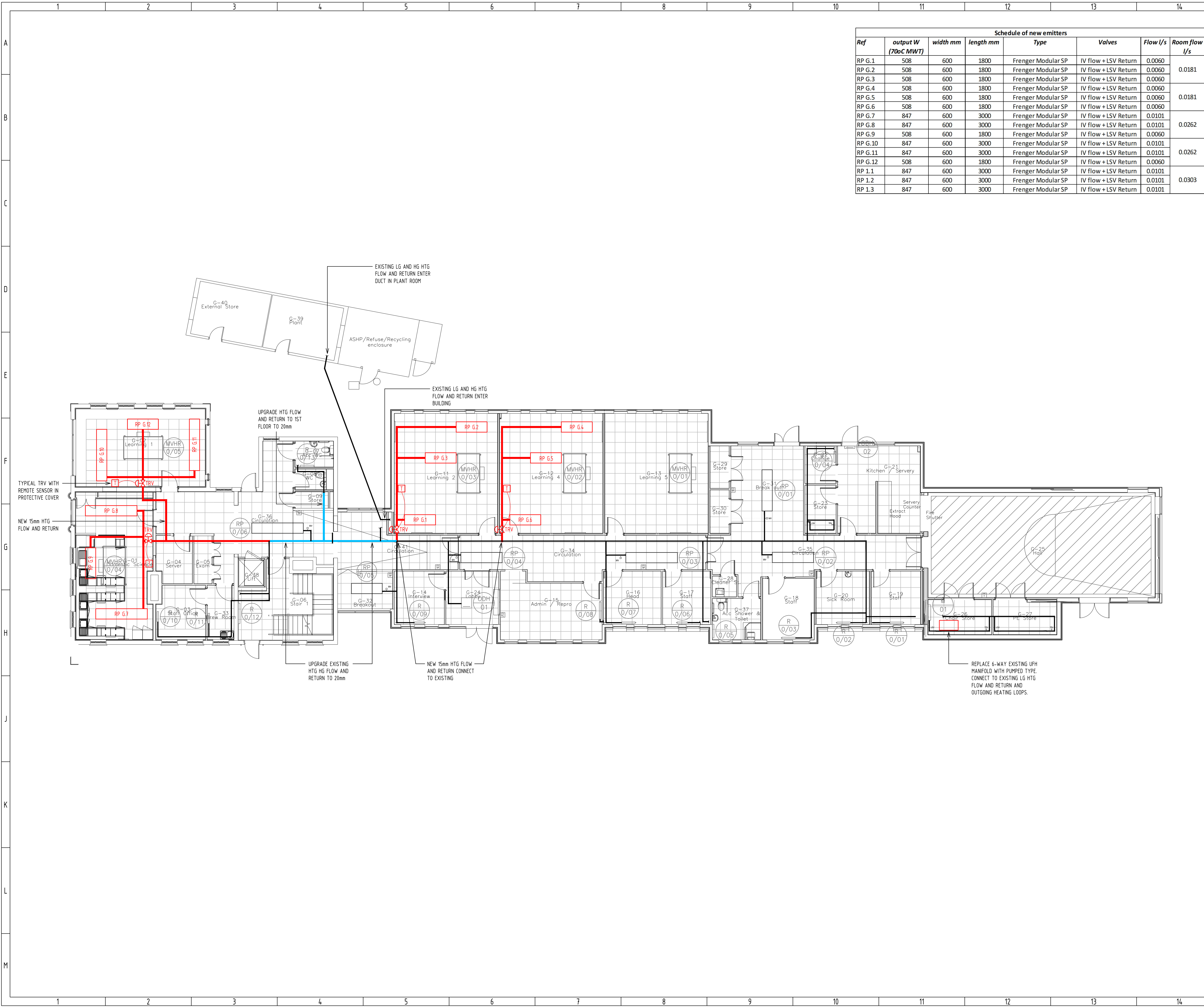
SUITABILITY:
ISSUE FOR TENDER

CODE:
D2


DRAWING NUMBER:
22106-BVR-MEC-SCS_00-DR-M-1801

REVISION:
P01





Schedule of new emitters							
Ref	output W (700C MWT)	width mm	length mm	Type	Valves	Flow l/s	Room flow l/s
RP G.1	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.2	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.3	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.4	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.5	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.6	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.7	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.8	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.9	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0262
RP G.10	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.11	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.12	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP 1.1	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0303
RP 1.2	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP 1.3	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	

**THIS DRAWING MUST BE PRINTED IN COLOUR**

HEALTH AND SAFETY ISSUES

1	SEE DESIGNERS RISK ASSESSMENT
---	-------------------------------

NOTES

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- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE M&E ENGINEERING SPECIFICATION DOCUMENTS.
- ALL PIPEWORK TO BE SUITABLY BRACKETED.
- ALL PIPEWORK WHERE ROUTED WITHIN BUILDING VOIDS OR PLANT AREAS SHALL BE INSULATED.
- PIPE JOINTS/CONNECTIONS WITHIN VOIDS SHALL BE KEPT TO A MINIMUM.
- DOC's SHALL BE INSTALLED AT ALL LOW POINTS OF SYSTEM.
- AAV's SHALL BE INSTALLED AT ALL HIGH POINTS OF SYSTEM.

LEGEND

NEW 15mm HG HEATING FLOW AND RETURN PIPEWORK

UPGRADED 20mm EXISTING HG HEATING FLOW AND RETURN PIPEWORK

EXISTING HEATING FLOW AND RETURN PIPEWORK

NEW REMOTE SENSING TRV AND ROOM SENSOR (IN PROTECTIVE COVER)

NEW RADIANT PANEL

P01	TENDER ISSUE			
	C. DUGGINS	27/01/2023	A. FOREMAN	27/01/2023
REV	DRAWN BY	DATE	CHECKED BY	DATE

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Consulting Engineers

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PROJECT TITLE:

SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY:	DATE:
C. DUGGINS	JANUARY 2023

APPROVED BY:	SCALE:
A. FOREMAN	1:100 @ A1

DRAWING TITLE:

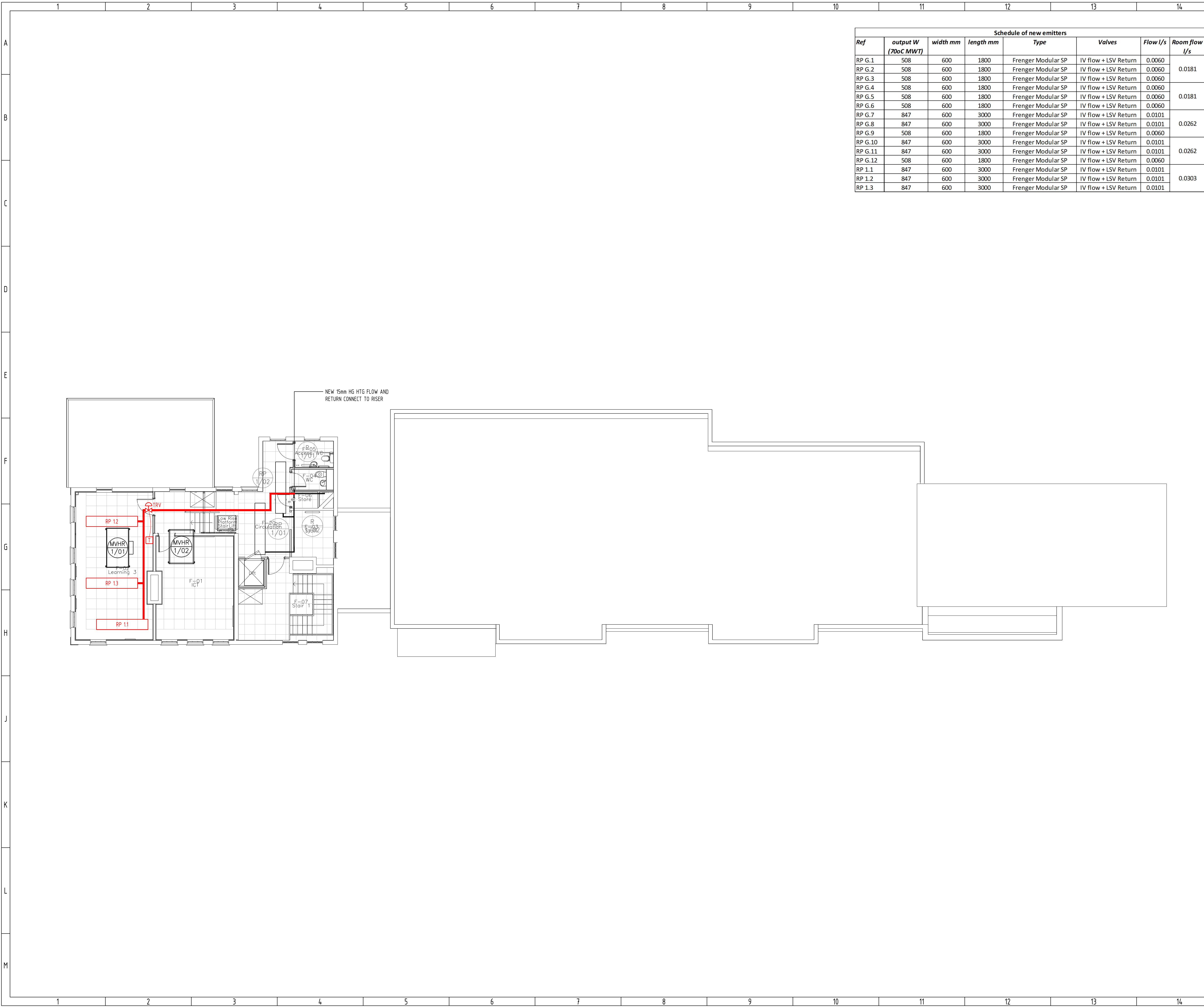
MECHANICAL SERVICES
GROUND FLOOR HEATING LAYOUT

SYSTEM:

MECHANICAL

SUITABILITY:	CODE:
ISSUE FOR TENDER	D2

DRAWING NUMBER:	REVISION:
22106-BVR-MEC-SCS_00-DR-M-1500	P01



Schedule of new emitters							
Ref	output W (70oC MWT)	width mm	length mm	Type	Valves	Flow l/s	Room flow l/s
RP G.1	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.2	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.3	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.4	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.5	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.6	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
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RP G.9	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0262
RP G.10	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.11	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.12	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP 1.1	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0303
RP 1.2	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP 1.3	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	



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HEALTH AND SAFETY ISSUES

- 1SEE DESIGNERS RISK ASSESSMENT
- NOTES
- 1DO NOT SCALE FROM THIS DRAWING.
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- 4ALL PIPEWORK TO BE SUITABLY BRACKETED.
- 5ALL PIPEWORK WHERE ROUTED WITHIN BUILDING VOIDS OR PLANT AREAS SHALL BE INSULATED.
- 6PIPE JOINTS/CONNECTIONS WITHIN VOIDS SHALL BE KEPT TO A MINIMUM.
- 7DOC's SHALL BE INSTALLED AT ALL LOW POINTS OF SYSTEM.
- 8AAV's SHALL BE INSTALLED AT ALL HIGH POINTS OF SYSTEM.

LEGEND

- NEW 15mm HG HEATING FLOW AND RETURN PIPEWORK
- UPGRADED 20mm EXISTING HG HEATING FLOW AND RETURN PIPEWORK
- EXISTING HEATING FLOW AND RETURN PIPEWORK
- NEW REMOTE SENSING TRV AND ROOM SENSOR (IN PROTECTIVE COVER)
- RP

NEW RADIANT PANEL

P01	TENDER ISSUE			
	C. DUGGINS	27/01/2023	A. FOREMAN	27/01/2023
REV	DRAWN BY	DATE	CHECKED BY	DATE

Beveridge Associates
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PROJECT TITLE:
SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY: C. DUGGINS	DATE: JANUARY 2023
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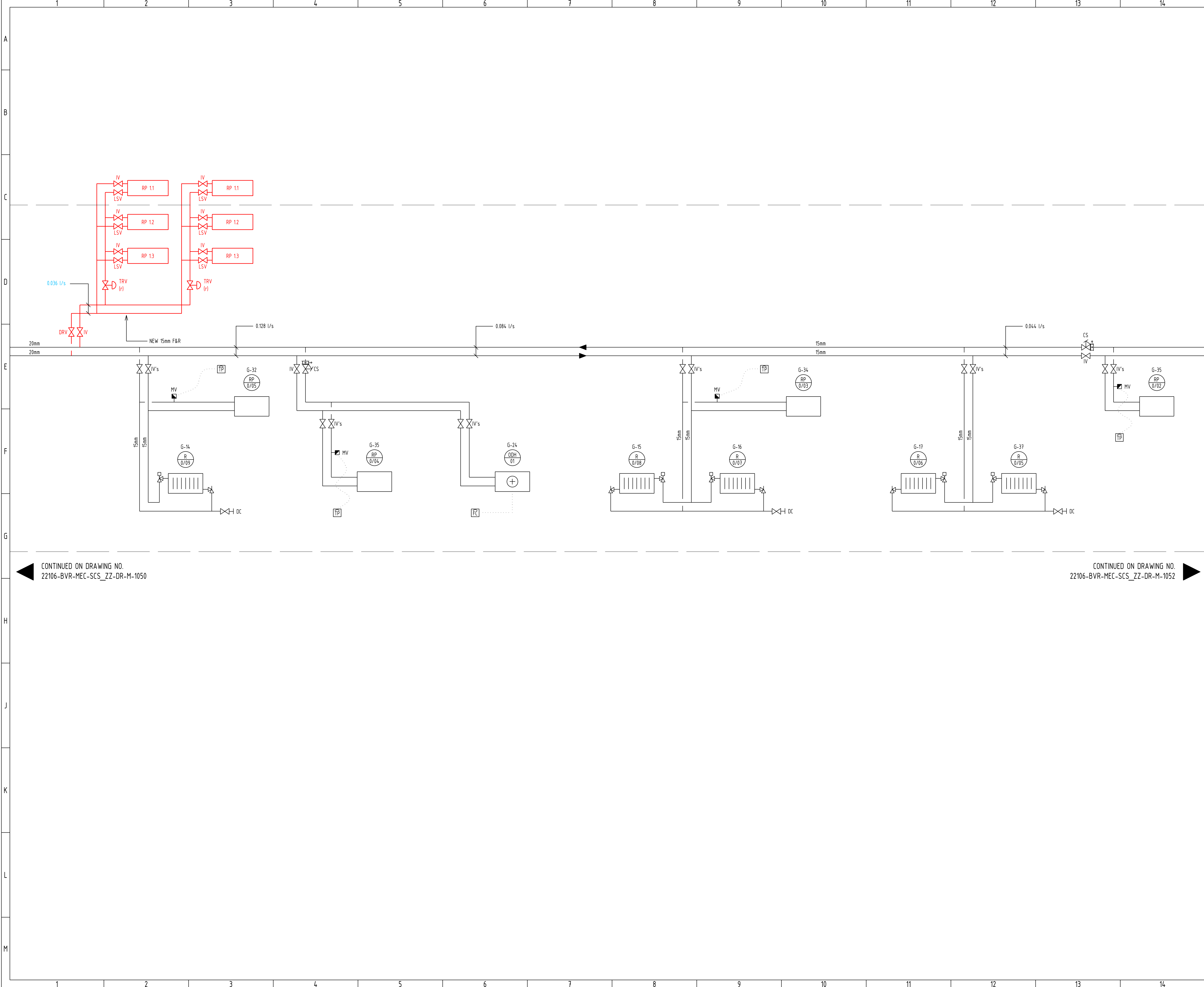
APPROVED BY: A. FOREMAN	SCALE: 1:100 @ A1
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DRAWING TITLE:
MECHANICAL SERVICES
FIRST FLOOR HEATING LAYOUT

SYSTEM:
MECHANICAL

SUITABILITY: ISSUE FOR TENDER	CODE: D2
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DRAWING NUMBER: 22106-BVR-MEC-SCS_01-DR-M-1501	REVISION: P01
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THIS DRAWING MUST BE PRINTED IN COLOUR

HEALTH AND SAFETY ISSUES

1	SEE DESIGNERS RISK ASSESSMENT
---	-------------------------------

NOTES

1.

DO NOT SCALE FROM THIS DRAWING.

2.

ALL DIMENSIONS ARE TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION, MANUFACTURE OF ANY COMPONENTS AND ORDERING OF MATERIALS AND EQUIPMENT.

3.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE M&E ENGINEERING SPECIFICATION DOCUMENTS.

4.

ALL PIPEWORK TO BE SUITABLY BRACKETED.

5.

ALL PIPEWORK WHERE ROUTED WITHIN BUILDING VOIDS OR PLANT AREAS SHALL BE INSULATED.

6.

PIPE JOINTS/CONNECTIONS WITHIN VOIDS SHALL BE KEPT TO A MINIMUM.

7.

DOC'S SHALL BE INSTALLED AT ALL LOW POINTS OF SYSTEM.

8.

AAV'S SHALL BE INSTALLED AT ALL HIGH POINTS OF SYSTEM.

LEGEND

NEW 15mm HG HEATING F&R PIPEWORK

UPGRADED 20mm EXISTING HG HEATING F&R PIPEWORK

RP

NEW RADIANT PANEL

P01	TENDER ISSUE			
	C. DUGGINS	27/01/2023	A. FOREMAN	27/01/2023
REV	DRAWN BY	DATE	CHECKED BY	DATE

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PROJECT TITLE:

SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY:	DATE:
C. DUGGINS	JANUARY 2023

APPROVED BY:	SCALE:
A. FOREMAN	1:50 @ A1

DRAWING TITLE:

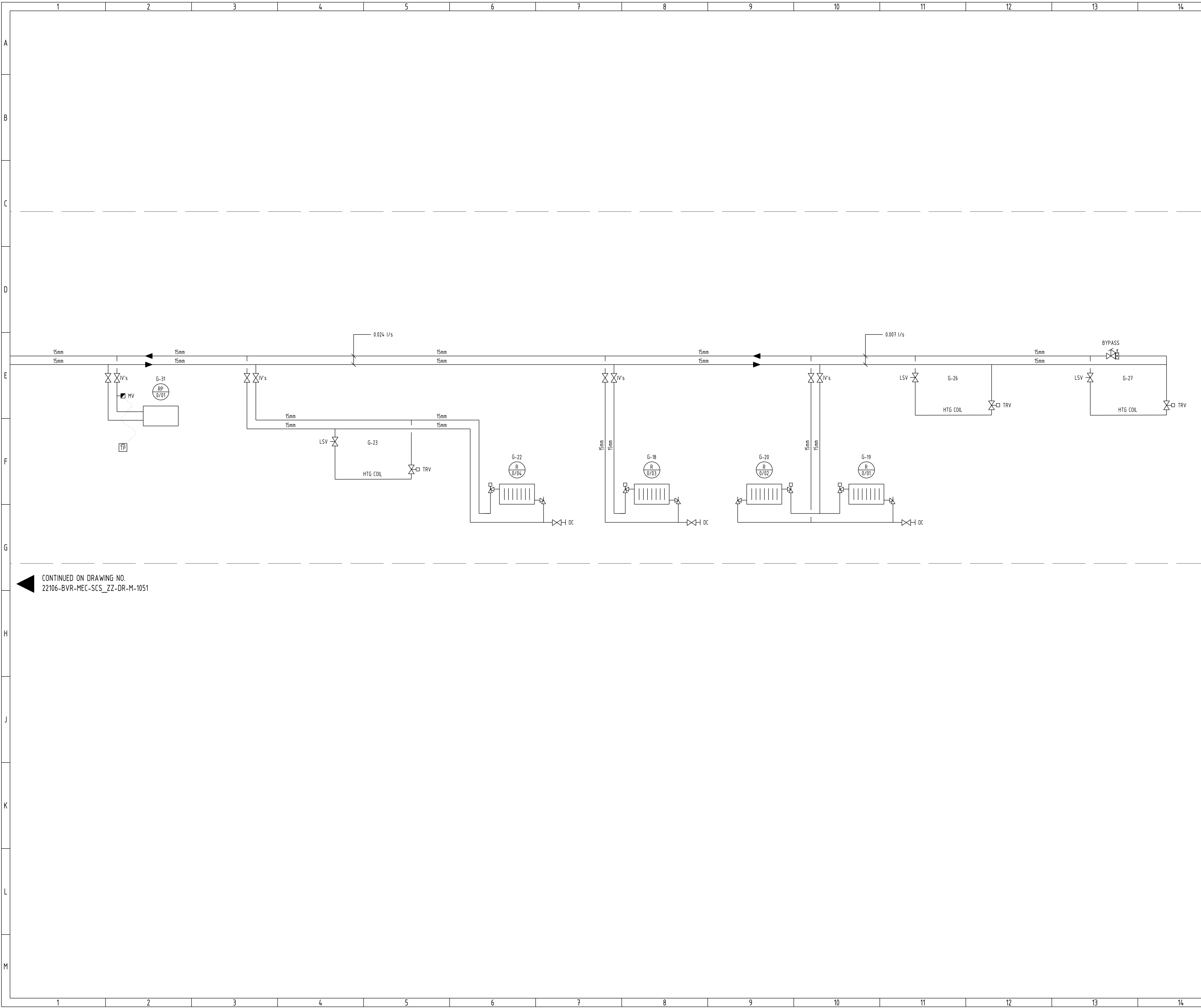
MECHANICAL SERVICES
LTHW HEATING PIPEWORK SCHEMATIC
SHEET 2 OF 3

SYSTEM:

MECHANICAL

SUITABILITY:	CODE:
ISSUE FOR TENDER	D2

DRAWING NUMBER:	REVISION:
22106-BVR-MEC-SCS_ZZ-DR-M-1051	P01



THIS DRAWING MUST BE PRINTED IN COLOUR

HEALTH AND SAFETY ISSUES

1 SEE DESIGNERS RISK ASSESSMENT

NOTES

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- AAV's SHALL BE INSTALLED AT ALL HIGH POINTS OF SYSTEM.

LEGEND

- NEW 15mm HG HEATING F&R PIPEWORK
- UPGRADED 20mm EXISTING HG HEATING F&R PIPEWORK
- RP NEW RADIANT PANEL

P01	TENDER ISSUE			
	C. DUGGINS	27/01/2023	A. FOREMAN	27/01/2023
REV	DRAWN BY	DATE	CHECKED BY	DATE

Beveridge Associates
Consulting Engineers

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PROJECT TITLE:
SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY:
C. DUGGINS

DATE:
JANUARY 2023

APPROVED BY:
A. FOREMAN

SCALE:
1:50 @ A1

DRAWING TITLE:
MECHANICAL SERVICES
LTHW HEATING PIPEWORK SCHEMATIC
SHEET 3 OF 3

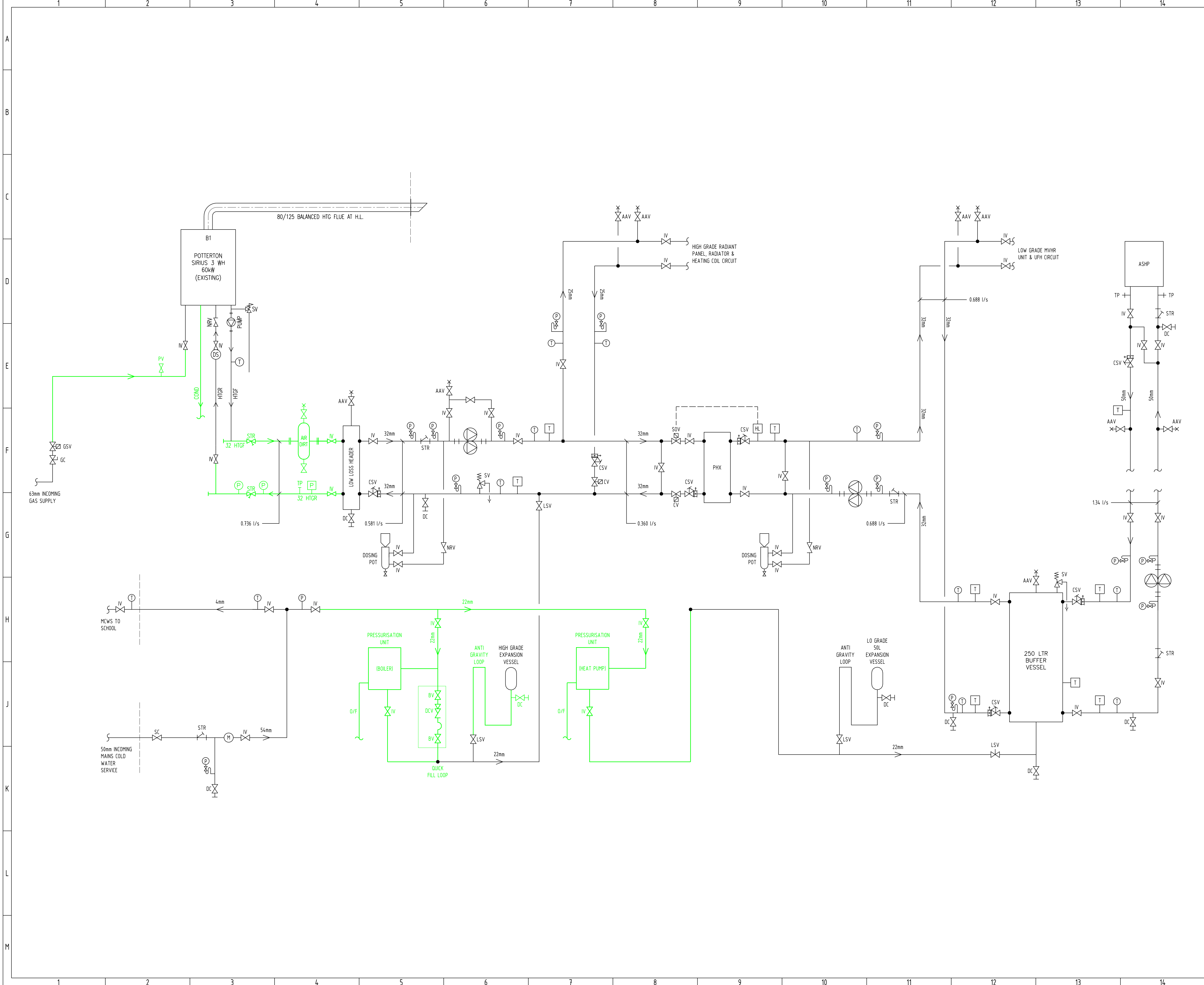
SYSTEM:
MECHANICAL

SUITABILITY:
ISSUE FOR TENDER

CODE:
D2

DRAWING NUMBER:
22106-BVR-MEC-SCS_ZZ-DR-M-1052

REVISION:
P01



THIS DRAWING MUST BE PRINTED IN COLOUR

HEALTH AND SAFETY ISSUES

1	SEE DESIGNERS RISK ASSESSMENT
---	-------------------------------

NOTES

1.

DO NOT SCALE. CHECK ALL DIMENSIONS ON SITE.

2.

REFER TO SCHEMATIC FOR VALVE ARRANGEMENT.

KEY

EXISTING TO BE RETAINED

EXISTING TO BE STRIPPED OUT

LEGEND

MWS

MAINS WATER SUPPLY

HTGF

HEATING FLOW

HTGR

HEATING RETURN

IV

ISOLATION VALVE

D/C

DRAIN COCK

AAV

AUTOMATIC AIR VENT

STR

STRAINER

SV

SOLENOID VALVE

CV

CONTROL VALVE

D/P

DOSING PUT

PU

PRESSURISATION UNIT

ASHP

AIR SOURCE HEAT PUMP

HG

HIGH GRADE HEATING

LG

LOW GRADE HEATING

PHX

PLATE HEAT EXCHANGER

DS

DIRT SEPARATOR

P

PRESSURE GAUGE

T

TEMPERATURE GAUGE

TENDER ISSUE

P01	C. GOVEY	27/01/2023	A. FOREMAN	27/01/2023
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REV

DRAWN BY	DATE	CHECKED BY	DATE
C. GOVEY	27/01/2023	A. FOREMAN	27/01/2023

Beveridge Associates

Consulting Engineers

REGENCY HOUSE, STATION ROAD, HAROLD WOOD, ESSEX, RM3 0BS

T: 01708 336 969

W: beveridge-associates.co.uk

PROJECT TITLE:

SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY:

C. GOVEY

DATE:

JANUARY 2023

APPROVED BY:

A. FOREMAN

SCALE:

N.T.S. @ A1

DRAWING TITLE:

PLANTROOM HEATING SCHEMATIC
STRIP-OUT OF EXISTING

SYSTEM:

MECHANICAL

SUITABILITY:

ISSUE FOR TENDER

CODE:

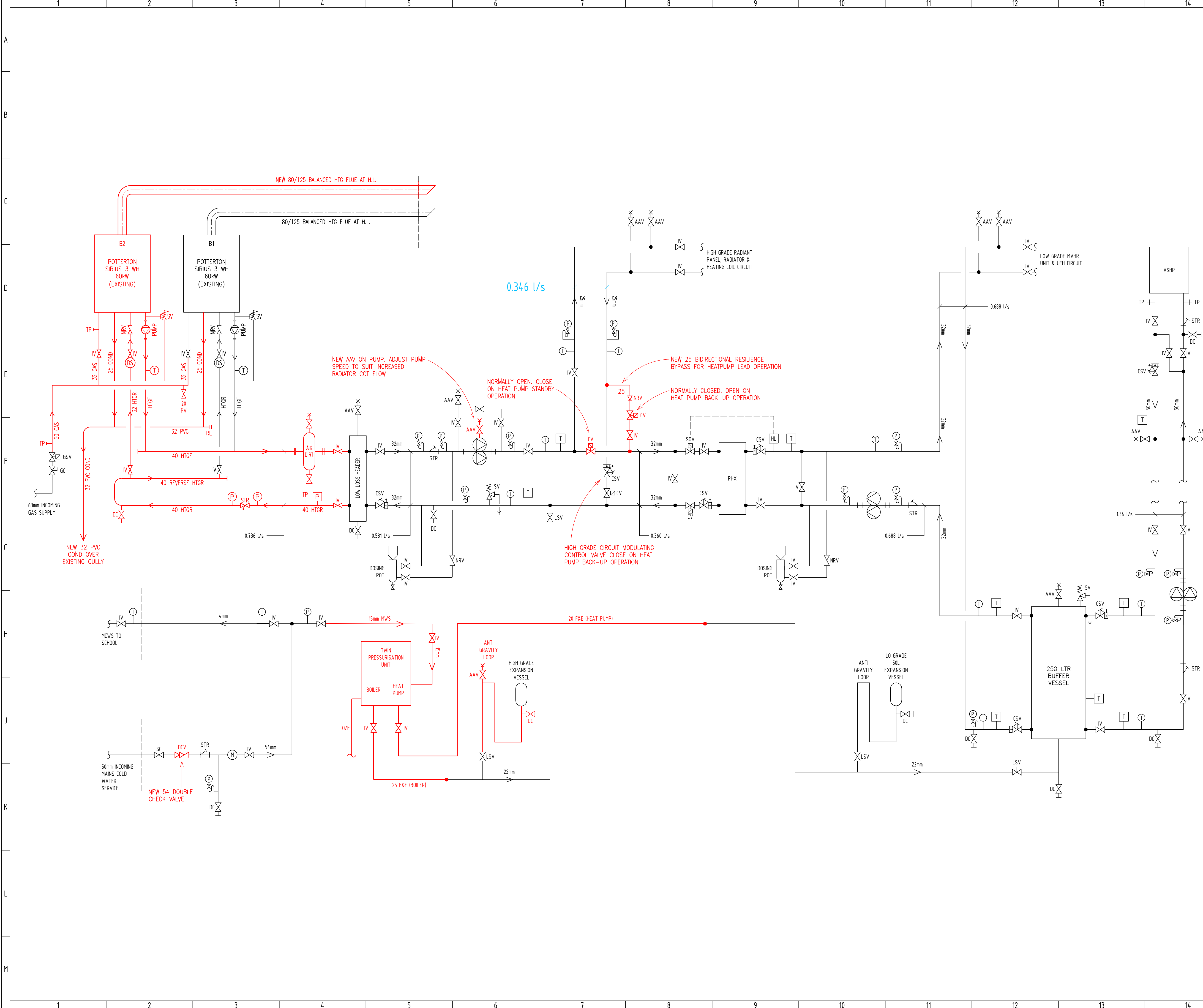
D2

DRAWING NUMBER:

22106-BVR-MEC-SCS_ZZ-DR-M-1053

REVISION:

P01



THIS DRAWING MUST BE PRINTED IN COLOUR

HEALTH AND SAFETY ISSUES

1	SEE DESIGNERS RISK ASSESSMENT
---	-------------------------------

NOTES

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KEY

- NEW 15mm HG HEATING F&R PIPEWORK
- UPGRADED 20mm EXISTING HG HEATING F&R PIPEWORK

LEGEND

MWS	MAINS WATER SUPPLY
HTGF	HEATING FLOW
HTGR	HEATING RETURN
IV	ISOLATION VALVE
D/C	DRAIN COCK
AAV	AUTOMATIC AIR VENT
STR	STRAINER
SV	SOLENOID VALVE
CV	CONTROL VALVE
D/P	DOSING PUT
PU	PRESSURISATION UNIT
ASHP	AIR SOURCE HEAT PUMP
HG	HIGH GRADE HEATING
LG	LOW GRADE HEATING
PHX	PLATE HEAT EXCHANGER
DS	DIRT SEPARATOR
P	PRESSURE GAUGE
T	TEMPERATURE GAUGE

TENDER ISSUE			
P01	C. GOVEY	27/01/2023	A. FOREMAN
REV			
	DRAWN BY	DATE	CHECKED BY
			DATE

Beveridge Associates
Consulting Engineers
REGENCY HOUSE, STATION ROAD, HAROLD WOOD, ESSEX, RM3 0BS
T: 01708 336 969
W: beveridge-associates.co.uk

PROJECT TITLE:
SOUTHEND YMCA COMMUNITY SCHOOL
SUPPLEMENTARY HEATING WORKS

DRAWN BY: C. GOVEY	DATE: JANUARY 2023
-----------------------	-----------------------

APPROVED BY: A. FOREMAN	SCALE: N.T.S. @ A1
----------------------------	-----------------------

DRAWING TITLE:
PLANTROOM HEATING SCHEMATIC
PROPOSED WORKS

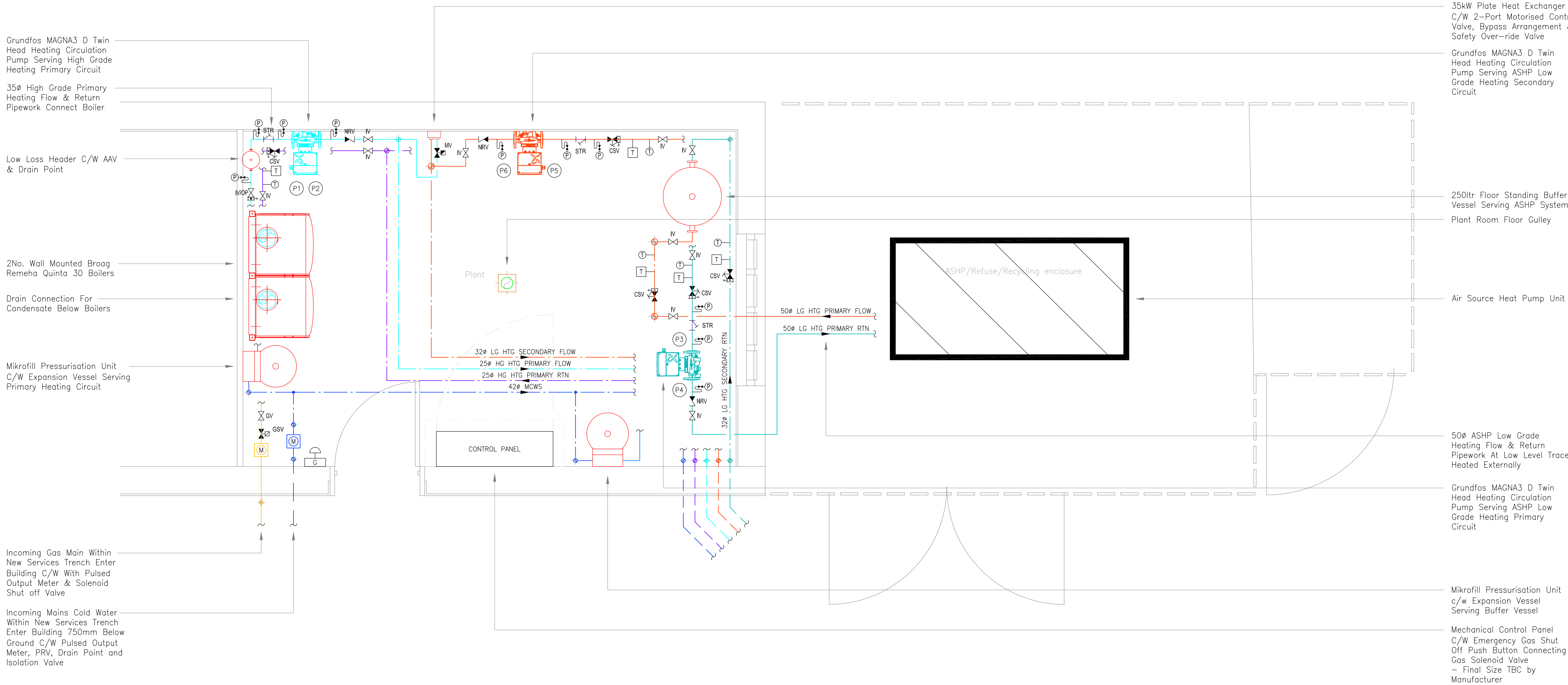
SYSTEM:
MECHANICAL

SUITABILITY: ISSUE FOR TENDER	CODE: D2
----------------------------------	-------------

DRAWING NUMBER: 22106-BVR-MEC-SCS_ZZ-DR-M-1054	REVISION: P01
---	------------------

Schedule of Supplementary Radiant Panels.

Schedule of new emitters							
Ref	output W (70oC MWT)	width mm	length mm	Type	Valves	Flow l/s	Room flow l/s
RP G.1	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.2	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.3	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.4	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.5	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.6	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.7	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0262
RP G.8	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.9	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.10	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0262
RP G.11	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.12	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP 1.1	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0303
RP 1.2	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP 1.3	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	



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- Any discrepancies are to be reported to the BSE for clarification.
- This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
- All pipework to be suitably bracketed.
- All pipework where routed within building voids or plant areas shall be insulated.
- Automatic air vents (AAV's) shall be provided at all high points.
- Drain off valves (DOC's) to be installed at all low points on the system.
- Mechanical sub-contractor to include for all valves necessary for an installation of this nature.
- All pump sets to be installed on anti-vibration mounts c/w flexible connections in accordance with manufacturers recommendations.
- All condensate drains & overflow pipes to be routed to drain.
- Safety valve discharge pipes to be routed to drain.
- All pipework within the boiler room to be insulated and finished in metal clad aluminium or equivalent.
- Hatched area denotes service/maintenance zones.
- Refer to Piped services drawings for routes from boiler room.
- Refer to Plantroom Heating Schematic for all valves and pipesizes.
- Refer to schedule of equipment for plant selection.
- Dosing pot not shown for clarity.
- Condensate/relief pipework not shown for clarity.

ALL ENGINEERING PLANT AND EQUIPMENT
SELECTED FOR INSTALLATION BY THE
CONTRACTOR SHALL BE EQUAL AND
DESIGNER APPROVED

Contract Issue
DRAWN BY **K.S.** DATE **08/07/14**

2	08.07.2014	N.H.	Low Loss Header Shown.	M.B.	
1	24.06.2014	N.H.	Raised To Contract Issue. Additional Boiler Added Following TA Comments. ASHP Relocated To Enclosure, Associated Pipework Routes Amended.	L.M.	
0	28.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

project: Southend YMCA Community School

drawing title: Mechanical Services
Plantroom Layout
Ground Floor

designed: N.H. checked: M.B. drawn: N.H. approved:
scale@A1: 1:20 project number: P01354 date: Oct 2013
drawing number: GA-50-00-01 revision: 2

"As Built"

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- This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
- All pipework to be suitably bracketted.
- All pipework where routed within building voids or plant areas shall be insulated.
- All Final domestic pipework connections to terminate with ballloxf isolation valves.
- Blending valves to be installed on all wash hand basins (WHB's) unless noted otherwise.
- Blending valves should be installed within 1m of the final outlet.
- Hot water service return shall route within 300mm of final outlet or blending valve where appropriate.
- Refer to architects and kitchen specialist equipment schedule for all connections.

LEGEND:

- Recessed Fluorescent Luminaire
- Recessed Compact Fluorescent Luminaire
- Recessed LED Emergency Luminaire
- PIR Occupancy Sensor COM RB (recessed)
- Break Glass Call Point
- Heat Detector Fixed Temperature
- Smoke Detector (Optical)
- Intruder Alarm Door Contact
- Wall Mounted Dual Technology Sensor
- Connection Unit Switched 13amp With Flex Outlet
- Proximity Card Reader
- Magnetic Door Lock
- Emergency Break Glass Door Release (not membrane type)
- Socket outlet switched 13 amp double
- Socket outlet switched 13 amp single cleaners
- Connection unit switched 13 amp
- Connection unit switched 13 amp with flex outlet
- Computer Data Outlet (2 Denotes Double)
- Distribution Board TPN

ALL ENGINEERING PLANT AND EQUIPMENT
SELECTED FOR INSTALLATION BY THE
CONTRACTOR SHALL BE EQUAL AND
DESIGNER APPROVED

Contractors Proposal

DRAWN BY K.S. DATE 19/11/13

REV	DATE	BY	DESCRIPTION	CHK	APP
0	19.11.2013	N.H.	For Information	M.B.	

client:

EFA

project:

Southend YMCA Community School

drawing title:

Mechanical & Electrical Services
Kitchen Layout

designed: N.H. checked: M.B. drawn: K.S. approved:

scale@A1: 1:100 project number: P01354 date: Nov 2013

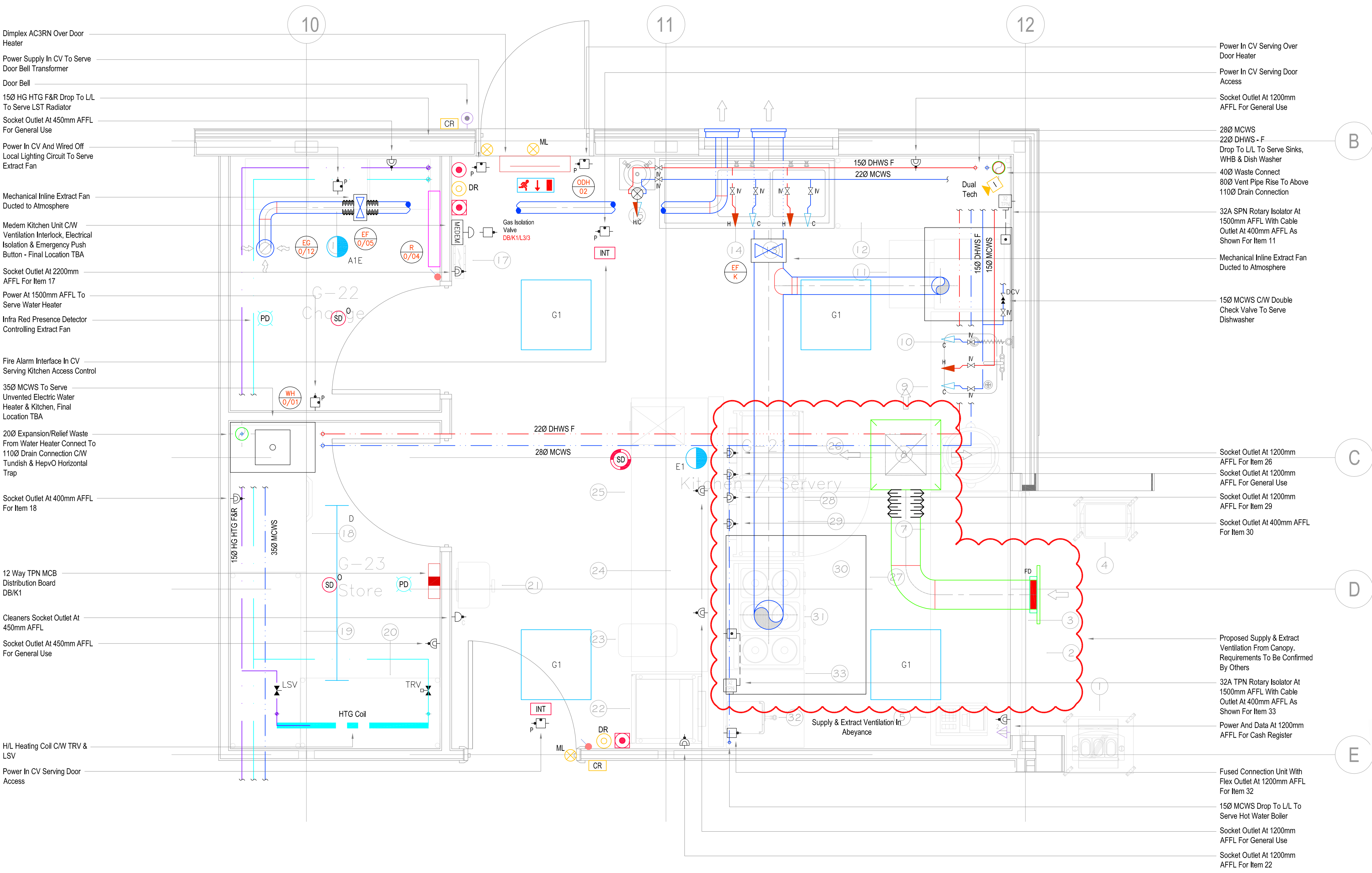
drawing number: GA-50-00-02 revision: 0

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"As Built"

NO	DESCRIPTION	QTY	UNIT	REMARKS	DATE	BY	CHK	APP
1	MULTIPLE COULDER/COMPONENT RACKS	2						
2	DROP DOWN TRAY SLIDE	2						
3	LINE SPLITTER - BY OTHERS	2						
4	LAUNDRY TRAY RACK UP	2						
5	LAUNDRY BENCH	2						
6	COULDER	2						
7	COULDER	2						
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- Any discrepancies are to be reported to the BSE for clarification.
- This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
- All on site excavation, trenches, ducts and permanent reinstatement shall be carried out by the Main Contractor.
- Routes are subject to confirmation of services levels/location from utility companies.
- New gas pipe sizes are subject to confirmation of existing site supply capacity to be confirmed by utilities provider.
- Mains water to enter building minimum 750mm below ground level for frost protection.
- All internal pipework installation to comply with building regulation and local authority requirements.

LEGEND:

- EX G

Existing Gas
- EX W

Existing Water
- G

New Gas
- W

New Water
- E

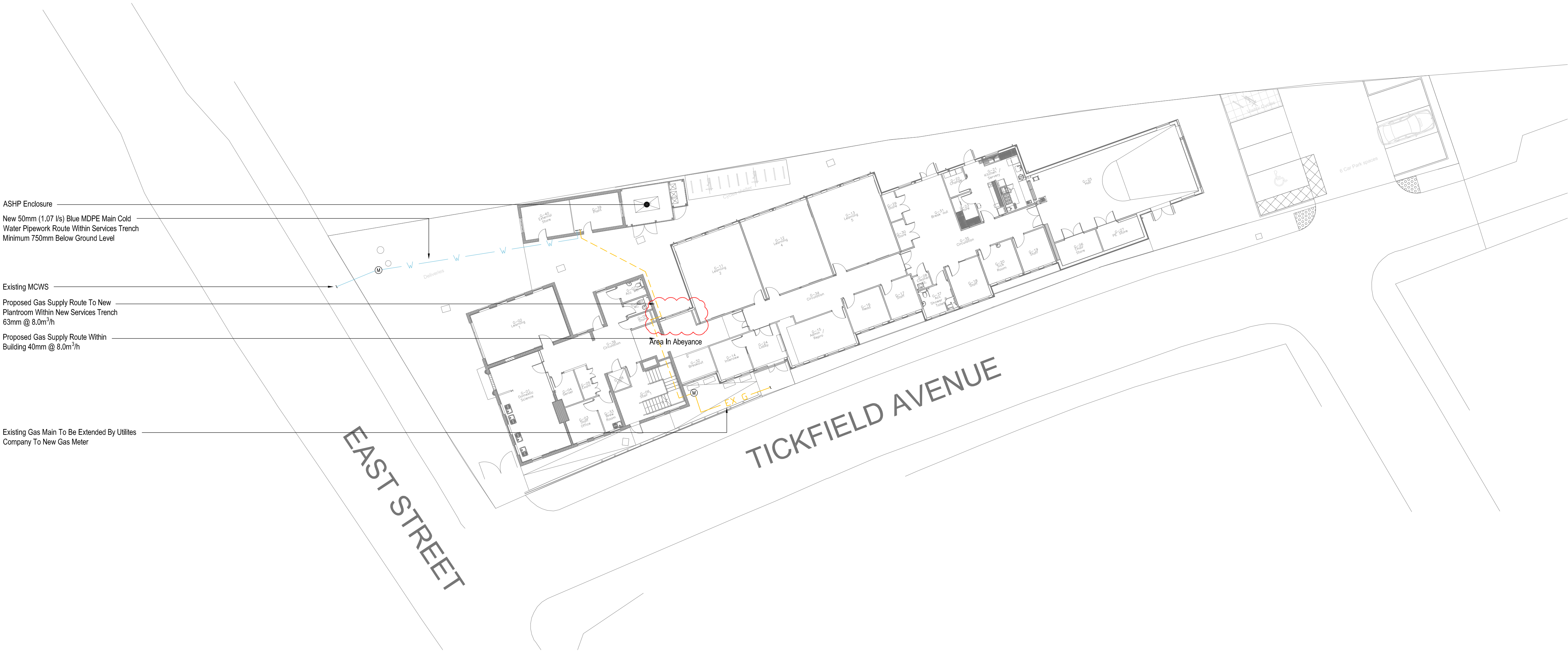
Electrical Services
- ASHP

Air Source Heat Pump (ASHP) Pipework
- AC

Refrigerant Air Conditioning (AC) Pipework
- FH

Fire Hydrant
- M

Meter



ALL ENGINEERING PLANT AND EQUIPMENT
SELECTED FOR INSTALLATION BY THE
CONTRACTOR SHALL BE EQUAL AND
DESIGNER APPROVED

Contract Issue

DRAWN BY

A.F.

DATE

20/06/14

0	20.06.2014	N.H.	Raised To Contract Issue. Gas Pipework Route Amended	L.M.	
0	15.11.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client:
EFA

project:
Southend YMCA Community School

drawing title:
Mechanical Services
Site Wide Layout

designed:
N.H.

checked:
M.B.

drawn:
K.S.

approved:
K.S.

scale@A1:
1:200

project number:
P01354

drawing number:
GA-50-SW-01

date:
Oct 2013

revision:
1

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- Any discrepancies are to be reported to the BSE for clarification.
- This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
- All waste pipework to run 400mm AFFL unless routed in ceiling voids.
- All traps to be 75mm deep seal removable bottle type.
- Fire collar on SVP and pipework above 50mmØ where pipes pass through floors or fire compartments.
- Rodding access to be provided at all levels and all changes in stack positions.
- Access doors in stacks required as necessary.
- All condensate drains to be complete with HepvO horizontal Trap.
- Rain water outlet positions, pipework sizes and stacks to be confirmed by others.
- Installation shall be in accordance with approved building regulations document part H and BS EN 12056.



1	20.06.2014	N.H.	Water Heater Relocated, Raised To Contract Issue.	L.M.	
0	14.10.2013	N.H.	For Information.	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client:
EFA

project:
Southend YMCA Community School

drawing title:
Mechanical Services
Above Ground Drainage
Ground Floor

designed: N.H.
scale@A1: 1:100
drawing number: GA-52-00-01
checked: M.B.
project number: P01354
drawn: K.S.
date: Oct 2013
revision: 1
approved:

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C:

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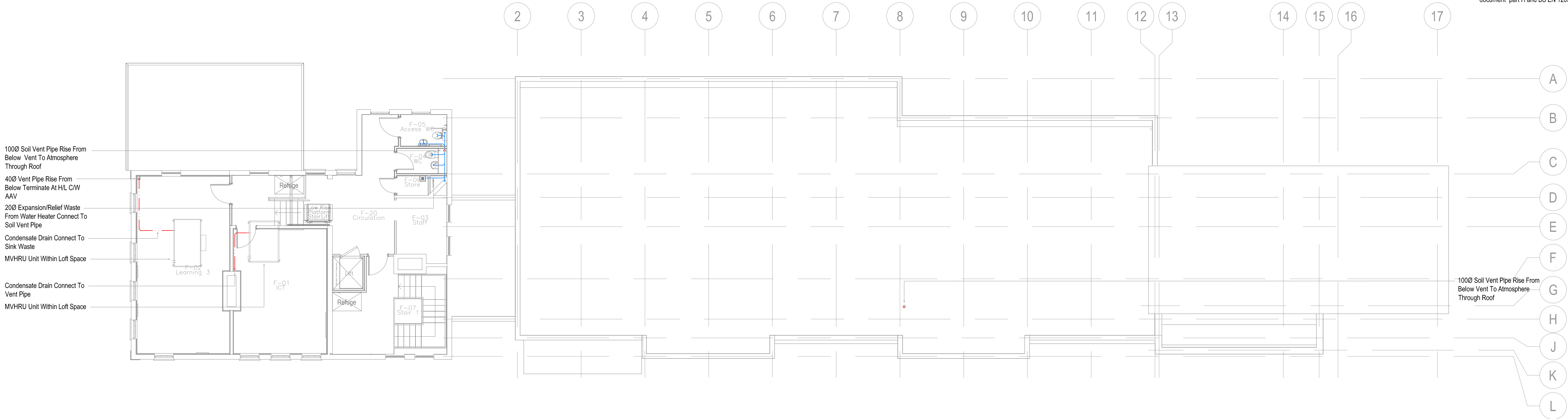
DRAW

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4. Any discrepancies are to be reported to the BSE for clarification.
5. This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
6. All waste pipework to run 400mm AFFL unless routed in ceiling voids.
7. All traps to be 75mm deep seal removable bottle type.
8. Fire collar on SVP and pipework above 50mmØ where pipes pass through floors or fire compartments.
9. Rodding access to be provided at all levels and all changes in stack positions.
10. Access doors in stacks required as necessary.
11. All condensate drains to be complete with HepvO horizontal Trap.
12. Rain water outlet positions, pipework sizes and stacks to be confirmed by others.
13. Installation shall be in accordance with approved building regulations document part H and BS EN 12056.



1	20.06.2014	N.H.	Raised To Contract Issue, AC Unit Omitted For MVHRU CoIL.	L.M.	
0	14.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client:

EFA

project:

Southend YMCA Community School

drawing title:

Mechanical Services
Above Ground Drainage
First Floor

designed: N.H. checked: M.B. drawn: K.S. approved:
scale@A1: 1:100 project number: P01354 date: Oct 2013
drawing number: GA-52-01-01 revision: 1

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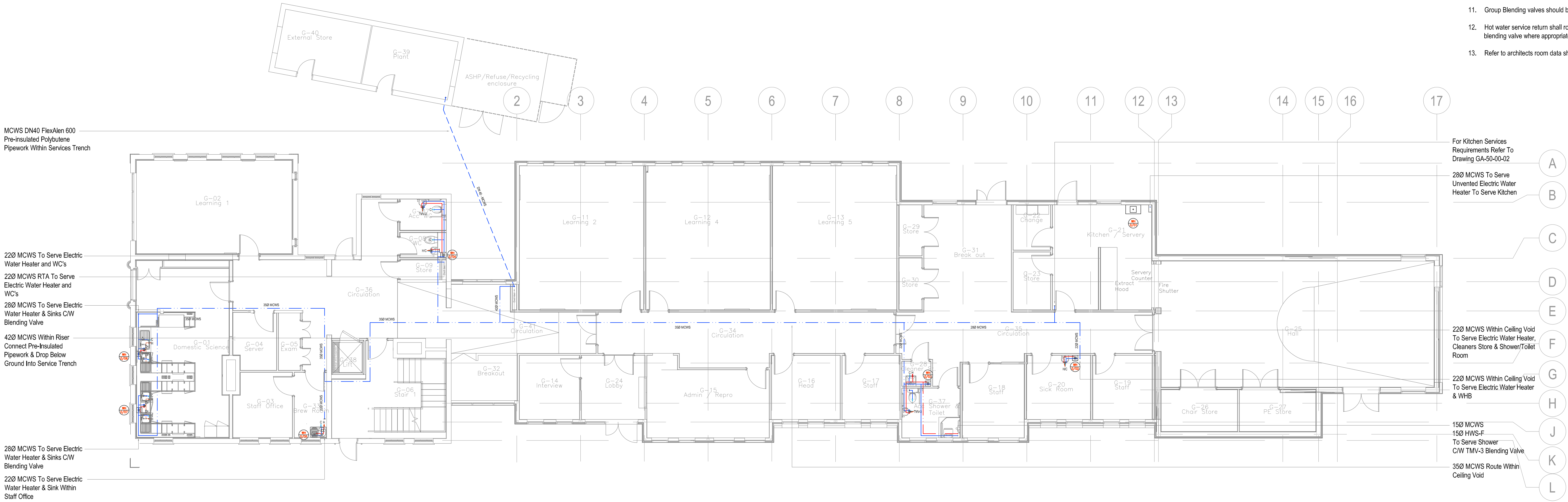
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5. This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
6. All pipework to be suitably bracketed.
7. All pipework where routed within building voids or plant areas shall be insulated.
8. Any visible domestic pipework shall be chrome-plated copper.
9. All Final domestic pipework connections to terminate with ballcofix isolation valves.
10. Blending valves to be installed on all wash hand basins (WHBs) and sinks unless noted otherwise.
11. Group Blending valves should be installed within 3m of the final outlet.
12. Hot water service return shall route within 300mm of final outlet or blending valve where appropriate.
13. Refer to architects room data sheets for sanitaryware requirements.



1	20.08.2014	N.H.	Water Heater Relocated, Pipe Sizes Revised, Raised to Contract Issue.	L.M.	
0	15.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

project: Southend YMCA Community School

drawing title: Mechanical Services
Hot & Cold Water Services
Ground Floor

designed: N.H. checked: M.B. drawn: K.S. approved:
scale@A1: 1:100 project number: P01354 date: Oct 2013
drawing number: GA-53-00-01 revision: 1

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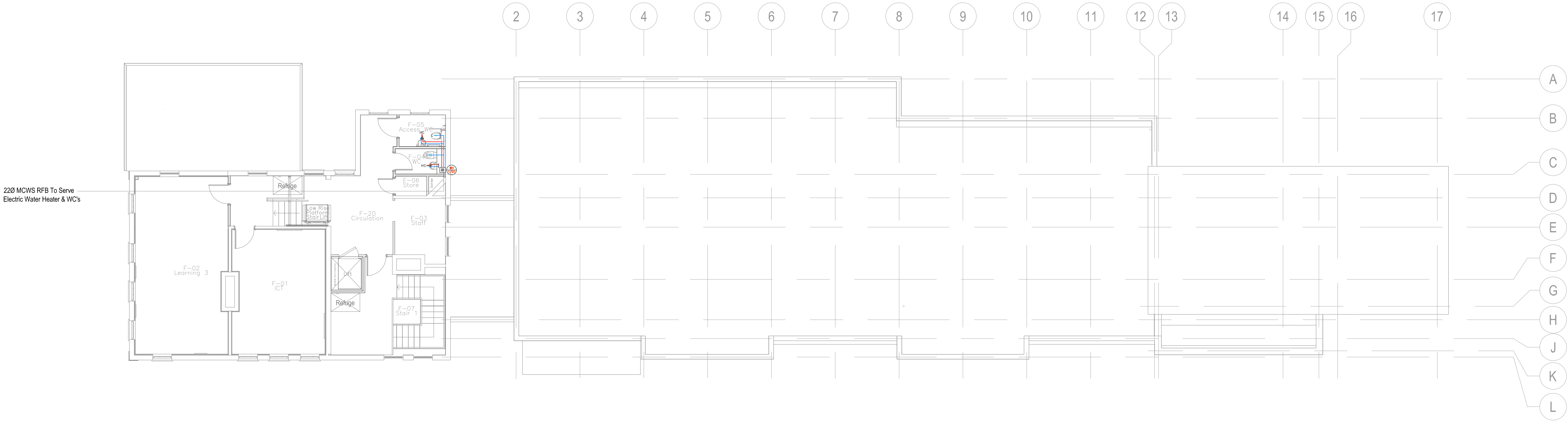
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9. All Final domestic pipework connections to terminate with ballcoix isolation valves.
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11. Group Blending valves should be installed within 3m of the final outlet.
12. Hot water service return shall route within 300mm of final outlet or blending valve where appropriate.
13. Refer to architects room data sheets for sanitaryware requirements.



1	20.06.2014	N.H.	Raised To Contract Issue.	L.M.	
0	15.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

project: Southend YMCA Community School

drawing title: Mechanical Services
Hot & Cold Water Services
First Floor

designed: N.H. checked: M.B. drawn: K.S. approved:
scale@A1: 1:100 project number: P01354 date: Oct 2013
drawing number: GA-53-01-01 revision: 1

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SE
C:

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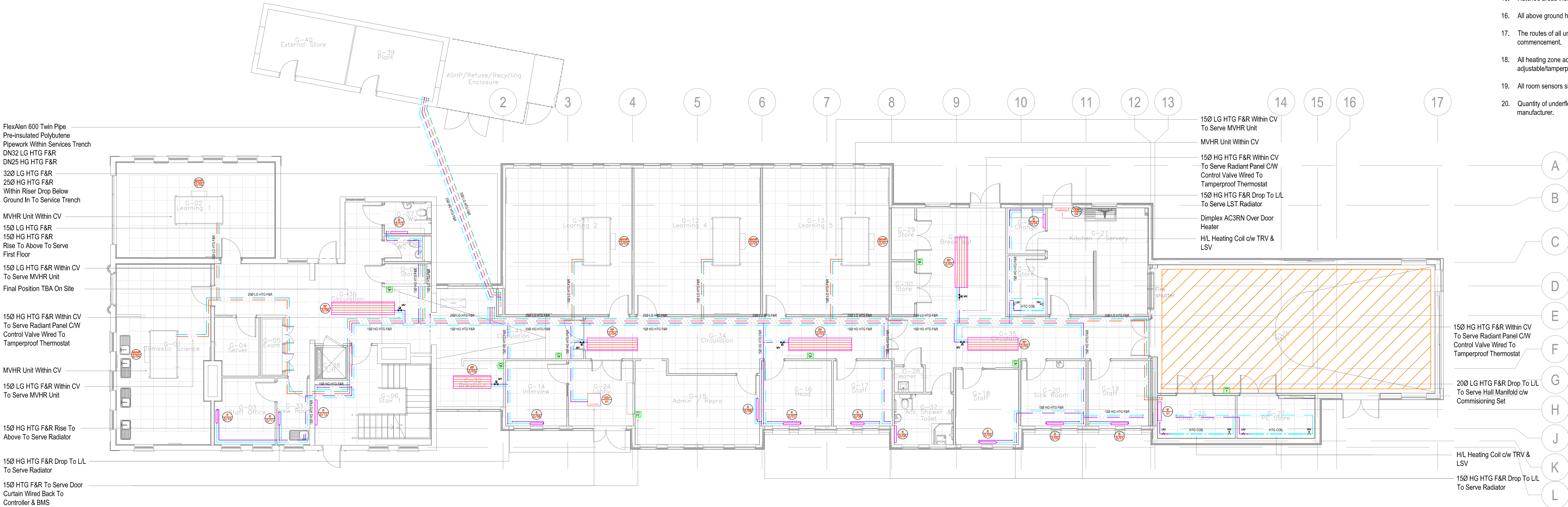
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4. Any discrepancies are to be reported to the BSE for clarification.
5. This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
6. All pipework to be suitably bracketed.
7. All pipework where routed within building voids or plant areas shall be insulated.
8. DOC's shall be installed at all low points of system.
9. AAV's shall be installed at all high points of system.
10. The mechanical sub-contractor shall install commissioning sets and test points on HTG flow & return pipework at each floor level.
11. All radiators and heating coils to have thermostatic radiator valves (TRV) on flow & lockshield valves (LSV) on return pipework connections.
12. Main contractor to provide purpose built removable casings to all pipe drops.
13. Refer to schedules for sizes & duties.
14. Final connections to mechanical ventilation heat recovery units (MVHRU) to be 20mm c/w double regulating valve for commissioning.
15. Hatched areas indicate underfloor heating zones.
16. All above ground heating pipework to be carbon steel.
17. The routes of all underfloor heating shall be verified on site prior to commencement.
18. All heating zone actuators to be controlled from room adjustable/tamperproof sensors.
19. All room sensors shall be mounted at 1500mm above finished floor level.
20. Quantity of underfloor heating zones/manifolds to be advised by manufacturer.



FlexAlen 600 Twin Pipe
Pre-insulated Polybutene
Pipework Within Services Trench
DN32 LG HTG F&R
DN25 HG HTG F&R
320 LG HTG F&R
250 HG HTG F&R
Within Riser Drop Below
Ground In To Service Trench

MVHR Unit Within CV
150 LG HTG F&R
150 HG HTG F&R
Rise To Above To Serve
First Floor

150 LG HTG F&R Within CV
To Serve MVHR Unit
Final Position TBA On Site

150 HG HTG F&R Within CV
To Serve Radiant Panel C/W
Control Valve Wired To
Tamperproof Thermostat

MVHR Unit Within CV
150 LG HTG F&R Within CV
To Serve MVHR Unit

150 HG HTG F&R Rise To
Above To Serve Radiator

150 HG HTG F&R Drop To L/L
To Serve Radiator

150 HTG F&R To Serve Door
Curtain Wired Back To
Controller & BMS

150 LG HTG F&R Within CV
To Serve MVHR Unit
MVHR Unit Within CV

150 HG HTG F&R Within CV
To Serve Radiant Panel C/W
Control Valve Wired To
Tamperproof Thermostat
150 HG HTG F&R Drop To L/L
To Serve LST Radiator

Dimplex AC3RN Over Door
Heater
H/L Heating Coil c/w TRV &
LSV

150 HG HTG F&R Within CV
To Serve Radiant Panel C/W
Control Valve Wired To
Tamperproof Thermostat

200 LG HTG F&R Drop To L/L
To Serve Hall Manifold c/w
Commissioning Set

H/L Heating Coil c/w TRV &
LSV

150 HG HTG F&R Drop To L/L
To Serve Radiator

1	20.06.2014	N.H.	Raised To Contract Issue, Radiator 0/10 & 0/11 Positions Revised To Suit Latest Furniture Layout, Pipework Routes Amended Following Architects Comments.	L.M.	
0	16.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client:

EFA

project:

Southend YMCA Community School

drawing title:

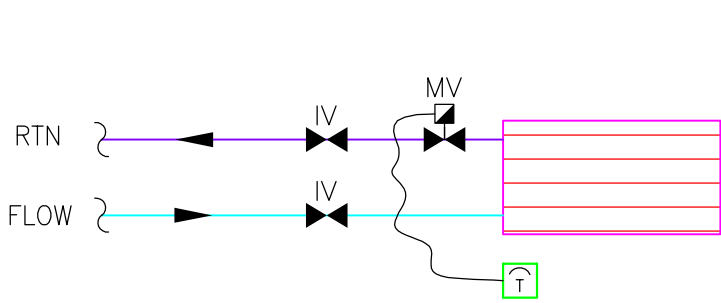
Mechanical Services
Space Heating
Ground Floor

designed: N.H.
scale@A1: 1:100
drawing number: GA-56-00-01

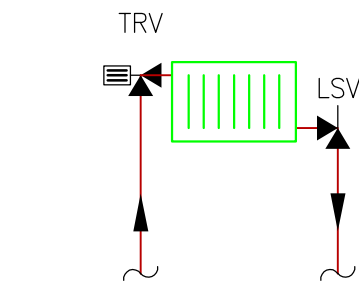
checked: M.B.
project number: P01354

drawn: K.S.
date: Oct 2013
revision: 1

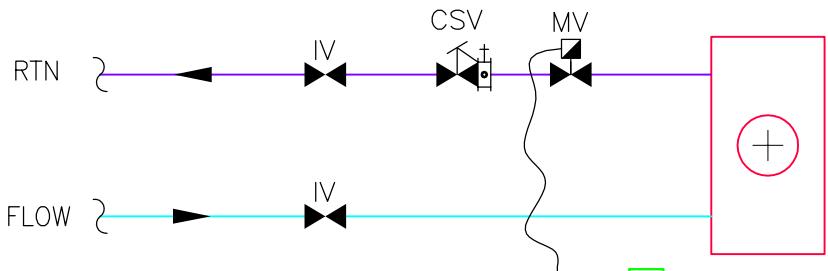
approved:



SCHEMATIC
Typical Radiant Panel Valve Arrangement



SCHEMATIC
Typical Radiator Valve Arrangement



SCHEMATIC
Typical Heat Recovery Unit Valve Arrangement

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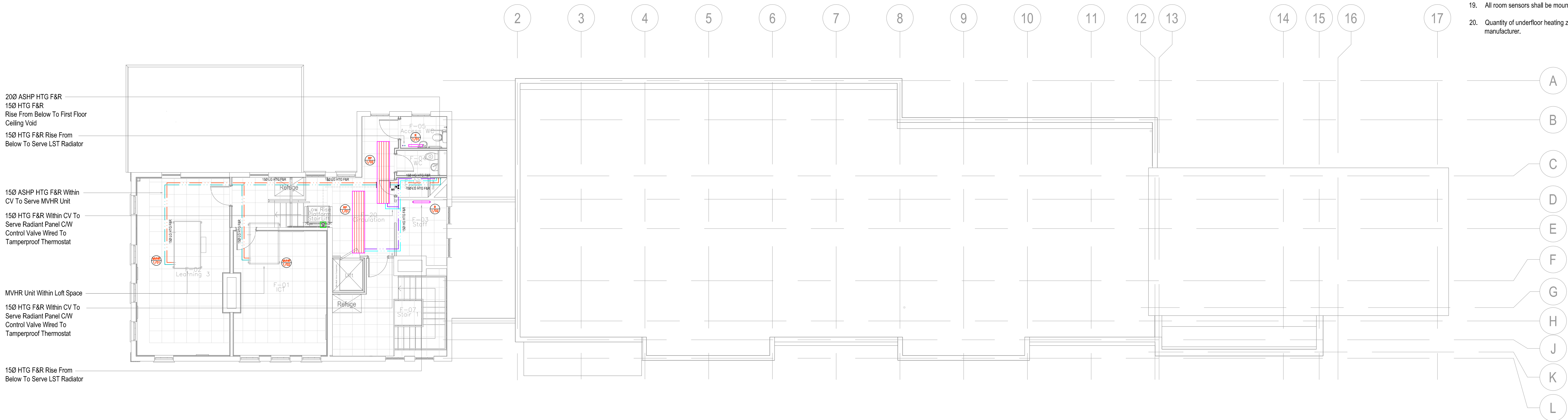
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5. This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
6. All pipework to be suitably bracketed.
7. All pipework where routed within building voids or plant areas shall be insulated.
8. DOC's shall be installed at all low points of system.
9. AAV's shall be installed at all high points of system.
10. The mechanical sub-contractor shall install commissioning sets and test points on HTG flow & return pipework at each floor level.
11. All radiators and heating coils to have thermostatic radiator valves (TRV) on flow & lockshield valves (LSV) on return pipework connections.
12. Main contractor to provide purpose built removable casings to all pipe drops.
13. Refer to schedules for sizes & duties.
14. Final connections to mechanical ventilation heat recovery units (MVHRU) to be 20mm c/w double regulating valve for commissioning.
15. Hatched areas indicate underfloor heating zones.
16. All above ground heating pipework to be carbon steel.
17. The routes of all underfloor heating shall be verified on site prior to commencement.
18. All heating zone actuators to be controlled from room adjustable/tamperproof sensors.
19. All room sensors shall be mounted at 1500mm above finished floor level.
20. Quantity of underfloor heating zones/manifolds to be advised by manufacturer.



1	20.06.2014	N.H.	Raised To Contract Issue. Radiator 1/01 & 1/02 Positions Revised To Suit Latest Furniture Layout.	L.M.	
0	16.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

project: Southend YMCA Community School

drawing title: Mechanical Services
Space Heating
First Floor

designed: N.H.
scale@A1: 1:100
drawing number: GA-56-01-01

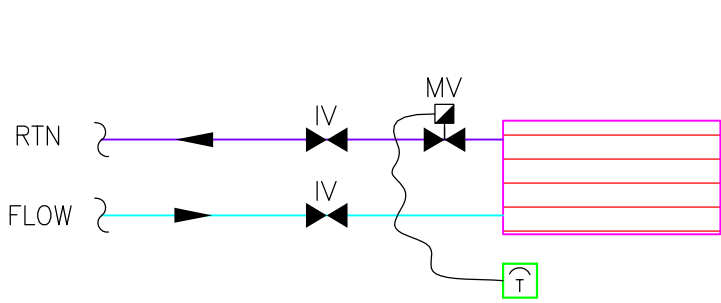
checked: M.B.
project number: P01354

drawn: K.S.

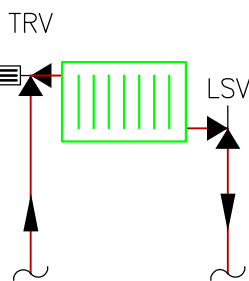
approved: K.S.
date: Oct 2013
revision: 1

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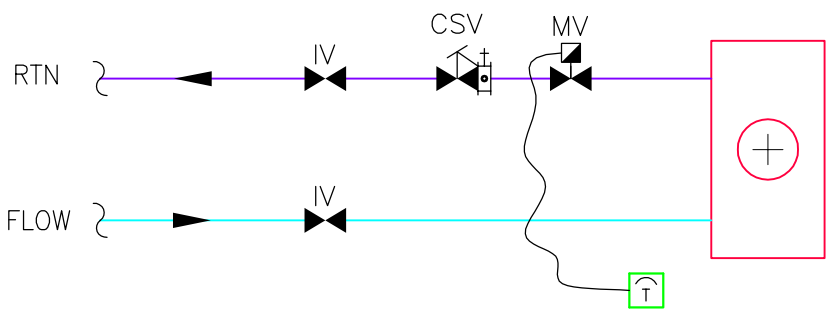
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SCHEMATIC
Typical Radiant Panel Valve Arrangement



SCHEMATIC
Typical Radiator Valve Arrangement



SCHEMATIC
Typical Heat Recovery Unit Valve Arrangement

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- This drawing shall be read in conjunction with the M&E engineering specification documents and the associated architectural information.
- All fire dampers shall provide minimum 1 hour fire integrity.
- Access doors to be provided adjacent all fire dampers for maintenance and re-setting.
- Access doors to be installed adjacent all VCD's.
- All ductwork shall be constructed & installed in accordance with DW144.
- Final ductwork connections may be in flexible where required, maximum length of 500mm.
- MVHR Units within modular construction to be installed at 2950mm AFFL to underside unless noted otherwise.
- Mechanical extract ventilation fans controlled from time clock controllers and local passive infra-red presence detectors.
- For final setting out of grilles refer to reflected ceiling plan.
- Refer to Schedules for sizes and duties.
- Fire dampers to be installed as per Architects Fire Plan to maintain all fire compartmentation.

LEGEND:

- Carbon Dioxide Sensor
- Infra-Red Presence Detector
- Adjustable Temperature Thermostat
- Temperature Sensor
- Manual Boost Push Button
- Mechanical Extract Fan
- Volume Control Damper (VCD)
- Attenuator
- Circular Extract Valve
- 4-Way Blow Extract Grille
- 4-Way Blow Supply Grille
- Weather Louvre
- Fire Damper

Mitsubishi Outdoor AC Unit
External Weather Louvre
Serving Mechanical Extract Fan
Mechanical Inline Extract Fan
Ducted To Atmosphere, Wired
To PIR Detector
Mitsubishi Outdoor AC Unit
External Weather Louvre
Serving HRU's Exhaust
Connection 600x650mm Open
Louvre @ 50% Free Area

MVHR Unit C/W Summer
Bypass
Spiral Wound Galvanised
Ductwork Connecting Supply
Air Grille
Carbon Dioxide Sensor Within
Ceiling Void Adjacent Extract Intake

Wall Mounted Adjustable
Temperature Thermostat and
Boost Button

Refrigerant Pipework Route
Within Ceiling Void To Serve
Server Room AC Unit
Server Room AC Controller
Mechanical Inline Extract Fan
Ducted To Atmosphere, Wired
To Fan Speed Controller

Return Air Grille Serving
Ceiling Plenum

Mitsubishi Wall Mounted Indoor
AC Unit

Spiral Wound Galvanised
Ductwork Connecting Supply
Air Grille

Mechanical Inline Extract Fan
Ducted To Atmosphere, Wired
To PIR Detector

Refrigerant Pipework Rise To
Loft Space & Connect ICT
Suite MVHR Unit

Wall Mounted Adjustable
Temperature Thermostat and
Boost Button

External Weather Louvre
Serving HRU's Exhaust & FAI
Connections

Return Air Grille Serving
Ceiling Plenum

MVHR Unit C/W Summer
Bypass

High & Low Level Vents With
Intumescent Inserts Within
Store Door

Refer To Kitchen Services
Drawing For Ventilation
Requirements

Carbon Dioxide Sensor Within
Ceiling Void Adjacent Extract
Intake

Wall Mounted Temperature
Sensor and Carbon Dioxide
Sensor Wired To BMS Serving
H/L Extract Fans

1000 Extract Ductwork Route
Within Ceiling Void

Mechanical Inline Extract Fan
Ducted To Atmosphere, Wired
To PIR Detector

1	20.06.2014	N.H.	Raised To Contract Issue. Ductwork Routes Amended Following Architects Comments. Extract Fan (EF/005) Added. Extract Grille (EG/012) Added.	L.M.
0	23.10.2013	N.H.	For Information	M.B.
REV	DATE	BY	DESCRIPTION	CHK APP

client:

EFA

project:

Southend YMCA Community School

drawing title:

Mechanical Services
Ventilation
Ground Floor

designed: N.H.
scale@A1: 1:100
drawing number: GA-57-00-01

checked: M.B.
project number: P01354

drawn: K.S.
date: Oct 2013
revision: 1

approved:

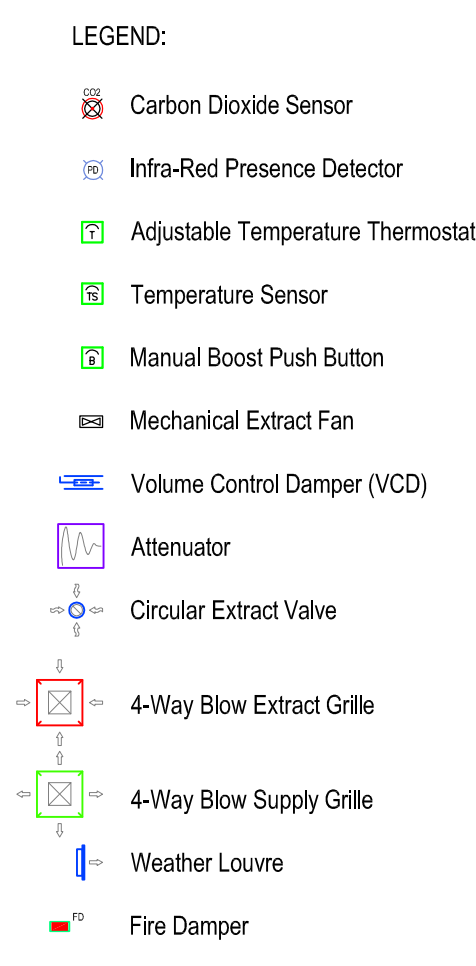
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 6. All fire dampers shall provide minimum 1 hour fire integrity.
 7. Access doors to be provided adjacent all fire dampers for maintenance and re-setting.
 8. Access doors to be installed adjacent all VCD's.
 9. All ductwork to be constructed & installed in accordance with DW144.
 10. Final ductwork connections may be in flexible where required, maximum length of 500mm.
 11. Mechanical extract ventilation fans controlled from time clock controllers and local passive infra-red presence detector unless noted otherwise.
 12. For final setting out of grilles refer to reflected ceiling plan.
 13. Refer to Schedules for sizes and duties.
 14. Fire dampers to be installed as per Architects Fire Plan to maintain all fire compartmentation.

1	23.06.2014	K.S.	Raised To Contract Issue. Duchwork Routes Amended Following Architects Comments.	L.M.	
0	23.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP


client: EFA

project: Southend YMCA Community School

drawing title:

Mechanical Services
Ventilation
First Floor

designed: N.H. checked: M.B. drawn: K.S. approved:
 scale@A1: 1:100 project number: P01354 date: Oct 2013
 drawing number: GA-57-01-01 revision: 1



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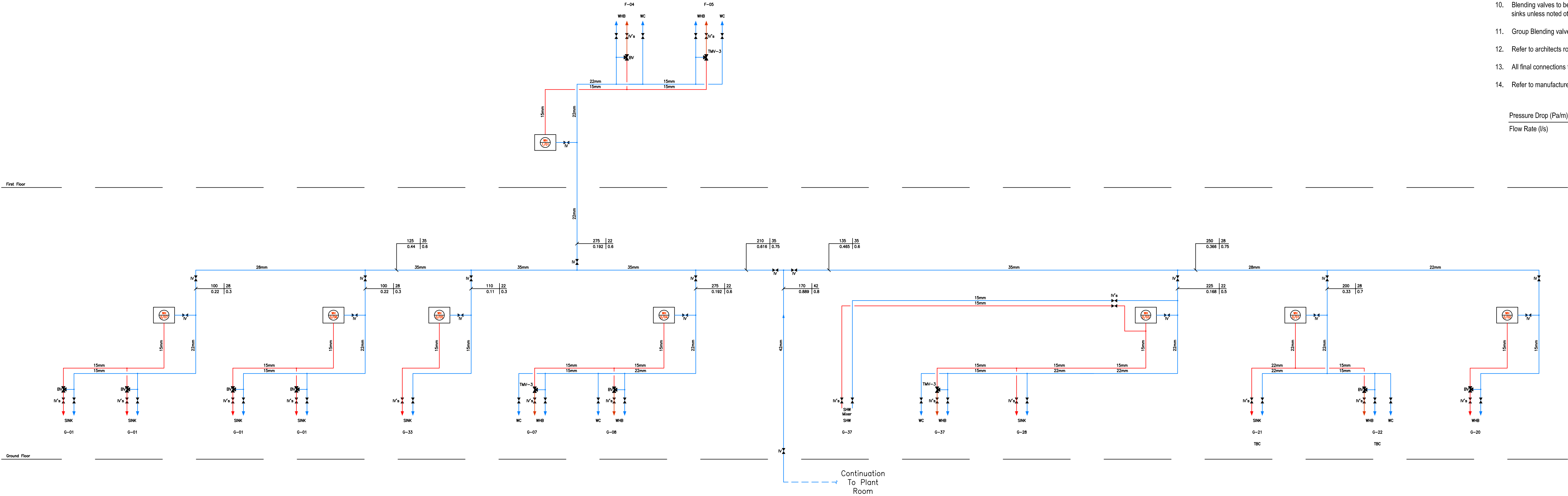
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- All pipework to be suitably bracketed.
- All pipework where routed within building voids or plant areas shall be insulated.
- Any visible domestic pipework shall be chrome-plated copper.
- All final domestic pipework connections to terminate with balllox isolation valves.
- Blending valves to be installed on all wash hand basins (WHB's) and sinks unless noted otherwise.
- Group Blending valves should be installed within 3m of the final outlet.
- Refer to architects room data sheets for sanitaryware requirements.
- All final connections to be 15mm unless noted otherwise.
- Refer to manufacturers installation instructions for all water heaters.

Pressure Drop (Pa/m)	Size (mm)
Flow Rate (l/s)	Velocity (m/s)



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Contract Issue

DRAWN BY **A.F.** DATE **20/06/14**

1	20.06.2014	N.H.	Raised To Contract Issue.	L.M.	
0	16.10.2013	N.H.	For Information.	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

project: Southend YMCA Community School

drawing title: Mechanical Services
Domestic Hot & Cold Water
Pipework Schematic

designed: N.H. checked: M.B. drawn: K.S. approved:

scale@A1: NTS project number: P01354 date: Oct 2013

drawing number: SC-53-XX-01 revision: 1

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Legend

TE	Duct / Pipe MTD Temperature Sensor
CV	Control Valve & Actuator
WV	Motorised Damper Actuator
	Wall Mounted Temperature Sensor
HLV	High Limit Valve
HLT	High Limit Thermostat
DPS	Pump Differential Pressure Switch
	Panel Hardwired Lamp & BMS Alarm
OAT	Outside Air Temperature Sensor
RT	Room Air Temperature Sensor
DPT	Differential Pressure Transducer
TC	Time Clock/Switch
	Value Logging / Set Point Adjustment
	Passive Infra-Red (PIR) Sensor
CO2	Carbon Dioxide Sensor
	ESPB - Emergency Stop Push Button
F	Flow Sensor
CV	Control Valve
SOV	Safety Over-ride Valve
DP	Pressure Differential Control Valve
	Whole Operating System Controlling The Building

Schedule

Temp. Sensor	System
TE 001	LPHW Flow
TE 002	LPHW Return
TE 003	PHX Secondary Flow
TE 004	PHX Secondary Return
TE 005	Buffer Vessel - PHX Flow
TE 006	Buffer Vessel
TE 007	ASHP Primary Return
TE 008	ASHP Primary Flow
TE 009	ASHP Trace Htg
Room Temp. Sensor	System
RT 001	G-25 Hall
High Limit Sensor	System
HLT 001	PHX Secondary Flow
Control Valve	System
CV 001	LPHW Return
Safety Shut Off Valve	System
SOV 001	LPHW Flow

3	08.07.2014	K.S.	Low Loss Header Shown.	L.M.	
2	24.06.2014	K.S.	Raised To Contract Issue. Additional Boiler Added Following TA Comments.	L.M.	
1	04.11.2013	N.H.	Water Booster Set & Kitchen Gas Supply Omitted.	M.B.	
0	18.10.2013	N.H.	For Information.	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client:

EFA

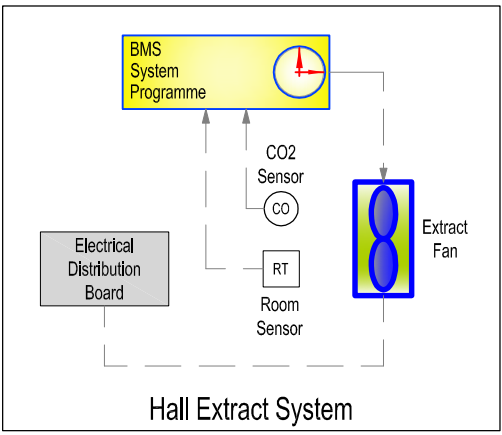
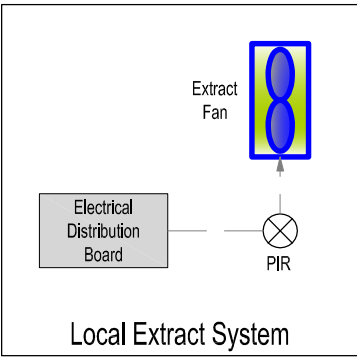
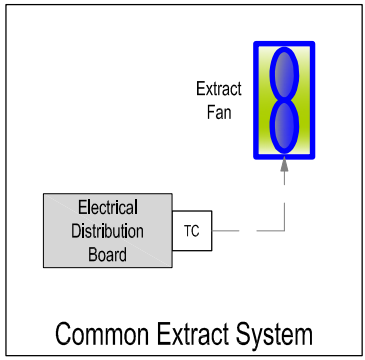
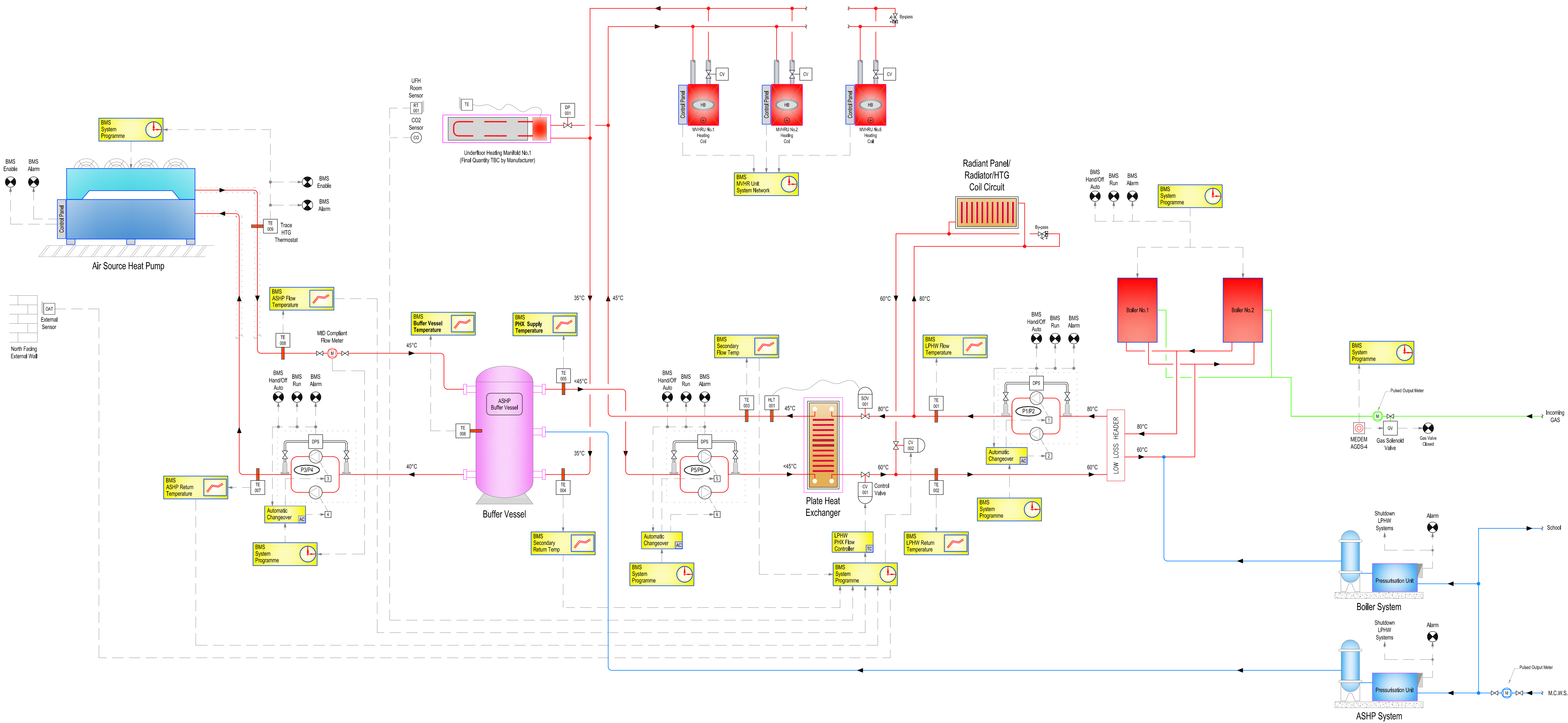
project:

Southend YMCA Community School

drawing title:

Mechanical Services
Controls Schematic

designed:	checked:	drawn:	approved:
N.H.	M.B.	K.S.	
scale@A1:	project number:	date:	
NTS	P01354	Oct 2013	
drawing number:	revision:		
SC-56-XX-01	3		



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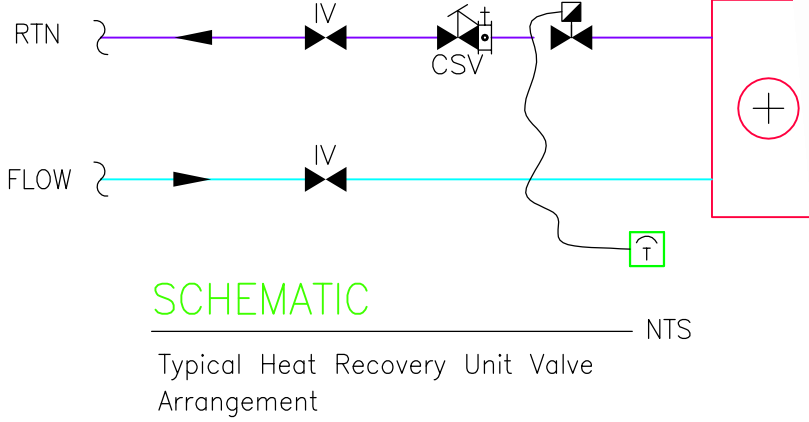
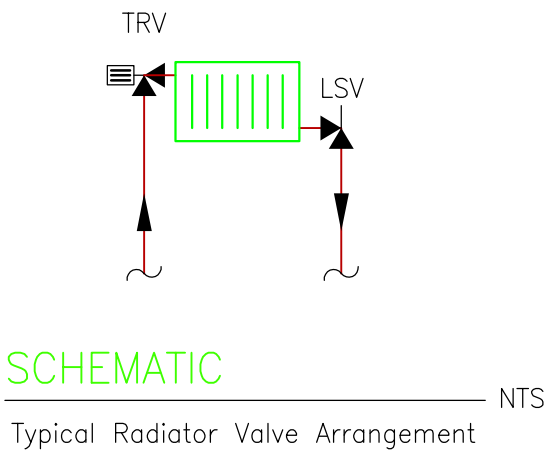
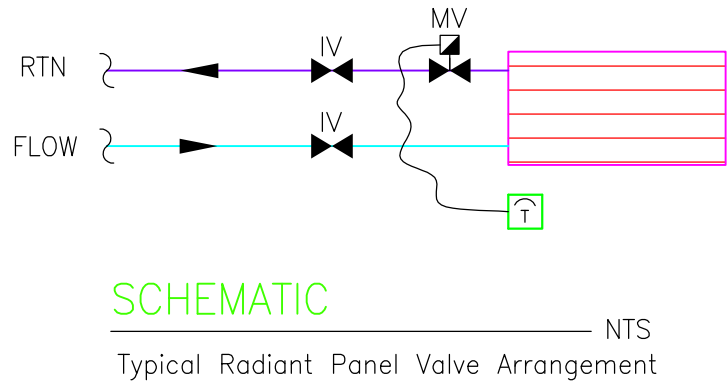
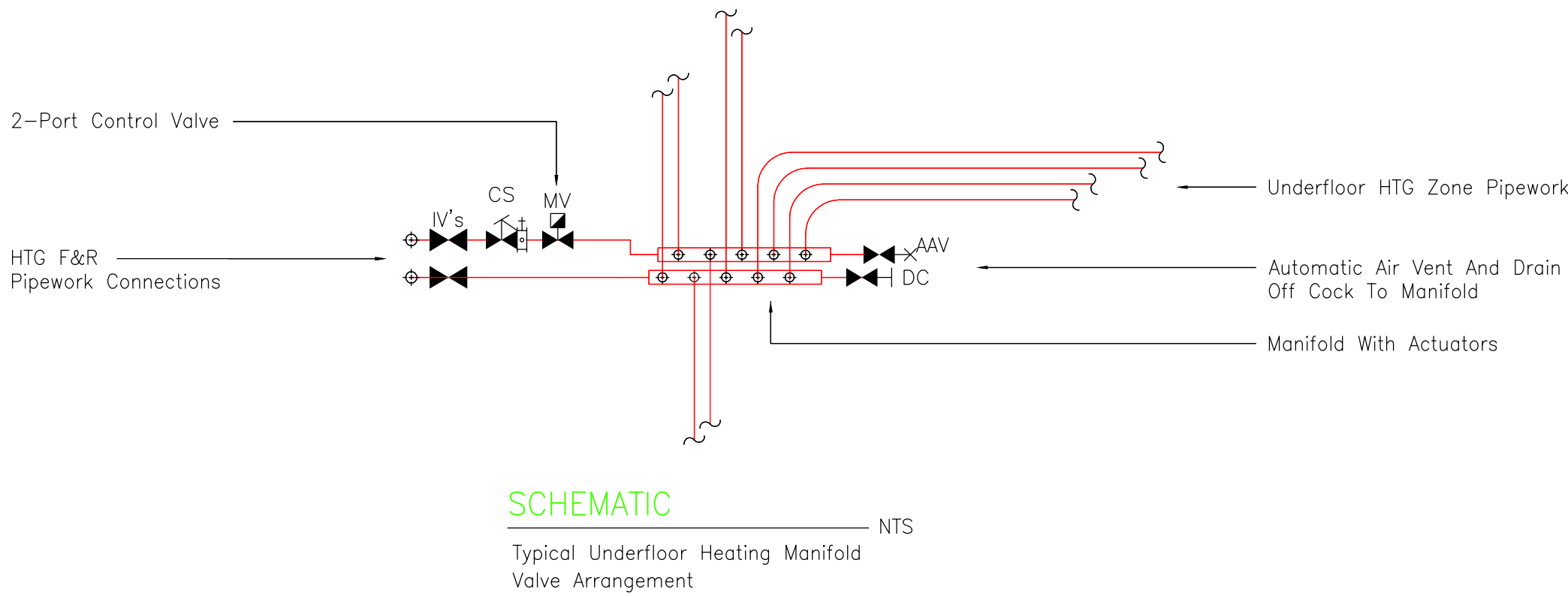
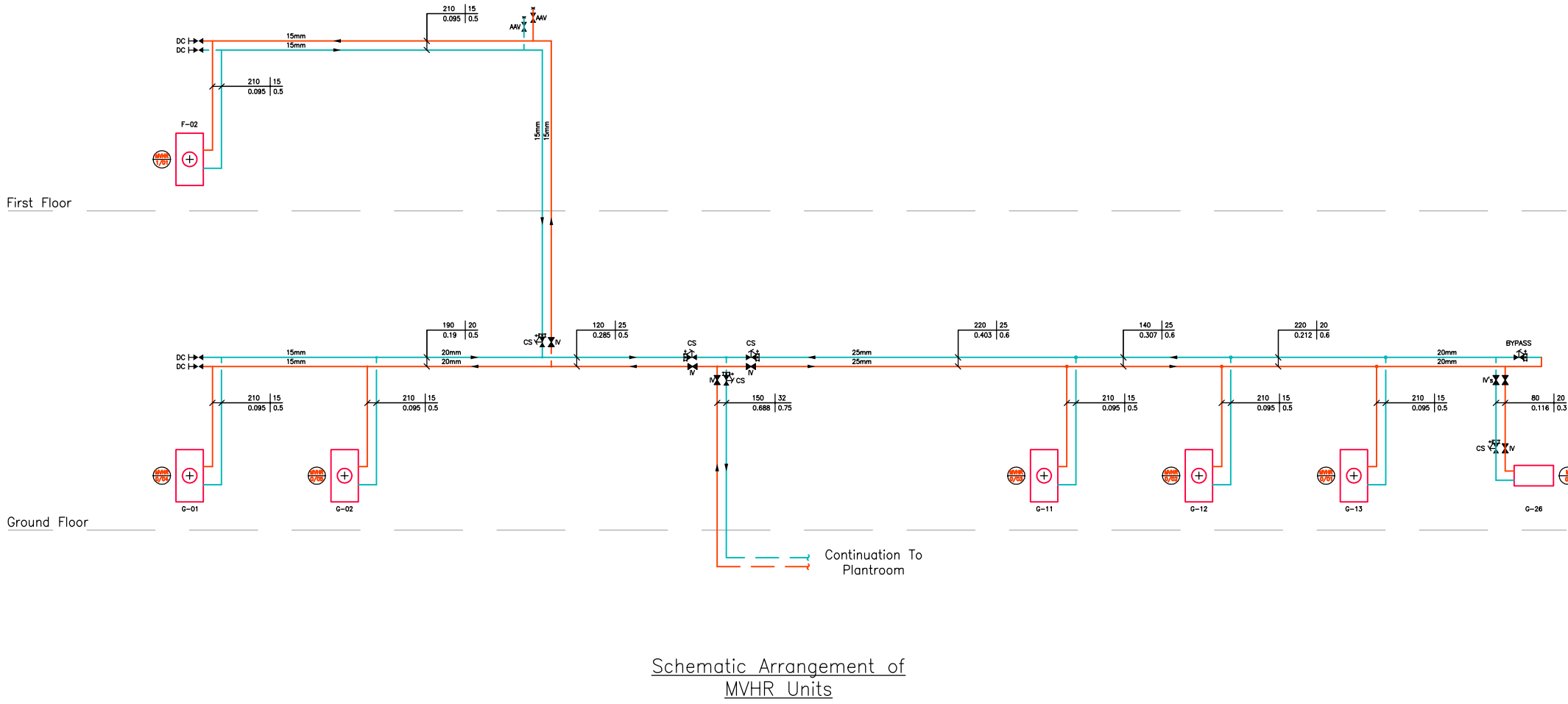
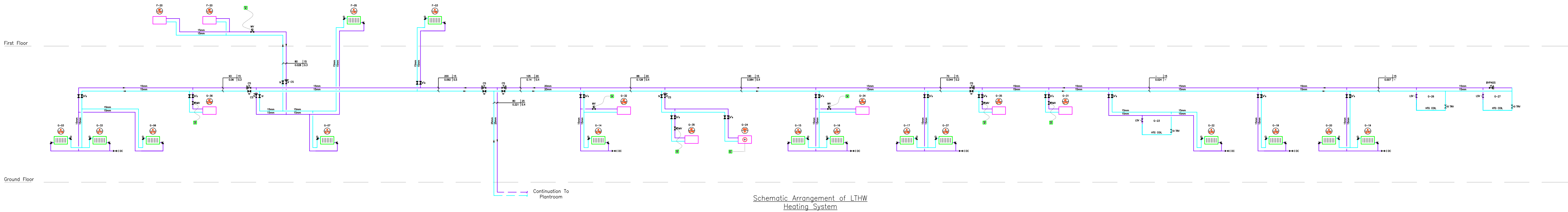
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- All pipework to be suitably bracketed.
- All pipework where routed within building voids or plant areas shall be insulated.
- Pipe joints/connections within voids shall be kept to a minimum.
- DOC's shall be installed at all low points of system.
- AAV's shall be installed at all high points of system.
- All radiators to have thermostatic radiator valves (TRV) on flow & lockshield valves (LSV) on return pipework connections.
- Refer to architects sanitaryware schedule.

Pressure Drop (Pa/m)	Flow Rate (l/s)
Size (mm)	Velocity (m/s)



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DRAWN BY **A.F.** DATE **20/06/14**

1	20.06.2014	N.H.	Raised To Contract Issue.	L.M.	
0	16.10.2013	N.H.	For Information	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

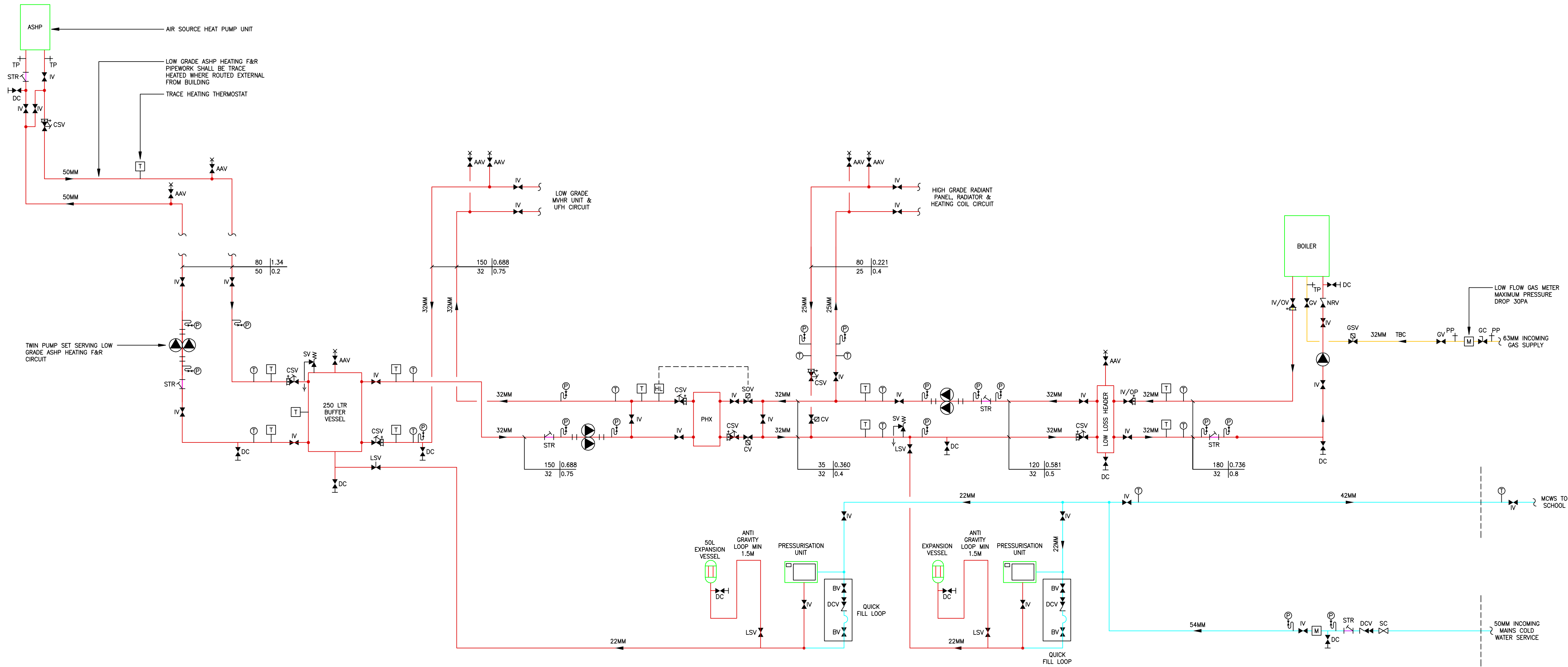
project: Southend YMCA Community School

drawing title: Mechanical Services
LTHW Heating Pipework Schematic

designed: N.H.	checked: M.B.	drawn: K.S.	approved:
scale@A1: NTS	project number: P01354	date: Oct 2013	revision: 1
drawing number: SC-56-XX-02			

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 6. All pipework to be suitably bracketed.
 7. All pipework where routed within building voids or plant areas shall be insulated.
 8. Automatic air vents (AAV's) shall be provided at all high points.
 9. Drain off valves (DOC's) to be installed at all low points on the system.
 10. Mechanical sub-contractor to include for all valves necessary for an installation of this nature.
 11. All pump sets to be installed on anti-vibration mounts c/w flexible connections in accordance with manufacturers recommendations.
 12. All condensate drains & overflow pipes to be routed to drain.
 13. Safety valve discharge pipes to be routed to drain.
 14. All pipework within the boiler room to be insulated and finished in metal clad aluminium or equivalent.
 15. Refer to Piped services drawings for routes from boiler room.
 16. Hatched area denotes service/maintenance zones.
 17. Refer to schedule of equipment for plant selection.
 18. Quantity of underfloor heating manifolds subject to manufacturer.
 19. MCW expansion kit not shown from clarity.
 20. The mechanical sub-contractor shall install all valves necessary in accordance with the manufacturers literature.
 21. Dosing pot not shown for clarity.
 22. Condensate/relief pipework not shown for clarity.

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Contract Issue
DRAWN BY **K.S.** DATE **08/07/14**

1	08.07.2014	N.H.	Low Loss Header Valve Arrangement Amended.	M.B.	
0	24.06.2014	N.H.	Contract Issue.	M.B.	
REV	DATE	BY	DESCRIPTION	CHK	APP

client: EFA

project: Southend YMCA Community School

drawing title: Mechanical Services
Plantroom Heating Schematic

designed: N.H. checked: M.B. drawn: N.H. approved: N.H.
scale@A1: NTS project number: P01343 date: Sep 2013
drawing number: SC-56-XX-05 revision: 1

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Appendix E – Specification

Southend YMCA Community School Mechanical Works



Material & Workmanship Specification Supplementary heating and associated works

1	23-01-23	Tender Issue	AF	DS
Rev	Date	Description	Originator	Checked
Doc Ref 22106-BVR-MEC-SCS-SP-M-4001				

Beveridge Associates Partnership Ltd
Regency House
Station Road
Harold Wood RM3 0BS

Contents

Ss_50_30_04_97 Above ground internal stack wastewater drainage systems	1
Ss_50_35_82_73 Road drainage systems	5
Ss_55_20_34_57 Natural gas supply systems	7
Ss_55_70_38_15 Cold water supply systems	12
Ss_60_40_37_48 Low-temperature hot water heating systems	19
Ss_70_30_25_25 Earthing and bonding systems	33
Ss_70_30_80_35 Hard-wired voltage small power systems	34

Appendix A – Schedule of Supplementary Radiant Panels

Ss_50_30_04_97

Above ground internal stack wastewater drainage systems

Systems

Ss_50_30_04_97 Above ground internal stack wastewater drainage systems

1. Description: Refer to scope document
2. System performance: [Ss_50_30_04/210 Design of above ground wastewater drainage systems](#)
3. Sanitary pipework
 - 3.1. Small diameter branch discharge pipework
 - 3.1.1. Traps: [Pr_65_52_25_75 Sanitary appliance traps](#)
 - 3.1.2. Pipelines and fittings: [Pr_65_52_63_13 Chlorinated polyvinyl chloride \(PVC-C\) pipe and fittings](#)
 - 3.1.3. Accessories for jointing: Solvent welding cement.
 - 3.1.4. Supports: [Pr_20_85_09_01 Above-ground drainage pipe brackets](#)
4. Overflow pipework
 - 4.1. Pipelines and fittings: Chlorinated polyvinyl chloride (PVC-C) pipe and fittings
 - 4.2. Accessories for jointing: Solvent welding cement.
 - 4.3. Supports: [Pr_20_85_09_01 Above-ground drainage pipe brackets](#)
5. Execution: [Ss_50_30_04/622 Access to above ground wastewater drainage systems for testing and maintenance](#); [Ss_50_30_04/614 Installing above ground wastewater drainage discharge branch pipework](#); [Ss_50_30_04/610 Installing above ground wastewater drainage systems](#)
6. System completion: [Ss_50_30_04/820 Above ground wastewater drainage system pipework airtightness test](#); [Ss_50_30_04/840 Above ground wastewater drainage system pre-handover checks](#); [Ss_50_30_04/860 Documentation](#); [Ss_50_30_04/810 Testing above ground wastewater drainage systems](#)

System performance

Ss_50_30_04/210 Design of above ground wastewater drainage systems

1. Design: Complete the design of the above ground wastewater drainage system.
2. Standards: To [BS EN 12056-1](#), [BS EN 12056-2](#) and relevant parts of [BS EN 12056-4](#) and [BS EN 12056-5](#), and to [BS EN 12056-2](#) National Annexes NA-NG.
3. System configuration
 - 3.1. Configuration: gravity drainage into existing gulley
4. Design discharges
 - 4.1. Design discharge content: Condensate and system water.

Products

Pr_20_85_09_01 Above-ground drainage pipe brackets

1. Description: Condensate drainage
2. Pipe location: Internal.
3. Form: Pipe clips.
4. Material: Plastics.
5. Finish: Self-finished.

Pr_65_52_25_75 Sanitary appliance traps

1. Description: Condense traps
2. Standard: To [BS EN 274-1](#).
3. Third party product certification: BSI Kitemark certified.
4. Trap: Tubular P trap.
5. Jointing: Compression
6. Material: Polypropylene.
7. Colour: White.
8. Size: As indicated on the drawing
9. Depth of water seal (minimum): 75mm

Pr_65_52_63_13 Chlorinated polyvinyl chloride (PVC-C) pipe and fittings

1. Description: Condensate drains and overflows
2. Manufacturer: Terrain
3. Standard: To [BS 5255](#).
4. Third party product certification: BSI Kitemark certified.
5. Jointing type: Solvent weld.
6. Nominal sizes: DN 32. DN 40. DN 50.
7. Colour: White.
8. Integral accessories: Access fittings.

Execution

Ss_50_30_04/610 Installing above ground wastewater drainage systems

1. Standards: To [BS EN 12056-2](#) and [BS EN 12056-5](#).
2. Collection and distribution of wastewater
 - 2.1. General: Quick, quiet and complete; self-cleansing in normal use, without blockage, crossflow, backfall, leakage, odours, noise nuisance or risk to health.
 - 2.2. Pressure fluctuations in pipework (maximum): ± 38 mm water gauge.
 - 2.3. Water seal retained in traps (minimum): 25 mm.
3. Pipelines
 - 3.1. Routes
 - 3.1.1. Routes generally: The shortest practical, with as few bends as possible.
 - 3.2. Jointing: Joint with materials, fittings and techniques intended for the purpose and that will make effective and durable connections.
4. Protection
 - 4.1. Purpose made temporary caps: Fit to prevent ingress of debris.
 - 4.2. Access covers, cleaning eyes and blanking plates: Fit as the work proceeds.

Ss_50_30_04/614 Installing above ground wastewater drainage discharge branch pipework

1. Pipework
 - 1.1. Alignment: Fix securely plumb and/ or true to line.
 - 1.2. Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
 - 1.3. Socketed pipes and fittings: Fix with sockets facing upstream.
 - 1.4. Additional supports: Provide as necessary to support junctions and changes in direction.

Ss_50_30_04/622 Access to above ground wastewater drainage systems for testing and maintenance

1. **General:** Install pipework with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.
2. **Access fittings and rodding eyes:** Position to avoid obstruction.

System completion

Ss_50_30_04/810 Testing above ground wastewater drainage systems

1. **Dates for testing**
2. **Preparation**
 - 2.1. **Pipework:** Securely fixed and free from obstruction and debris.
 - 2.2. **Traps:** Fill with clean water.
3. **Testing**
 - 3.1. **Water for testing:** Supply clean water, assistance and apparatus.
 - 3.2. **Smoke for testing:** Do not use.
4. **Records of tests:** Submit.

Ss_50_30_04/820 Above ground wastewater drainage system pipework airtightness test

1. **Preparation**
 - 1.1. **Open ends of pipework:** Temporarily seal using plugs.
 - 1.2. **Test apparatus:** Connect a 'U' tube water gauge and air pump to pipework via a plug or through trap of an appliance.
2. **Testing:** Pump air into pipework until gauge registers 38 mm.
3. **Required performance:** Maintain pressure of 38 mm without loss for at least 3 minutes.

Ss_50_30_04/840 Above ground wastewater drainage system pre-handover checks

1. **Temporary caps:** Remove.
2. **Permanent blanking caps, access covers, rodding eyes, floor gratings and the like:** Secure complete with fixings.

Ss_50_30_04/860 Documentation

1. **Operating and maintenance instructions**
 - 1.1. **Product information:** Include product description, date of purchase, performance characteristics, application (suitability for use), method of operation and control, and cleaning and maintenance requirements.
 - 1.2. **Format:** Paper copy.
Electronic copy
 - 1.3. **Number of copies:** Two.
2. **Record drawings**
 - 2.1. **Content:** Location, size and route of above ground services. Location of outlets.
 - 2.2. **Format:** Electronic.
 - 2.3. **Number of copies:** Two.
3. **Submittal date:** At handover.

Ω End of System

Ss_50_35_82_73 Road drainage systems

Systems

Ss_50_35_82_73 Road drainage systems

1. Description: Refer to scope and drawings
2. System performance: Load Class C 250
3. System manufacturer: ACO Hexdrain
4. Standards: Building Regs Part G
5. Products: [Pr_65_52_24_24 Drainage channels with gratings](#); [Pr_65_52_07_64 Polypropylene \(PP\) solid wall below-ground drainage pipes and fittings](#)

Products

Pr_20_31_16_21 Designated concrete

1. Supplied by: Contractor's choice
2. Ready mixed concrete producer
 - 2.1. Third party accreditation: Currently certified by a body accredited by UKAS to [BS EN ISO/IEC 17065](#) for product conformity certification of ready-mixed concrete.
 - 2.2. Source
 - 2.2.1. Name and address of depot: Submit before any concrete is delivered.
 - 2.2.2. Delivery notes: Retain for inspection.
 - 2.3. Information
 - 2.3.1. Mix design robustness: Submit evidence to demonstrate robustness of mix design.
 - 2.4. Declarations of non-conformity from concrete producer: Notify immediately.
3. Standards: To [BS EN 206](#), [BS 8500-1](#), and [BS 8500-2](#).
4. Properties
 - 4.1. Cement and cement combination (maximum): 550 kg/m³.
5. Aggregates
 - 5.1. Additional requirements for aggregates: Freeze-thaw resisting.
 - 5.2. Recycled aggregates: Permitted.
6. Admixtures
 - 6.1. Standard: To [BS EN 934-2](#).
7. Execution: [Pr_20_31_16/695 Temperature of concrete](#); [Pr_20_31_16/714 Curing generally](#)

Pr_20_31_53_11 Cement-gauged mortars

1. Manufacturer: Contractor's choice
2. Standard: To [BS EN 998-2](#).
3. Mortar type: Batched dry cement:sand.
4. Admixture: Styrene butadiene rubber (SBR).
5. Colour: Natural.
6. Reaction to fire classification: Class A1.
7. Additional requirements: Durability: freeze/ thaw resistance: frost-resistant.

Pr_65_52_07_64 Polypropylene (PP) solid wall below-ground drainage pipes and fittings

1. Description: new gully connection to existing
2. Manufacturer: Polypipe
3. Standards: BS EN 13476-2

Pr_65_52_24_24 Drainage channels with gratings

1. Description: See scope and drawings
2. Manufacturer: ACO Hexdrain
3. Material: Composite
4. Gratings
 - 4.1. Material: Steel. galvanised
 - 4.2. Form: Slotted.
 - 4.3. Colour: Galvanized.
5. Load class (minimum): C 250.
6. Channel unit dimensions
 - 6.1. Width (nominal): 80
 - 6.2. Depth (nominal): 125
 - 6.3. Length: as drawing
7. Integral accessories: Drain unions. Endcaps – closing pieces. Sump units.
8. Execution: [Pr_65_52_24/610 Installing channels](#)

Execution

Pr_20_31_16/695 Temperature of concrete

1. High temperatures and steep temperature gradients: Prevent build-up during first 24 hours after casting. Prevent coincidence of maximum heat gain from cement hydration with high air temperature and/ or solar gain.
2. Rapid changes in concrete temperature: Prevent during the first 7 days after casting.

Pr_20_31_16/714 Curing generally

1. Method statement: Submit.
2. Records required: Maintain details of location and timing of casting of individual batches, removal of formwork and removal of coverings. Keep records on site, available for inspection.

Pr_65_52_24/610 Installing channels

1. Alignment: Grating flush with finished surface
2. Bedding
 - 2.1. Material: [Pr_20_31_53_11 Cement-gauged mortars](#)
 - 2.2. Thickness (minimum): 75 mm.
3. Surround
 - 3.1. Material: [Pr_20_31_16_21 Designated concrete](#)
 - 3.2. Width (minimum): 25mm over
 - 3.3. Depth: *To level of structural floor slab 90 mm.*

Ω End of System

Ss_55_20_34_57 Natural gas supply systems

Systems

Ss_55_20_34_57 Natural gas supply systems

1. Description: Refer to scope - **Note that gas safety system is to be renewed prior to the works commencing** (including 2nd boiler integration)
2. System performance: [Ss_55_20_34/210 Design of gas supply installations](#)
3. Pipeline material: [Pr_65_52_63_17 Copper pipes Type A](#); [Pr_65_52_63_18 Copper pipe fittings Type A](#)
4. Fire-stopping: Individual services penetrations fire-stopping system.
5. Support: [Pr_20_29_14_65 Pipe clips](#)
6. Gas valves: [Pr_65_54_33_33 Gas ball valves](#)
Provide 20mm purge valves at each boiler
Provide test points after the solenoid valve and at each boiler
7. Gas outlets: Boilers
8. Plant and equipment identification: [Pr_40_10_57_78 Self-adhesive colour pipe bands Type A](#); [Pr_40_10_57_93 Valve charts and schematics](#)
9. Execution: [Ss_55_20_34/610 Removing gas installations](#); [Ss_55_20_34/630 Gas Safe registration requirements](#); [Ss_55_20_34/650 Installing gas pipelines](#); [Ss_55_20_34/670 Connection to gas outlets](#)
10. System completion: [Ss_55_20_34/810 Testing gas pipeline installations](#); [Ss_55_20_34/840 Commercial and industrial gas installations](#); [Ss_55_20_34/850 Pressure testing of gas supply systems](#); [Ss_55_20_34/870 Inspection and test records](#); [Ss_55_20_34/875 Documentation](#)

System performance

Ss_55_20_34/210 Design of gas supply installations

1. Standards
 - 1.1. General: To [IGEM Standard UP/2](#).
 - 1.2. Low-pressure gas for premises: To [BS 6891](#).
 - 1.3. Gas pipework for buildings: To [BS EN 1775](#).

Products

Pr_20_29_14_65 Pipe clips

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: New and modified pipework
2. Manufacturer: [Walraven Ltd](#)
3. Contact details
 - 3.1. Address: 18 Wildmere Road
Wildmere Industrial Estate
Banbury
Oxfordshire
OX16 3JU
 - 3.2. Telephone: [+44 \(0\)1295 753400](#)
 - 3.3. Web: <https://www.walraven.com/en/>
 - 3.4. Email: sales.uk@walraven.com

4. Product reference: [Bifix 300 Stainless Steel Clamp Unlined \(M8 - M10\) \(Pipe diameter: 15–19 mm \(M8\)\)](#)
5. Channels
 - 5.1. Format: Pipe clamp, M8–M10.
 - 5.2. Dimensions: 58 x 33 x 20 mm.
 - 5.3. Type: Single.
 - 5.4. Material: Stainless steel 1.4401 (AISI 316L).
 - 5.5. Finish: Manufacturer's standard.
6. Execution: [Pr_20_29_14/620 Installing pipeline supports](#)

Pr_40_10_57_78 Self-adhesive colour pipe bands Type A

1. Description: Gas service
2. Standards: To [BS 1710](#).
3. Identification type: Adhesive colour bands.
4. Execution: [Pr_40_10_57/660 Installing identification on pipework](#)

Pr_40_10_57_93 Valve charts and schematics

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: Updated schematic
2. Material: Paper print, encapsulated.
3. Information to be included: Location and identification of pipework regulating, isolating and control valves.
4. Size: A1.
5. Execution: [Pr_40_10_57/620 Installing valve charts and schematics](#)

Pr_65_52_63_17 Copper pipes Type A

1. Description: Gas pipework
2. Manufacturer: Viega (suitable for gas press-fitting)
3. Standard: To [BS EN 1057](#).
4. Third-party certification: [Kitemark](#)-approved.
5. Grade: R250.
6. Finish: Plain.
7. Execution: [Pr_65_52_63/631 Installing copper pipelines](#)

Pr_65_52_63_18 Copper pipe fittings Type A

1. Description: Gas approved press-fittings
2. Manufacturer: [VIEGA LTD](#)
3. Contact details
 - 3.1. Address: 2 Miller Court
Severn Drive
Tewkesbury Business Park
Tewkesbury
GL20 8DN
 - 3.2. Telephone: [+44 \(0\)204 582 6495](tel:+442045826495)
 - 3.3. Web: www.viega.co.uk
 - 3.4. Email: sales@viega.co.uk

4. Product reference: [Profipress G](#)
5. Standards
 - 5.1. Press fittings: Manufacturer's standard.
6. Accessories: Provide tools as supplied by the manufacturer
7. Sizes: as drawings
8. Operating temperature: Gas and liquid gas installations: -20°C to +70°C; Heating oil and diesel fuel installations: 40°C (maximum).
9. Operating pressure (maximum): Manufacturer's standard.
10. Standards
 - 10.1. Press fittings: To [BS 8537](#)

Pr_65_54_33_33 Gas ball valves

1. Description: Gas isolation valves
2. Manufacturer: [Crane Fluid Systems](#)
3. Contact details
 - 3.1. Address: Crane House
Epsilon Terrace
West Road
Ipswich
Suffolk
IP3 9FJ
 - 3.2. Telephone: [+44 \(0\)1473 277300](tel:+44(0)1473277300)
 - 3.3. Web: www.cranefs.com
 - 3.4. Email: enquiries@cranefs.com
4. Product reference: D191 with yellow handle
5. Standard: To [BS EN 331](#).
6. Arrangement: Lever-operated.
7. Material: Brass.
8. Connections: Compression to [BS EN 1254-2](#).
9. Execution: [Pr_65_54_95/610 Installation of valves generally](#)

Execution

Pr_20_29_14/620 Installing pipeline supports

1. Position
 - 1.1. In plant rooms: Pipe clip, sling rod, washer and nuts.
 - 1.2. Distribution corridors and risers: Pipe clip, sling rod, washer and nuts.
 - 1.3. Surface mountings: Split ring, spacer nipple and backplate.

Pr_40_10_57/620 Installing valve charts and schematics

1. Fixing: *Plug and screw to wall.*
2. Position: Boiler house.

Pr_40_10_57/660 Installing identification on pipework

1. Application of basic identification colour: Coloured bands as [BS 1710](#).
2. Information: Colour bands as [BS 1710](#).
3. Direction of flow: Indication arrow.

Pr_65_52_63/610 Pipelines installation generally Type A

1. Standard: [BESA Technical Report TR/20/9 Natural gas](#).
2. Dissimilar metals: Prevent electrolytic corrosion.

Pr_65_52_63/615 Installing pipeline fittings Type A

1. Fabricated junctions and fittings: In accordance with manufacturer's recommendations
2. Demountable joints: In accordance with manufacturer's recommendations

Pr_65_52_63/631 Installing copper pipelines

1. General requirements: [Pr_65_52_63/710 General inspection and testing Type A](#); [Pr_65_52_63/610 Pipelines installation generally Type A](#); [Pr_65_52_63/615 Installing pipeline fittings Type A](#)
2. Standard: In accordance with [CDA publications 88 Copper tube in buildings](#).
3. Jointing method
 - 3.1. Permanently concealed joints: Press-fit (Viega)
 - 3.2. Accessible joints: Compression joints on valves and equipment connections

Pr_65_52_63/710 General inspection and testing Type A

1. Safety precautions: In accordance with [HSE Guidance Notes: General Series \(GS\) GS 4](#).

Pr_65_54_95/610 Installation of valves generally

1. Installation: In accordance with [BS 6683](#).
2. Isolation and regulation valves: Provide at equipment and on sub-circuits.
3. Access: Locate valves so they can be readily operated and maintained. Locate next to equipment which is to be isolated.
4. Connection to pipework: Fit with joints that suit the pipe material.

Ss_55_20_34/610 Removing gas installations

1. Scope: Refer to scope and drawings

Ss_55_20_34/630 Gas Safe registration requirements

1. Type of service: Non-domestic.
2. Type of gas: Natural gas.
3. Area of work: Gas boilers.

Ss_55_20_34/650 Installing gas pipelines

1. Standards
 - 1.1. General: To [IGEM Standard UP/10](#).
 - 1.2. Gas pipelines: To [BS 6891](#) and [BS EN 1775](#).

Ss_55_20_34/670 Connection to gas outlets

1. Equipment: Gas-fired condensing boilers.
2. Connection: Connect to installed equipment.

System completion

Ss_55_20_34/810 Testing gas pipeline installations

1. Standards
 - 1.1. Testing, purging and commissioning: To [BS 6891](#) and [BS EN 1775](#).
 - 1.2. Soundness testing and purging: To [IGEM Standard UP/1A](#).
 - 1.3. Tightness testing and direct purging: To [IGEM/UP/1B](#)

Ss_55_20_34/840 Commercial and industrial gas installations

1. Soundness testing and purging: To [IGEM Standard UP/1](#).
2. Testing, purging and commissioning pipelines: To [BS EN 15001-2](#).
3. Commissioning gas-fired plant: To [IGEM Standard UP/4](#).

Ss_55_20_34/850 Pressure testing of gas supply systems

1. Notice (minimum): 48 hours.
2. Pressure: 2 times working pressure.
3. Duration of test: Two hours.

Ss_55_20_34/870 Inspection and test records

1. **Reports:** systematic record of testing and commissioning actions and records should be provided to serve as a permanent record in the operation and maintenance manual
2. Record sheets
 - 2.1. Submission: On completion

Ss_55_20_34/875 Documentation

1. Test records: Submit a record of inspections and tests.
2. Operating and maintenance instructions
 - 2.1. Scope: Submit for the system giving optimum settings for controls.
 - 2.2. **Product information:** Include product description, date of purchase, performance characteristics, application (suitability for use), method of operation and control, and cleaning and maintenance requirements.
 - 2.3. Format: Electronic.
3. Record drawings
 - 3.1. Content: Location and arrangement of plant in plant rooms. schematics
 - 3.2. Format: Electronic.
4. Submittal date: At handover.

Ω End of System

Ss_55_70_38_15 Cold water supply systems

Systems

Ss_55_70_38_15 Cold water supply systems

1. Description: Refer to scope document
2. System performance: [Ss_55_70_38/220 Cold water supply](#)
3. Arrangement: Building is all mains
4. Pipelines
 - 4.1. Above ground: [Pr_65_52_63_17 Copper pipelines](#) press-fit joints (compression at valves and equipment)
5. Pipeline accessories
 - 5.1. Accessories: [Pr_65_52_61_63 Pipe sleeves](#)
 - 5.2. Pipeline supports: as heating
6. Valves
 - 6.1. Backflow prevention devices: [Pr_65_54_95_05 Backflow prevention check valves](#)
 - 6.2. Isolating valves: [Pr_65_54_95_06 Ball valves](#)
 - 6.3. Draining devices: [Pr_65_54_95_27 Draining taps](#)
7. Fire-stopping: Individual services penetrations fire stopping system.
8. Thermal insulation
 - 8.1. Pipelines: [Pr_25_57_06/310 Insulation products generally](#); [Pr_80_77_76_54 Mineral wool pipe section insulation](#)
 - 8.2. Valves and flanges - plant room: [Pr_80_77_76_95 Valve and flange insulation jackets Type A](#)
9. Controls: Refer to BMS and controls section
10. Plant and equipment identification: [Pr_40_10_57_26 Engraved mechanical plant and equipment identification labels](#); [Pr_40_10_57_60 Paper valve charts and schematics](#); [Pr_40_10_57_78 Self-adhesive colour pipe bands](#)
11. Execution: [Ss_55_70_38/620 Installing hot and cold water systems generally](#); [Ss_55_70_38/650 Hydraulic pressure testing of hot and cold water supply systems](#); [Ss_55_70_38/660 Flushing hot and cold water systems](#); [Ss_55_70_38/670 Disinfection of hot and cold water systems](#); [Pr_60_55_96_12 Chlorination of Water Services](#)
12. System completion: [Ss_55_70_38/810 Commissioning of hot and cold water supply systems](#); [Ss_55_70_38/820 Inspection and test records](#); [Ss_55_70_38/830 Demonstrations](#); [Ss_55_70_38/840 Documentation](#); [Ss_55_70_38/850 Water quality tests](#)

System performance

Ss_55_70_38/220 Cold water supply

1. Type of system: Direct mains fed.
2. Design parameters: To [BS 8558](#).
In accordance with [CIPHE Plumbing engineering services design guide](#).
To [BS EN 806-2](#).

Products

Pr_25_57_06/310 Insulation products generally

1. Evidence of compliance: Submit copy of current certificate for proposed product.

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2. Certified effective life (minimum): 30 years.

Pr_40_10_57_26 Engraved mechanical plant and equipment identification labels

1. Description: All new plant and equipment
2. Material: Face engraved rigid plastic laminate.
3. Colour
 - 3.1. Background: White.
 - 3.2. Lettering: Black.
4. Information to be included: Equipment reference number.
5. Execution: [Pr_40_10_57/611 Installing mechanical plant and equipment identification Type A](#)

Pr_40_10_57_60 Paper valve charts and schematics

1. Description: Plant room schematics
2. Information to be included: Location and identification of pipework regulating, isolating and control valves.
3. Execution: [Pr_40_10_57/620 Installing valve charts and schematics Type A](#)

Pr_40_10_57_78 Self-adhesive colour pipe bands

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: New, modified and incorrectly labelled pipework
2. Standards: To [BS 1710](#).
3. Identification type: Adhesive colour bands.
4. Execution: [Pr_40_10_57/660 Installing identification on pipework](#)

Pr_60_55_96_12 Chlorination of Water Services

1. Description: Chlorination of all new and retained mains water, cold water and hot water systems. Where systems are connected in stages, undertake all necessary phased chlorination
2. Standards: BS EN 806 and BS 8558
3. Certification: Provide certificates for each system no more than 3 days prior to putting into service
4. Accessories: Provide all necessary injection points
5. Execution: Undertake chlorination for 4 hours, Provide labels at outlets, advising that they should not be run Take water samples for laboratory analysis (test for Legionella (10 day), Coliforms, E-Coli (3 day)
6. Completion: Provide chlorination and laboratory test reports for all sterilising operations Report any significant TVC or legionella levels in reports and seek direction from water hygiene specialist

Pr_65_52_61_63 Pipe sleeves

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: All penetrations through floors and walls
2. Material: line material - two sizes above line size

Pr_65_52_63_17 Copper pipelines

1. Description: Internal hot and cold water pipework
2. General requirements: [Pr_65_52_63_18 Copper pipeline fittings](#)

3. Standard: To [BS EN 1057](#).
4. Grade: R220.
5. Finish: Plain.
6. Execution: [Pr_65_52_63/631 Installing copper pipelines](#)
Install press-fit systems in accordance with manufacturer's recommendations

Pr_65_52_63_18 Copper pipeline fittings

1. Description: Press-fit systems
2. Manufacturer: Viega
3. Standards
 - 3.1. Compression: Connections to valves and equipment To [BS EN 1254-2](#), type A.
 - 3.2. Press fittings: Domestic Water - Viega Profipress press-fit system

Pr_65_54_95_05 Backflow prevention check valves

1. Description: Double check valves
2. Manufacturer: Crane, Oventrop
3. Standard: To [BS EN 13959](#).
4. Third-party certification: [WRAS](#) approval.
5. Family and type: EC – verifiable double check valve.
6. Class: a.
7. Pressure class: PN 10.
8. Connections: Capillary or compression to BS EN 1254-1, [BS EN 1254-2](#), [BS EN 1254-3](#) or [BS EN 1254-4](#).
9. Execution: [Pr_65_54_95/615 Installation of back flow prevention devices](#); [Pr_65_54_95/610 Installation of valves generally Type A](#)

Pr_65_54_95_06 Ball valves

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: Isolation valves
2. Manufacturer: [Crane Fluid Systems](#)
3. Contact details
 - 3.1. Address: Crane House
Epsilon Terrace
West Road
Ipswich
Suffolk
IP3 9FJ
 - 3.2. Telephone: [+44 \(0\)1473 277300](#)
 - 3.3. Web: [www.cranefs.com](#)
 - 3.4. Email: [enquiries@cranefs.com](#)
4. Material: Brass copper alloy.
5. Connections: Pressure-tight joints threaded to [BS EN 10226-1](#).
6. Finish: Natural.
7. Execution: [Pr_65_54_95/610 Installation of valves generally](#)

Pr_65_54_95_27 Draining taps

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: All low points
2. Manufacturer: [Crane Fluid Systems](#)
3. Contact details
 - 3.1. Address: Crane House
Epsilon Terrace
West Road
Ipswich
Suffolk
IP3 9FJ
 - 3.2. Telephone: [+44 \(0\)1473 277300](tel:+44(0)1473277300)
 - 3.3. Web: www.cranefs.com
 - 3.4. Email: enquiries@cranefs.com
4. Product reference: [D340 Drain Taps \(DN15\)](#)
5. Standard: To BS EN 10226-2, BS EN 12165, BS EN 12164 and BS 2879.
6. Size: DN15.
7. Arrangement: Type 2.
8. Material: DZR Brass BS EN 12165 CW602N, Brass BS EN 12164 CW614N, EP80 (EPDM-WRAS Approved) and EP70 (EPDM-WRAS Approved).
9. Connections: Threaded joints to BS EN 10226-2 (taper).
10. OperationTemperatureRange: 0 to +110°C.
11. Pressure: 16 BAR.
12. Operator: Lockshield.
13. Approvals: WRAS approved.
14. Execution: [Pr_65_54_95/610 Installation of valves generally](#)

Pr_80_77_76_54 Mineral wool pipe section insulation

Shared by: [Ss_60_40_37_48 Low-temperature hot water heating systems](#)

1. Description: new and modified pipework
 2. Manufacturer: [ROCKWOOL Ltd](#)
 3. Contact details
 - 3.1. Address: ROCKWOOL Ltd
14th Floor, Chiswick Tower
389 Chiswick High Road
London
W4 4AJ
 - 3.2. Telephone: [+44 \(0\)1656 862621](tel:+44(0)1656862621)
 - 3.3. Web: <https://www.rockwool.com/uk/>
 - 3.4. Email: info@rockwool.com
 4. Product reference: [ROCKWOOL RockLap H&V Pipe Section \(40 mm\)](#)
 5. Standard: To BS EN 14303, ISO 14001.
 6. Thermal conductivity: 0.033–0.034 W/m·K.
 7. Finish: Aluminium foil faced.
 8. Reaction to fire classification: A2-s1,d0.
 9. Insulation thickness (minimum): 40 mm.
 10. Execution: Installing foil faced mineral wool insulation on pipelines.
 11. Specific heat: 0.84 kJ/kg·K (nominal) at 20°C.
 12. Density: 120 kg/m³.
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23-01-2023

13. Length: 1000 mm.
14. Execution: [Pr_80_77_76/625 Installing foil-faced mineral wool insulation on pipelines](#)

Pr_80_77_76_95 Valve and flange insulation jackets Type A

1. Description: Insulated jackets all valves and flanges
2. Manufacturer: Jade Insulation or similar
3. Material: PVC outer face,
silicone inner face
50mm mineral wool insulation Complete with drawstring and Velcro fastening,
4. Colour: Self finish.

Execution

Pr_40_10_57/611 Installing mechanical plant and equipment identification Type A

1. Fixing: Fix with adhesive to equipment.
2. Position: On wall adjacent equipment. On equipment.

Pr_40_10_57/620 Installing valve charts and schematics Type A

1. Position: Boiler room wall

See [Pr_40_10_57/660 Installing identification on pipework](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

See [Pr_65_52_63/610 Pipelines installation generally Type A](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

See [Pr_65_52_63/615 Installing pipeline fittings Type A](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

See [Pr_65_52_63/631 Installing copper pipelines](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

See [Pr_65_52_63/710 General inspection and testing Type A](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

See [Pr_65_54_95/610 Installation of valves generally](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_65_54_95/610 Installation of valves generally Type A

1. Installation: In accordance with [BS 6683](#).
2. Isolation and regulation valves: Provide at equipment and on sub-circuits.
3. Access: Locate valves so they can be readily operated and maintained. Locate next to equipment which is to be isolated.
4. Connection to pipework: Fit with joints that suit the pipe material.

Pr_65_54_95/615 Installation of back flow prevention devices

1. Standard: In accordance with [Water Regulations Advisory Scheme Water regulations guide](#)

Pr_80_77_76/610 Installing insulation and protection products generally

1. Standard: In accordance with [BS 5970](#).
2. Timing: Insulate after installed system has been fully tested and joints proved sound.
3. Insulation: Do not enclose adjacent units together.
4. Clearance: Maintain between pipes.

5. Finish: Neatly finish joints, corners, edges and overlaps.

Pr_80_77_76/625 Installing foil-faced mineral wool insulation on pipelines

1. General requirements: [Pr_80_77_76/610 Installing insulation and protection products generally](#)
2. Joints: to BS 5970
3. At fittings: to BS 5970
4. Vapour seal: to BS 5970

Ss_55_70_38/620 Installing hot and cold water systems generally

1. Standard: To [BS 8558](#) and [BS EN 806-4](#).
2. Performance: Free from leaks and the audible effects of expansion, vibration and water hammer.
3. Fixing of equipment, components and accessories: Fix securely, parallel or perpendicular to the structure of the building.
4. Corrosion resistance: In locations where moisture is present or may occur, avoid contact between dissimilar metals by use of suitable washers, gaskets, and the like.

Ss_55_70_38/650 Hydraulic pressure testing of hot and cold water supply systems

1. Standard: To [BS 8558](#) and [BS EN 806-4](#).
2. Notice (minimum): 48 h.
3. Pressure: 1.5 times working pressure.
4. Duration of test: 1 hours

Ss_55_70_38/660 Flushing hot and cold water systems

1. Standard: To [BS EN 806-4](#).
2. Water analysis: Analyse water samples before treatment.
3. Preliminary checks: Thoroughly inspect pipework. Complete pressure tests before cleaning or chemical treatment.
4. Waste products : Neutralize, and dispose of to drain. Preferably direct to manhole.

Ss_55_70_38/670 Disinfection of hot and cold water systems

1. Standard: To [BS EN 806-4](#).
2. Samples for analysis: Provide before and after disinfection and flushing.

System completion

Ss_55_70_38/810 Commissioning of hot and cold water supply systems

1. Pre-commissioning: In accordance with [BSRIA BG 2/2010](#) and [CIBSE Commissioning Code W](#).
2. Commissioning: In accordance with [BS EN 806-4](#), [BSRIA BG 2/2010](#) and [CIBSE Commissioning Code W](#).
3. Notice (minimum): 2 days
4. Equipment: Check and adjust operation of equipment, controls and safety devices.
5. Outlets: Check operation of outlets for satisfactory rate of flow and temperature.

Ss_55_70_38/820 Inspection and test records

1. Construction phase reports: System cleanliness. System commissionable.
2. Records for water systems: In accordance with [BSRIA BG 2/2010](#).

Ss_55_70_38/830 Demonstrations

1. Running of plant
 - 1.1. **Operation:** Run, maintain and supervise the installations under normal working conditions.
2. **Instruction:** Instruct and demonstrate the purpose, function and operation of the installations.

Ss_55_70_38/840 Documentation

1. Operating and maintenance instructions
 - 1.1. **Scope:** Submit for the system giving optimum settings for controls.
 - 1.2. **Product information:** Include product description, date of purchase, performance characteristics, application (suitability for use), method of operation and control, and cleaning and maintenance requirements.
 - 1.3. **Format:** Paper copy.
 - 1.4. **Number of copies:** Two.
2. Record drawings
 - 2.1. **Content:** Location and arrangement of plant in plant rooms.
Location, size and route of hot and cold water services
Location and identification of regulating, isolation and control valves.
 - 2.2. **Format:** Electronic. A1 paper print.
 - 2.3. **Number of copies:** Two.
3. **Submittal date:** At handover.
4. **Wholesome water consumption notice:** Submit within 30 days.

Ss_55_70_38/850 Water quality tests

1. **Standard:** To [BS EN 806-4](#).
2. Samples
 - 2.1. **Sample points:** Cold water storage cistern.
Hot water storage .
Hot and cold sentinel outlets
 - 2.2. **Samples for analysis:** Submit samples for bacteriological analysis.
3. **Water temperature:** Record at each sampling point at the time of taking the sample.
4. Test results
 - 4.1. **Record:** Details of all analyses.
 - 4.2. **Submit:** On completion.
 - 4.3. **Number of copies:** Two.

Ω End of System

Ss_60_40_37_48

Low-temperature hot water heating systems

Systems

Ss_60_40_37_48 Low-temperature hot water heating systems

1. Description: Refer to scope of works and drawings
2. System performance: [Ss_60_40_37/220 Basic design temperatures for heating systems](#);
[Ss_60_40_37/250 System operating parameters for water-based heating systems](#);
[Ss_60_40_37/280 Chemical treatment for heating systems](#)
3. Arrangement: Two-pipe.
4. Heat source: [Pr_60_60_08_33 Gas-fired boilers](#); [Pr_70_60_37_04 Air-to-water heat pumps](#)
5. Fuel: Natural gas.
6. Flues and chimneys: [Pr_70_65_30_51 Flues and chimneys](#); [Pr_60_60_96/620 Installing balanced flue terminals](#)
7. Feed and expansion: [Pr_65_53_86_68 Pressurization units](#)
8. Pumps: [Pr_65_53_86_11 Canned rotor pumps](#)
Retain and adjust existing heating circuit pump flow rates
9. Water treatment plant
 - 9.1. Equipment: Retain existing
 - 9.2. Chemicals: [Pr_60_55_96_16 Corrosion inhibitor chemicals for closed circuits](#);
[Pr_60_55_96_06 Bacteria and biofouling inhibitors](#)
10. Pipelines: [Pr_65_52_63_82 Steel pipes](#); [Pr_65_52_63_83 Steel pipe fittings](#); [Pr_65_52_61_63 Pipe sleeves](#)
11. Pipeline ancillaries
 - 11.1. Venting devices: [Pr_65_54_93_05 Automatic air vents](#)
 - 11.2. Separators: [Pr_65_55_76_15 Combined air and dirt separators](#)
 - 11.3. Gauges: [Pr_65_52_34_66 Pressure gauges](#); [Pr_65_52_34_88 Temperature gauges](#)
 - 11.4. Accessories: [Pr_65_57_96_08 Basket water strainers](#)
 - 11.5. Pipeline supports: [Pr_20_29_14_65 Pipe clips](#)
12. Fire stopping: Individual services penetrations fire stopping system.
13. Valves
 - 13.1. Isolating valves: [Pr_65_54_95_06 Ball valves](#)
 - 13.2. Check valves: [Pr_65_54_95_14 Copper alloy check valves](#)
 - 13.3. Regulating valves: [Pr_65_54_95_26 Double regulating valves](#)
 - 13.4. Radiator valves: [Pr_65_54_95_89 Thermostatic radiator valves](#)
 - 13.5. Draining devices: [Pr_65_54_95_27 Draining taps](#)
 - 13.6. Accessories: [Pr_65_54_95_75 Safety valves](#); [Pr_65_54_93_87 Test points](#)
14. Thermal insulation: [Pr_80_77_76_54 Mineral wool pipe section insulation](#); [Pr_80_77_76_95 Valve and flange insulation casing](#)
15. Heat emitters: [Pr_70_60_36_71 Radiant panels](#)
16. Controls: Refer to scope schedule
[Pr_65_54_95_53 Motorized valves](#); [Pr_75_50_02_94 Valve actuators](#)
17. System accessories: [Pr_65_54_95_92 Underfloor heating and cooling manifolds](#)
18. Plant and equipment identification: [Pr_40_10_57_78 Self-adhesive colour pipe bands](#);
[Pr_40_10_57_51 Mechanical plant and equipment identification labels](#); [Pr_40_10_57_93 Valve charts and schematics](#); [Pr_40_10_57_94 Valve identification labels](#)

19. Execution: [Ss_60_40_37/620 Installing water based heating systems](#); [Ss_60_40_37/670 Installing water treatment for heating systems](#); [Ss_60_40_37/650 Filling and pressure testing of water based heating systems](#); [Ss_60_40_37/660 Flushing and pre-commission cleaning of heating systems](#)
20. System completion: [Ss_60_40_37/830 Commissioning boiler plant](#); [Ss_60_40_37/810 Commissioning water heating systems](#); [Ss_60_40_37/845 Demonstrations](#); [Ss_60_40_37/880 Servicing and maintenance](#); [Ss_60_40_37/860 Documentation](#)

System performance

Ss_60_40_37/220 Basic design temperatures for heating systems

1. Design temperatures: 21°C.
2. External air temperature: -5°C.

Ss_60_40_37/250 System operating parameters for water-based heating systems

1. Design flow temperature: Heat pump - 50oC, boiler 80oC
2. Water velocity: Maximum 1.5 m/s.

Ss_60_40_37/280 Chemical treatment for heating systems

1. Treatment: In accordance with BSRIA [BG 50/2013](#).
2. Chemical treatment
 - 2.1. Corrosion inhibition: Cathodic.
 - 2.2. Bacteria and biofouling inhibition: Pseudomonads - low grade. Treatment for nitrite reducing bacteria.
3. Non-chemical treatment
 - 3.1. Filtration: Dirt separators. Disposable media filters.
 - 3.2. Deaeration: Passive de-aeration.

Products

See [Pr_20_29_14_65 Pipe clips](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_40_10_57_51 Mechanical plant and equipment identification labels

1. Description: New equipment
2. Material: Face-engraved rigid plastic laminate.
3. Colour
 - 3.1. Background: White.
 - 3.2. Lettering: Black.
4. Information to be included: Equipment reference number. Equipment name.
5. Execution: [Pr_40_10_57/611 Installing mechanical plant and equipment identification](#)

See [Pr_40_10_57_78 Self-adhesive colour pipe bands](#) in [Ss_55_70_38_15 Cold water supply systems](#)

See [Pr_40_10_57_93 Valve charts and schematics](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_40_10_57_94 Valve identification labels

1. Description: All new valves
2. Material: Face-engraved rigid plastic laminate.
3. Colour

- 3.1. Background: White.
- 3.2. Lettering: Black.
- 4. Typography
 - 4.1. Font: Helvetica medium.
- 5. Information: Purpose and reference number.
- 6. Execution: [Pr_40_10_57/630 Installing valve identification labels](#)

Pr_60_55_96_06 Bacteria and biofouling inhibitors

- 1. Description: Closed loop systems
- 2. Manufacturer: Sentinel
- 3. Non-oxidizing biocides: In accordance with ASHP and boiler manufacturer recommendations

Pr_60_55_96_16 Corrosion inhibitor chemicals for closed circuits

- 1. Description: All closed circuit systems
- 2. Manufacturer: Sentinel
- 3. Corrosion inhibitors: Nitrite. Molybdate. Polyphosphate.

Pr_60_60_08_33 Gas-fired boilers

- 1. Description: Supplementary boiler (to match existing)
- 2. Manufacturer: Potterton Sirius 3 60kW
- 3. Standards
 - 3.1. Boilers with heat input not exceeding 70 kW: Heat only boiler to [BS EN 15502-1](#) and [BS EN 15502-2-1](#).
 - 3.2. Thermal performance testing: To [BS 845-1](#).
- 4. Output: 55kW
- 5. Energy efficiency rating: A
- 6. Seasonal efficiency (gross calorific value (minimum)): 87.6%
- 7. NOx emissions (maximum): 31 mg/kWh
- 8. Mounting: Wall mounted.
- 9. Number of modules: One - working in cascade with existing matched boiler.
- 10. Operating pressure: 1.5 bar
- 11. Test pressure: 4 bar
- 12. Operating temperature: 80/60oC
- 13. Heat exchanger: Stainless steel
- 14. Fuel: Natural gas.
- 15. Electrical supply type: Single phase.
- 16. Accessories: Safety valve, minimum flow pump

Pr_65_52_34_66 Pressure gauges

- 1. Standard: To [BS EN 837-1](#).
- 2. Diameter: 63 mm.
- 3. Scale subdivisions: 20 kPa (0.2 bar) for a maximum scale value of 1000 kPa (10 bar).
- 4. Material: Stainless steel.
- 5. Connections: 'U' pattern siphon and gauge cock.
- 6. Execution: [Pr_65_52_34/630 Installing pressure gauges](#)

Pr_65_52_34_88 Temperature gauges

1. Standard: To [BS EN 13190](#).
2. Format: Bimetallic.
3. Diameter: 80.
4. Case: Brass.
5. Connections: Straight stem.

See [Pr_65_52_61_63 Pipe sleeves](#) in [Ss_55_70_38_15 Cold water supply systems](#)

Pr_65_52_63_82 Steel pipes

1. Description: Heating pipework
2. Manufacturer: Viega
3. Standard: carbon **steel** to **BS EN 10305-3:2016** with a zinc plated exterior,
4. Third-party certification: [Kitemark](#)-approved.
5. Finish: Hot-dip zinc coating.
6. Execution: [Pr_65_52_63/680 Installing steel pipework](#)

Pr_65_52_63_83 Steel pipe fittings

1. Description: Press-fit
2. Manufacturer: Viega
3. Standards
 - 3.1. Press-fit fittings: carbon **steel** to **BS EN 10305-3:2016** with a zinc plated exterior,
4. Third-party certification: [Kitemark](#)-approved.

Pr_65_53_86/320 Pumps generally

1. General safety standard: To [BS EN 809](#).
2. Electrical safety: To [BS EN 60335-1](#) and [BS EN 60335-2-51](#).
3. Dynamic balance: To [BS ISO 21940-21](#).
4. Test standards: To [BS EN ISO 9906](#) and in accordance with [BS EN ISO 5198](#).
5. Connections
 - 5.1. Threaded: To [BS EN 10226-1](#).

Pr_65_53_86_11 Canned rotor pumps

1. Description: New boiler minimum flow pump
2. General requirements: [Pr_65_53_86/320 Pumps generally](#)
3. Manufacturer: Potteron matched to boiler
4. Arrangement: Single.
5. Material
 - 5.1. Impeller: Bronze. Stainless steel.
 - 5.2. Housing: Cast iron.
6. Duties
 - 6.1. Operation: Duty.
 - 6.2. Motor
 - 6.2.1. Nominal voltage: Single phase 230 V a.c.
7. Speed control: Variable. (integral)
8. Connections: Threaded.

9. Execution: [Pr_65_53_86/610 Installation of pumps generally](#)

Pr_65_53_86_68 Pressurization units

1. Description: Twin filling unit connected to existing expansion vessels
2. Manufacturer: Flamco Flexfiller Twin System
3. Standards
 - 3.1. General: To [BS EN 13831](#).
 - 3.2. Low and medium temperature hot water heating: In accordance with [BS 7074-2](#).
 - 3.3. Chilled water and condenser water: In accordance with [BS 7074-3](#).
4. Format: Fully automatic pre-wired packaged unit on common base plate.
5. Arrangement: Diaphragm expansion tank with air.
6. Duties
 - 6.1. Static head: .8 bar
 - 6.2. Plant rating: 120kW
 - 6.3. System water content: 400
 - 6.4. Operating temperatures
 - 6.4.1.Flow: 80 (boiler), 50 ASHP
 - 6.4.2.Return: 60 (boiler), 44 ASHP
 - 6.5. Operating pressure: 1.5
 - 6.6. Motor
 - 6.6.1.Nominal voltage: Single phase 230 V a.c.
 - 6.6.2.Frequency: 50 Hz.
7. Components: Twin circuit pressure control, Pressure control switch. Pressure limit switches. Suction tank with ball float valve and overflow connections. Standby pump with manual changeover. Anti-gravity system connection, BMS monitoring, hard-wired high and low pressure interlock
8. Accessories: Flexible connections. High pressure switch. Low pressure switch. Manual fill unit for initial filling and routine maintenance.
9. Execution: [Pr_65_53_86/630 Installing pressurization units](#)

Pr_65_54_93_05 Automatic air vents

1. Description: All high points
2. Manufacturer: [Crane Fluid Systems](#)
3. Contact details
 - 3.1. Address: Crane House
Epsilon Terrace
West Road
Ipswich
Suffolk
IP3 9FJ
 - 3.2. Telephone: [+44 \(0\)1473 277300](tel:+441473277300)
 - 3.3. Web: www.cranefs.com
 - 3.4. Email: enquiries@cranefs.com
4. Product reference: [D2003 Automatic Air Vents & D2004 Automatic Air Vents with Shut Off Valve \(D2003 DN15\)](#)
5. Material: Brass EN12165 - CW617N, Brass EN 1982 - CC754S, Plastic polyamide PA6 GF30%, Plastic ACETAL, Brass EN 12164 - CW614N, Plastic PTFE, Rubber EPDM, Stainless Steel EN

10270-3 - 1.4310, Rubber NBR, Plastic polypropylene and Stainless steel AISI 302-EN 10270-3 NS.

6. Connections: Threaded.
7. Inlets/outlets diameter: DN15
8. Operating temperature range: -10 to +110°C.
9. Pressure: 10 BAR.
10. Approvals: WRAS approved.

Pr_65_54_93_87 Test points

1. Description: as indicated
2. Manufacturer: Binder
3. Arrangement: Self-sealing.
4. Material: Stainless steel.
5. Connections: 12.5 mm (½ inch) standard length.

See [Pr_65_54_95_06 Ball valves](#) in [Ss_55_70_38_15 Cold water supply systems](#)

Pr_65_54_95_14 Copper alloy check valves

1. Description: non-return
2. Manufacturer: Crane
3. Standard: To [BS 5154](#).
4. Swing type: Horizontal.
5. Series: A.
6. Material: Copper alloy.
7. Connections: Pressure-tight joints threaded to [BS EN 10226-1](#).
8. Execution: [Pr_65_54_95/670 Installation of check valves](#)

Pr_65_54_95_26 Double regulating valves

1. Description: As indicated on drawings
2. Manufacturer: [Crane Fluid Systems](#)
3. Contact details
 - 3.1. Address: Crane House
Epsilon Terrace
West Road
Ipswich
Suffolk
IP3 9FJ
 - 3.2. Telephone: [+44 \(0\)1473 277300](#)
 - 3.3. Web: [www.cranefs.com](#)
 - 3.4. Email: [enquiries@cranefs.com](#)
4. Product reference: [D934 Fixed Orifice Double Regulating Valve](#)
5. Standard: To BS 7350:1990, BS EN 10226-2 (ISO 7-1), BS 2779 (ISO 228) and BS EN 1254/2.
6. Arrangement: Globe.
7. Material: Bronze BS EN 1982 CC491K, DZR Copper Alloy BS EN 12164/5 CW602N, EPDM Rubber and Plastic.
8. Connections: Compression to BS EN 1254-2.
9. Inlets/outlets diameter: 15 mm, 20mm.
10. Dimensions: 87 x 105 mm.

11. Weight: 0.61 kg.
 12. Approvals: Water Regulations Advisory Scheme (WRAS).
 13. PressureRange: Temperature (Threaded): -10 to +100°C: 25 bar, Temperature (Threaded): +110°C: 23.4 bar, Temperature (Threaded): 120°C: 21.8 bar. Temperature (Compression): -10 to +30°C:16 bar, Temperature (Compression): +65°C: 10 bar, Temperature (Compression): +120°C: 5 bar. WRAS approved -10 to +85°C.
 14. Flow capacity: 0.57 Kv and 0.58 Kvs.
 15. Execution: [Pr_65_54_95/620 Installation of double regulating valves](#)
- See [Pr_65_54_95_27 Draining taps](#) in [Ss_55_70_38_15 Cold water supply systems](#)

Pr_65_54_95_53 Motorized valves

1. Description: New bidirectional resilience bypass
2. Manufacturer: Belimo
3. Standards: To [BS EN 60730-1](#) and [BS EN IEC 60730-2-8](#).
4. Arrangement: Two-port.
5. Valve authority
6. Actuator: Belimo
7. Material: Copper alloy.
8. Connections: Screwed.
9. Execution: [Pr_65_54_95/641 Installing motorized valves](#)

Pr_65_54_95_75 Safety valves

1. Description: New boiler
2. Manufacturer: [NABIC Valves](#)
3. Contact details
 - 3.1. Address: 46-48 Wilbury Way
Hitchin
Hertfordshire
SG4 0UD
 - 3.2. Telephone: [+44 \(0\)1473 277300](#)
 - 3.3. Web: [www.nabicvalves.com/](#)
 - 3.4. Email: [customerservices@cranebsu.com](#)
4. Product reference: [Fig. 500L Pressure Relief Valve \(DN20\)](#)
5. Standard: BS EN ISO 4126 -1. WRAS approved (certificate 1806035).
6. Material: Body, seat seal holder, piston and seat seal retaining plate: Brass (BS EN 1982 and BS EN 12164). Spring: Chrome Vanadium Alloy Steel, BS 2803 735 A50 HS (Stainless Steel, BS 2056 302S26 Opt). Seat seal: PTFE and O-Ring: Viton.
7. Pressure: DN15 to DN25: 1.0 to 12.5; DN32 to DN65: 0.4 to 12.5.
8. Temperature: -20°C to +195°C.
9. Inlets/outlets diameter: Rp BSP Inlet / (Outlet): 1/2" (3/4"). Rp BSP Inlet / (Outlet): 3/4" (1").
10. Execution: [Pr_65_54_95/660 Installation of discharge connections](#); [Pr_65_54_95/680 Installation of safety valves](#)

Pr_65_54_95_89 Thermostatic radiator valves

1. Description: New room-by room control for radiant panels.
Provide interconnecting **capillary pipework clipped in the ceiling void and installed in double clipped metal conduit on drops**

Provide Perspex ventilated sensor covers, to match existing, complete with lockable lids, to prevent unauthorised access.

2. Manufacturer: Belmont (to match existing)
3. Standard: To [BS EN 215](#).
4. Arrangement: Remote sensor incorporating the selector.
5. Pattern: Straight.
6. Connections: Threaded to [BS EN 10226-1](#).
7. Execution: [Pr_65_54_95/640 Installation of thermostatic radiator valves](#)

Pr_65_54_95_92 Underfloor heating and cooling manifolds

1. Description: Replace existing manifold with new pumped manifold
2. Manufacturer: Upnor Wirsbo
3. Arrangement: Six-zone.
4. Accessories: Pump pack (Grundfos).
4-port valve,
draincocks
air vents
actuators
branch balancing valves

Pr_65_55_76_15 Combined air and dirt separators

1. Description: Boiler enlarged primary loop
2. Manufacturer: Spirotec
3. Arrangement: on common flow
4. Material: carbon steel
5. Connections: Flanged.
6. Execution: [Pr_65_55_76/640 Installing combined air and dirt separators](#)

Pr_65_57_96_08 Basket water strainers

1. Manufacturer: Crane, Hattersley
2. Pattern: Simplex basket.
3. Material: Bronze.
4. Connections: Threaded.
5. Execution: [Pr_65_57_96/650 Installing strainers](#)

Pr_70_60_36_71 Radiant panels

1. Description: new supplementary heat emitters
2. Manufacturer: Frenger Modular SP range
3. Standards: To [BS EN 14037-1](#).
4. Radiant panels type: Recessed in suspended ceiling, supported from slab/roof above.
5. Output: See schedule
6. Finish: White stove enamelled.
7. Connections: 15mm
8. Accessories: Insulated backing, lockshield valve, isolation valve, support to structure
9. Execution: Ensure panels are independently supported from the structure and are level with the ceiling finish

Pr_70_60_37_04 Air-to-water heat pumps

1. Description: Existing ASHP in fenced enclosure for information
2. Manufacturer: Carrier 30RQS-039-0223-PE-NGAH
3. Standards
 - 3.1. Safety and environmental: To [BS EN 378-1](#) and [BS EN 378-2](#).
 - 3.2. Test requirements: To [BS EN 14511-1](#), [BS EN 14511-2](#), [BS EN 14511-3](#) and [BS EN 14511-4](#).
 - 3.3. Electrical safety: To [BS EN 60335-2-40](#).
4. Heat pump type: Monobloc.
5. Mode: Heating. Cooling.
6. Fan
 - 6.1. Type: Axial.
 - 6.2. Fan drive: Direct.
 - 6.3. Configuration: Vertical.
7. Electrical supply type: Three phase.
8. Compressor
 - 8.1. Type: Scroll.
 - 8.2. Sealing: Hermetically sealed.
 - 8.3. Drive: Inverter driven.
9. Refrigerant: R410A.

Pr_70_65_30_51 Flues and chimneys

1. Description: Manufacturer supplied balanced twin-wall components
2. Manufacturer: Potteron
3. Standard: To [BS EN 1856-1](#) or [BS EN 1993-3-2](#).
4. Construction: Twin wall.
5. Material and finish: Stainless steel.
6. Accessories and fittings: Bends. wall balanced terminal and adaptor.
7. Execution: [Pr_70_65_30/610 Installing flues and chimneys](#)

Pr_75_50_02_94 Valve actuators

1. Description: New control valves
2. Manufacturer: Belimo
3. Standards: To [BS EN 60730-1](#) and [BS EN IEC 60730-2-8](#).
4. Actuator type: Electronic.
5. Action: Rotary.
6. Torque: High.
7. Stroke: 90°.
8. Operation: On/ off.
9. Electrical supply: to suit existing control voltage
10. Ancillaries: Auxiliary switches. Digital valve position indicator. Manual operation. Position indicator.
11. Execution: [Pr_75_50_02/610 Installing valve actuators](#)

See [Pr_80_77_76_54 Mineral wool pipe section insulation](#) in [Ss_55_70_38_15 Cold water supply systems](#)

Pr_80_77_76_95 Valve and flange insulation casing

1. Description: new and existing unlagged valves
2. Material: proprietary valve bags secured with Velcro

Execution

See [Pr_20_29_14/620 Installing pipeline supports](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_40_10_57/611 Installing mechanical plant and equipment identification

1. Fixing: Adhesive.
2. Position: On equipment.

See [Pr_40_10_57/620 Installing valve charts and schematics](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_40_10_57/630 Installing valve identification labels

1. Fixing: Secure with metal chain.

See [Pr_40_10_57/660 Installing identification on pipework](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_60_60_96/620 Installing balanced flue terminals

1. Opening in external wall: 1m from existing flue terminal
2. Flue guard: Potteron packaged flue terminal

Pr_65_52_34/630 Installing pressure gauges

1. Position: As indicated

Pr_65_52_63/610 Pipework installation generally

1. Standard: [BESA Technical Report TR/20/1 LTHW heating pipework systems](#).
2. Dissimilar metals: Prevent electrolytic corrosion.

Pr_65_52_63/615 Installing pipe fittings

1. Demountable joints: Screwed or compression

Pr_65_52_63/680 Installing steel pipework

1. General requirements: [Pr_65_52_63/610 Pipework installation generally](#); [Pr_65_52_63/615 Installing pipe fittings](#); [Pr_65_52_63/690 Spacing of pipework](#); [Pr_65_52_63/710 General inspection and testing](#)
2. Accessible joints: Press-fit fittings.

Pr_65_52_63/690 Spacing of pipework

1. Minimum clearance between insulated pipework and
 - 1.1. Wall finish: 25
 - 1.2. Ceiling finish or soffit: 100
 - 1.3. Floor: 150
 - 1.4. Electrical services: 150
 - 1.5. Adjacent services: 100
 - 1.6. Uninsulated pipework: 75
 - 1.7. Adjacent insulated pipework: 25

Pr_65_52_63/710 General inspection and testing

1. Inspection of joints
 - 1.1. Number of joints: Two.
2. Safety precautions: In accordance with [HSE Guidance Notes: General Series \(GS\) GS 4](#).

Pr_65_53_86/610 Installation of pumps generally

1. Pipeline connections: Arrange to prevent transmission of pipeline forces to pump casing.
2. Brackets: Support pipeline mounted pumps on purpose made brackets lined with vibration absorbent material.
3. Alignment: Align and balance to minimize vibration.
4. Access: Provide adequate space for service and maintenance.
5. Identification plate
 - 5.1. Format: Engraved
 - 5.2. Details: Pump name

Pr_65_53_86/630 Installing pressurization units

1. Standards: Low and medium temperature hot water heating systems in accordance with [BS 7074-2](#).
2. Location of expansion vessel: In the system return pipeline close to the heat source or chilled water unit.

See [Pr_65_54_95/610 Installation of valves generally](#) in [Ss_55_20_34_57 Natural gas supply systems](#)

Pr_65_54_95/620 Installation of double regulating valves

1. General requirements: [Pr_65_54_95/610 Installation of valves generally](#)
2. Position: Provide 10 diameters of straight pipe upstream of valve and 5 diameters downstream

Pr_65_54_95/640 Installation of thermostatic radiator valves

1. General requirements: [Pr_65_54_95/610 Installation of valves generally](#)
2. Position: Sensing heads to be located away from extraneous heat-sources.
Protect heads from malicious damage and adjustment
Locate capillary drops in cupboards or enclose in metal conduit

Pr_65_54_95/641 Installing motorized valves

1. General requirements: [Pr_75_50_20/606 Installing control components](#)
2. Spindles: Vertical.

Pr_65_54_95/660 Installation of discharge connections

1. General requirements: [Pr_65_54_95/610 Installation of valves generally](#)
2. Safety and relief valves: *Terminate at a safe discharge point.*
3. Automatic air vents: *Terminate over a suitable gully or drain line in a visible location.*

Pr_65_54_95/670 Installation of check valves

1. Lift type: Install in direction of flow as indicated on the body.
2. Disc type: With spring, fit in any plane. Without spring, fit in vertical plane with flow from bottom to top.

Pr_65_54_95/680 Installation of safety valves

1. General requirements: [Pr_65_54_95/610 Installation of valves generally](#)
2. Inlet connection: As short as possible; diameter no smaller than the outlet bore.
3. Discharge lines : Rise vertically. Fit with small bore drain points to prevent the accumulation of water.

Pr_65_55_76/640 Installing combined air and dirt separators

1. Position: Mount at suitable height for draining and venting
Comply with manufacturer's recommendations

Pr_65_57_96/650 Installing strainers

1. Orientation: *Install with strainer cap at the bottom. Inlet at the top or side.*
2. Direction of flow: *Install in direction of flow with the pocket in the horizontal plane.*

Pr_70_65_30/610 Installing flues and chimneys

1. Joints and bends: Minimize number.
2. Slope (maximum): 30° from the vertical.
3. Joints: Install with sockets uppermost, fully supported and fixed securely with brackets supplied for the purpose. Do not locate joints within the depth of floors.
4. Sealing of joints: To provide a gas-tight installation. Provide waterproof joints suitable for use on condensing boilers
5. Expansion and contraction: Accommodate thermal movement.
6. Fire safety: Locate a safe distance from combustible materials.
7. Terminal: Terminate at the same height, approximately 1m horizontally from the existing balanced flue terminal

Pr_75_50_02/610 Installing valve actuators

1. General requirements: [Pr_75_50_20/606 Installing control components](#)
2. Position: Top of valve.
3. Interconnection: To central control panel.
4. Cable type: Single-core non-sheathed cables with LSHF insulation.
5. Cable containment: Flexible conduit.

Pr_75_50_20/606 Installing control components

1. Standard: In accordance with [BS 7671](#).
2. Equipment and sensor identification labels: Provide.
3. Insulation: Submit details of proposed insulation method where control components are on insulated pipelines.
4. Supports: Do not strain components.
5. Access: Adequate for operation and maintenance.

See [Pr_80_77_76/610 Installing insulation and protection products generally](#) in [Ss_55_70_38_15 Cold water supply systems](#)

See [Pr_80_77_76/625 Installing foil-faced mineral wool insulation on pipelines](#) in [Ss_55_70_38_15 Cold water supply systems](#)

Ss_60_40_37/620 Installing water based heating systems

1. Standard: To [BS EN 14336](#).

Ss_60_40_37/650 Filling and pressure testing of water based heating systems

1. Testing: Procedure for filling and pressure testing in accordance with BSRIA [BG 29/2012](#).
2. Notice (minimum): 48 h.
3. Pressure: 1.5 times working pressure.
4. Duration of test: 1 h.

Ss_60_40_37/660 Flushing and pre-commission cleaning of heating systems

1. Preliminary checks: Thoroughly inspect pipework. Complete pressure tests before cleaning.
2. Flushing: In accordance with BSRIA [BG 29/2012](#).
3. Waste products: Neutralize, and dispose of to drain. Preferably direct to manhole.

Ss_60_40_37/670 Installing water treatment for heating systems

1. Treatment: Via existing LG & HG heat dosing pots Closed circuit systems in accordance with BSRIA [BG 50/2013](#).
2. Water sampling: In accordance with [BS 8552](#).

System completion

Ss_60_40_37/810 Commissioning water heating systems

1. Pre-commissioning: In accordance with BSRIA [BG 2/2010](#) and CIBSE [Commissioning Code W](#).
2. Commissioning: In accordance with BSRIA [BG 2/2010](#) and CIBSE [Commissioning Code W](#).
3. Seasonal commissioning: In accordance with BSRIA [BG 44/2013](#).
4. Variable flow systems: In accordance with CIBSE [Knowledge Series KS09](#).
5. Notice (minimum): 48 h.

Ss_60_40_37/830 Commissioning boiler plant

1. Pre-commissioning: In accordance with CIBSE [Commissioning Code B](#).
2. Commissioning: Boiler manufacturer to commission boiler to obtain **5 year warranty**.
In accordance with CIBSE [Commissioning Code B](#).

Ss_60_40_37/845 Demonstrations

1. Running of plant
 - 1.1. Operation: Run, maintain and supervise the installations under normal working conditions.
2. Instruction: Instruct and demonstrate the purpose, function and operation of the installations.

Ss_60_40_37/860 Documentation

1. Operating and maintenance instructions
 - 1.1. Scope: Submit for the system giving optimum settings for controls.
 - 1.2. Product information: Include product description, date of purchase, performance characteristics, application (suitability for use), method of operation and control, and cleaning and maintenance requirements.
 - 1.3. Format: Electronic and 1 hard copy
2. Record drawings
 - 2.1. Content: Location and arrangement of plant in plant rooms.
Location, size and route of mechanical services.
Location, size, route and depth of underground services. Location and identification of pipework regulating, isolation and control valves.
 - 2.2. Format: Electronic drawing.

3. Submittal date: At handover.

Ss_60_40_37/880 Servicing and maintenance

1. **Requirement:** Appoint ASHP manufacturer to **inspect and undertake full service of existing machine and ancillaries**

Ω End of System

Ss_70_30_25_25 Earthing and bonding systems

Systems

Ss_70_30_25_25 Earthing and bonding systems

1. Description: **Earthing and Bonding**
The contractor shall all necessary supplementary earthing and bonding associated with the project works, in accordance with this specification and the IET Wiring Regulations, BS 7671 Amendment 1 and Guidance Notes.
The minimum cross sectional area of the supplementary bonding conductor shall be 16mm².
2. Supplementary bonding conductors: Not less than 16mm² LSOH single core LSOH sheathed.
3. Circuit protective conductors: Equal sized to the phase conductor of the circuit.
4. Execution: [Ss_70_30_25/630 General installation](#); [Ss_70_30_25/680 Installing supplementary bonding conductors](#)
5. System completion: [Ss_70_30_25/810 Inspection and testing](#)

Execution

Ss_70_30_25/630 General installation

1. Standards: In accordance with [BS 7430](#) and [BS 7671](#).

Ss_70_30_25/680 Installing supplementary bonding conductors

1. Earth connections: Bond all extraneous/conductive metalwork in the plant room.

System completion

Ss_70_30_25/810 Inspection and testing

1. Standards: In accordance with [BS 7430](#) and [BS 7671](#).
2. Continuity of protective conductors
 - 2.1. Parallel earth paths: Isolate before testing.
 - 2.2. Equipment: Continuity tester with short circuit current not less than 200 mA, and a no load d.c. or a.c. voltage between 4 V and 24 V.
3. External earth fault loop impedance (Z_e): Direct measurement.
4. Earth fault loop impedance (Z_s): Direct measurement.

Ω End of System

Ss_70_30_80_35

Hard-wired voltage small power systems

Systems

Ss_70_30_80_35 Hard-wired voltage small power systems

1. Description: **General Power Installation**

Refer to scope document and drawings

All works must be undertaken in accordance with BS 7671 (18th Edition).

Provide SPN supplies to new mechanical plant from the existing panel. Wiring shall be installed in LSOF single core cables, drawn into galvanised steel and conduit. Minimum cable size is to be 2.5mm².

Terminate all new cables in the control panels. Provide new, clearly permanently labelled double-pole isolators next to all new equipment. Ensure that all isolators are readily accessible. Clearly label all cable terminations

Provide final connections from isolators to equipment using single core wiring in flexible conduit, or manufacturer supplied flexible cable. Provide all necessary cable glands, fittings and accessories.

Undertake all necessary builders work in connection, including forming holes, fixings, etc.

Test and certify the new electrical installation and include certificates in record information

2. Final circuit cabling: [Pr_65_70_48_75 Single core non-sheathed \(LHSF\) insulated cables Type A](#)
3. Cable accessories: [Pr_65_70_11_15 Cable ties](#)
4. Containment: [Pr_65_70_11_18 Cable trunking Type B](#); [Pr_65_70_11_30 Flexible conduit Type A](#); [Pr_65_70_11_71 Rigid conduit Type A](#)
5. Rewireable installation: Required.
6. Electrical accessories and outlets: MK Metclad Plus range, aluminium.
7. Execution: [Ss_70_30_80/620 Small power installation](#); [Ss_70_30_80/610 Removing small power systems](#); [Ss_70_30_80/630 Installing cabling to socket outlets](#); [Pr_65_70_11/721 Installing rigid metallic conduit Type A](#)

Products

Pr_65_70_11_15 Cable ties

1. Standard: To [BS EN IEC 62275](#).
2. Format: Wrap around self-locking non-releasable.
3. Material: Nylon.
Metal. for fire alarm
4. Temperatures for permanent installation
- 4.1. Maximum: 60°C.
- 4.2. Minimum: 0°C.
5. Contribution to fire : Non-flame-propagating.
6. Environmental influences
- 6.1. Non-metallic and composite components: Resistant to ultraviolet light.
- 6.2. Metallic and composite components: Resistant to corrosion.

Pr_65_70_11_18 Cable trunking Type B

1. Description: Supply and install a TP&N radial final circuit to serve the new mechanical control panel wired in 6mm² LS0H single core cables plus 6mm² CPC drawn into galvanised steel. Trunking fixed surface to the building fabric.
2. Standards: To [BS EN 50085-1](#) and [BS EN 50085-2-1](#).

3. Installation position: Surface mounted on the wall.
4. Compartments: One.
5. Execution: [Pr_65_70_11/740 Installing trunking generally Type B](#)

Pr_65_70_11_30 Flexible conduit Type A

1. Description: Final connections to equipment
2. Manufacturer: Kopex
3. Standards: To [BS EN 61386-1](#) and [BS EN 61386-23](#).
4. Mechanical properties
 - 4.1. Resistance to compression: Heavy.
 - 4.2. Resistance to impact: Heavy.
5. Transport, installation and application
 - 5.1. Lower temperature (minimum): -5°C.
 - 5.2. Upper temperature (maximum): 60°C.
6. Resistance to bending: Flexible.
7. Electrical characteristics: With electrical insulating properties.
8. Resistance to external influences
 - 8.1. Protection against ingress of solid objects (minimum): To [BS EN 60529](#), IP3X.
 - 8.2. Protection against ingress of water (minimum): To [BS EN 60529](#), IPX0.
9. Resistance to corrosion: Medium/ high composite protection – Class 2 inside; Class 4 outside.
10. Resistance to flame propagation: Non-flame-propagating.
11. Sizes (OD): 25 mm. 20 mm.
12. Execution: [Pr_65_70_11/735 Installing conduit connections to equipment Type A](#);
[Pr_65_70_11/715 Installing pliable and flexible conduit Type A](#)

Pr_65_70_11_71 Rigid conduit Type A

1. Description: General, Emergency/Escapes Lighting and General purpose power LSOH insulated cables surface H.G. Class 4 galvanised steel conduit.
2. Standards: To [BS EN 61386-1](#) and [BS EN 61386-21](#).
3. Resistance to bending: Rigid.
4. Colour: PVC-White, galvanised - self colour
5. Execution: [Pr_65_70_11/720 Installing rigid metallic conduit](#)

Pr_65_70_48_75 Single core non-sheathed (LHSF) insulated cables Type A

1. Description: 1.5mm², 2.5mm² and 6mm² wired as a radial drawn into galvanised conduit and trunking
2. Standards: To [BS EN 50525-1](#) and [BS EN 50525-3-41](#).
3. Cable type: LSOH single core cables
4. Size: 1.5mm², 2.5mm² & 6.0mm²
5. Execution: [Pr_65_70_48/635 Installing low voltage cables Type A](#)

Execution

Pr_65_70_11/700 Installing conduit, trunking and ducting Type A

1. Standards: In accordance with [BS 7671](#) and [IET Guidance Note 1](#).
2. Preparation: Cut square. Remove burrs and sharp edges to make smooth.

3. Protection of metallic conduit, trunking and ducting
 - 3.1. Joints and ends: Remove grease, oil, dirt and rust before applying protective paint. Paint immediately following installation.
 - 3.2. Protective paint
 - 3.2.1. Generally: Compatible with conduit, trunking and ducting finish.
 - 3.2.2. Type: Galvanizing zinc rich paint, two coats.
4. Cross-sectional area: Maintain throughout the conduit, trunking and ducting length.
5. Arrangement: Position vertically and horizontally in line with equipment served, and parallel with building lines.
6. Spare containment: 25%
7. Draw wires: Install galvanized soft iron wires within spare conduit, trunking and ducting.
8. Distance from other services running parallel (minimum)
 - 8.1. Generally: 150 mm.
9. Drainage of conduit, trunking and ducting: Locate drainage outlets at lowest points in conduit, trunking and ducting installed externally, and where condensation may occur.
10. Fire barriers: Provide to maintain integrity of fire compartments.
11. Rewireable installations: Enable rewiring from accessible boxes or accessories only.
12. Support: Independently fix and support conduit, trunking and ducting from building structure.
13. Cleaning: Clean insides of conduit, trunking and ducting before installing cables.
14. Cabling: Install when conduit, trunking and ducting enclosure is complete.

Pr_65_70_11/710 Installing conduit generally

1. Fixing: Fix securely. Fix boxes independently of conduit.
2. Changes of direction: Conduit boxes or bends site formed by machine. Do not use elbows, tees or inspection bends.
3. Joints
 - 3.1. Generally: Manufacturer's jointing fittings.
 - 3.2. Number of joints: Minimize.
 - 3.3. Lengths of conduit: Maximize.
 - 3.4. Open ends: Plug.
 - 3.5. At movement joints in structure: Manufactured expansion coupling. Install adaptable boxes on both sides of joint at a maximum distance of 300 mm.
4. Connections to boxes, trunking, equipment and accessories: Screwed couplings with rubber bushes at open ends.
5. Conduit boxes
 - 5.1. Generally: Install flush with finished surfaces. Provide extension rings if required.
 - 5.2. Fixing screws: Countersunk or round-headed screws.
 - 5.3. Number of fixings (minimum): Two.
 - 5.4. Lids: Fasten with brass slot pan head screws.
6. Rear outlet boxes: Locate where surface conduits pass through walls to external equipment.
7. Draw-in boxes
 - 7.1. Spacing (maximum): 10 m.
 - 7.2. Number of bends between draw-in boxes (maximum): Two.
 - 7.3. Floors: Do not install draw-in boxes in floors.
8. Suspended ceiling installations: Fasten outlet boxes to structure above ceiling.

Pr_65_70_11/715 Installing pliable and flexible conduit Type A

1. General requirements: [Pr_65_70_11/700 Installing conduit, trunking and ducting Type A](#)
2. Joints: Push fit.
3. Connections to trunking: Female adaptors and externally screwed brass bushes.
4. Connections to equipment: Threaded bush.

Pr_65_70_11/720 Installing rigid metallic conduit

1. General requirements: [Pr_65_70_11/700 Installing conduit, trunking and ducting Type A](#)
2. Fixings: Saddle.
3. Joints: Screwed.
4. Threaded conduits: Tightly screw to ensure electrical continuity, with no thread showing.
5. Conduit connections to boxes and items of equipment, other than those with threaded entries: Earthing coupling with male brass bush and protective conductor.

Pr_65_70_11/721 Installing rigid metallic conduit Type A

1. General requirements: [Pr_65_70_11/710 Installing conduit generally](#)
2. Fixings: Saddle.
3. Joints: Screwed.
4. Threaded conduits: Tightly screw to ensure electrical continuity, with no thread showing.
5. Conduit connections to boxes and items of equipment, other than those with threaded entries: Earthing coupling with male brass bush and protective conductor.

Pr_65_70_11/735 Installing conduit connections to equipment Type A

1. General requirements: [Pr_65_70_11/700 Installing conduit, trunking and ducting Type A](#)
2. Surface mounted equipment
 - 2.1. Concealed conduit: Conceal the final connection.
 - 2.2. Exposed conduit: Contain the final connection from the conduit box within flexible metal conduit.
3. Equipment subject to vibration: Flexible metal conduit of adequate length to facilitate removal of equipment for maintenance. Final termination in swivel connectors.
4. Connections to external equipment: Flexible conduit.
Manufacturer supplied flexible cable, cut to suit

Pr_65_70_11/740 Installing trunking generally Type B

1. Changes of direction: Manufacturer's bends and tees.
2. Joints
 - 2.1. Generally: Manufacturer's jointing fittings. Maintain rigidity of trunking across joint.
 - 2.2. Number of joints: Minimize.
 - 2.3. Lengths of trunking: Maximize.
 - 2.4. Open ends: Blank using manufacturer's removable end caps.
 - 2.5. Metal edging: Protect with PVC edging strip.
 - 2.6. Electrical continuity: Maintain at each joint with a copper link fitted on the outside of the trunking.
3. Connections to conduit, boxes, equipment and accessories: Screwed couplings, adaptors, connectors and glands, with rubber bushes at open ends.
4. Connections to trunking covers: Minimize.

5. **Electrical continuity of covers:** Electrically continuous with the trunking or provide protective conductors.
6. **Access:** Provide space around trunking to permit access for installing and maintaining cables. Set out access with covers on a continuous face to allow cabling to be laid in throughout its entire length.
7. **Trunking passing through building fabric openings:** Provide fixed trunking covers. Extend covers 50 mm from both sides of the opening.
8. **Cable retaining straps:** Required except when trunking cover is on top.

Pr_65_70_48/635 Installing low voltage cables Type A

1. **Standard:** In accordance with [BS 7671](#).
2. **Timing:** Do not start internal cabling until building enclosure provides permanently dry conditions.
3. **Preparation:** Store cables above 5°C for 24 hours before installation.
4. **Installation temperature (minimum):** 5°C.
5. **Cables:** Install in one length. Dress cables flat, free from twists, kinks and strain.
6. **Cable pulling:** Do not overstress. Prevent kinks and twisting of the cable.
7. **Cable protection:** Cables passing through walls and floors to be sleeved with conduit or pipeduct to a minimum of 300 mm. Bush at both ends. Ensure that appropriate fire stopping materials are used to maintain the original fire integrity of the wall or floor around the penetration.
8. **Distance from other services running parallel (minimum):** 150 mm. Position cables below heating pipes.

Ss_70_30_80/610 Removing small power systems

1. **Scope:** Survey, isolate and completely remove all existing electrical supply installations within the boiler room (taking account requirement to provide temporary supplies to hot water system, pump and gas valve).
Remove all associated isolators, wiring, containment, supports, fixings, etc. Fire stop all redundant openings through the boiler room wall with 2 hour rated material
Update distribution board labelling and record information to suit.

Ss_70_30_80/620 Small power installation

1. **Standard:** In accordance with [BS 7671](#).

Ss_70_30_80/630 Installing cabling to socket outlets

1. **General:** Wire socket outlets in ring final circuits without spurs where hard wiring is employed.

Ω End of System



Specification created using NBS Chorus

Appendix A – Schedule of supplementary radiant panels

Schedule of Supplementary Radiant Panels.

Schedule of new emitters							
<i>Ref</i>	<i>output W (70oC MWT)</i>	<i>width mm</i>	<i>length mm</i>	<i>Type</i>	<i>Valves</i>	<i>Flow l/s</i>	<i>Room flow l/s</i>
RP G.1	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.2	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.3	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.4	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	0.0181
RP G.5	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.6	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.7	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0262
RP G.8	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.9	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP G.10	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0262
RP G.11	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP G.12	508	600	1800	Frenger Modular SP	IV flow + LSV Return	0.0060	
RP 1.1	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	0.0303
RP 1.2	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	
RP 1.3	847	600	3000	Frenger Modular SP	IV flow + LSV Return	0.0101	

Appendix F – PCI

SOUTHEND YMCA COMMUNITY SCHOOL

Pre-construction Information

FEBRUARY 2023



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This report dated 28 February 2023 has been prepared for DfE (the “Client”) in accordance with the terms and conditions of appointment dated (the “Appointment”) between the Client and **Arcadis LLP** (“Arcadis”) for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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Designers Information on Significant Risk

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Health & Safety File

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Principal Contractor's Construction Phase Plan

APPENDIX E

Asbestos Reports

1 Introduction

1.1 Objectives

1.1.1 Pre-construction Information

This Pre-Construction Information sets out to ensure that the design and construction of the works is implemented in a safe manner and complies with current health and safety legislation. It follows the requirements of the Construction (Design and Management) Regulations 2015 Appendix 2 of the guidance document and is intended to impart relevant information about the works to enable due allowance to be made in respect of health and safety.

1.1.2 Hazard Identification

Hazard Identification and Residual Risk registers have been compiled because of design risk workshops, though comprehensive, the Principal Contractor is to review and conduct his own risk assessment and bring any concerns to the attention of the design team.

1.1.3 Arcadis LLP Quality Assurance Procedures

This Document has been checked in accordance with Arcadis LLP procedures.

2 Client Health and Safety Standards and Requirements

As a 'Client' under the Construction (Design and Management) Regulations 2015 (CDM regulations), DfE recognise that they have considerable influence over the health and safety performance achieved on construction projects in which we are involved.

DfE is committed to ensuring that the underlying principles and requirements of the CDM Regulations are fully implemented on all construction projects so that exemplar standards of health and safety performance are achieved across our project programmes.

To fulfil the duties placed upon the client and demonstrate our compliance with the requirements of the CDM Regulations, DfE have developed processes, procedures, and checklists to be used at all work stages throughout a construction project.

2.1 Appointments

The Principal Designer, Designers, Principal Contractor and Contractors appointed by DfE shall be either existing approved suppliers or approved via the DfE process, which includes relevant CHAS accreditation.

2.2 Design Phase

DfE expect all Designers to be familiar with the HSE Principles of Prevention and Red, Amber, Green (RAG) lists, and demonstrate that they have been adopted in all design work undertaken on behalf of DfE.



Health and safety must be an agenda item at all design team meetings, and DfE expect the necessary workshops to take place during the design phase to identify strategies for safe access for the internal and external cleaning and maintenance of the building.

During the design phase health and safety hazards associated with:

- Groundworks
- Erection of Primary Structure
- Installation of Plant
- Internal Fit Out
- Occupation and Use of the Building
- Internal and External Cleaning (especially high level)
- Maintenance
- Refurbishment / Repair / Alteration / Extension
- Dismantling
- Demolition

must be identified and measures to reduce and control the level of risk, so far as reasonably practicable, developed.

Where a Principal Designer is appointed, DfE expect a combined Project Health and Safety Risk Register to be maintained by the Principal Designer throughout the project to record significant and unusual hazards associated with the project, actions taken to eliminate or control the level of risk during design and residual risks that must be controlled during the construction and on-going use of the building.

The Project Health and Safety Risk Register must be included with the Pre-Construction Information provided to the Principal Contractor / Contractors.

DfE also expect significant and unusual hazards that have not been eliminated during the design process to be annotated using pictorial warnings supported with written dialogue in a Residual Health and Safety Risks Box on design and construction drawings provided to the Principal Contractor / Contractors.

This allows for all relevant risk information to be collated in one place and ensures all significant and unusual issues are not missed during design changes. This practice also ensures that the intended audience, the contractors, and their employees will visually be made aware of these issues.

2.3 Mobilisation for Construction

No work is to commence until the Principal Contractor or Contractor's Construction Phase Plan has been assessed for its adequacy by the DfE, and an authorisation to proceed has been issued.

The Principal Contractor or Contractor's Construction Phase Plan must be sufficient to address clearly, the arrangements for managing and organising the project and include information as listed in the '**Principal Contractors Construction Phase Plan**', given in **Appendix D**, prior to work commencing on site.

The Construction Phase Plan must refer to the health and safety competence reviews of all sub-contractors used for the project. The Plan must contain an example of the process used to undertake this evaluation, i.e. questionnaire / evaluation form contractors are required to complete.

The content of any existing Health and Safety File and the survey reports and utilities information provided with this Pre-Construction Information must be referenced and addressed within the Principal Contractor / Contractor's Construction Phase Plan and project specific Risk Assessments and Method Statements.

2.4 Construction Phase

On receipt of authorisation to proceed the Principal Contractor or Contractor is under a legal duty to administer, implement and update the Construction Phase Plan as required by changes in design or circumstances, throughout the construction period.

The Principal Contractor and all Contractors must ensure that all operatives are familiar with DfE, Construction Standards and Expectations before starting work on site and always comply with the site requirements.

Failure to comply with any elements may be considered as a breach of contract and result in the persons removal from site.

DfE require that personnel allocated to work on our projects hold the following qualifications:

Site Managers - valid Site Managers Safety Training Scheme (SMSTS) certificate
Site Supervisors - valid Site Supervisors Safety Training Scheme (SSSTS) certificate
All operatives - valid CSCS card relevant to their role on the project

All construction work must take place in compliance with the requirements of the DfE – as per site requirements and rules and must be pre agreed with the principal contractor.

Health and safety must be an agenda item at all site progress meetings, and DfE expect the necessary liaison to take place on a regular basis, throughout the construction phase to identify, amend and implement risk control measures to ensure the continuing health, safety, and welfare of DfE staff, customers and other visitors to the premises.

To ensure that Principal Contractors and Contractors continue to manage health and safety to a high standard on site throughout the construction phase of projects, DfE will arrange for site health and safety inspections to be carried out.

Principal Contractors and Contractors must co-operate with the suppliers engaged by DfE to undertake site health and safety inspections on our behalf. Any failure to cooperate or attempt to obstruct the completion of site health and safety inspections may be considered as a breach of contract and result in the persons removal from site.

Where poor performance is identified during a site health and safety inspection, the report of inspection will be escalated directly to DfE.

In the event of any accident or health and safety related incident occurring during the construction Phase, DfE expect that the Principal Contractor / Contractor will comply with the requirements as per the site rules.

3 Clients Brief

3.1 Information on the Aims and Objectives of the Project

3.1.1 Main function and operational requirements of the finished project

The Principal Contractor will report directly to the Project Manager and will produce a monthly progress report which will be copied to the Project Manager, Client and Project Team as well as any other stakeholders requested to be copied in by the Client.

Regular project progress meetings will be expected to be held by the Principal Contractor, who will invite the Project Manager, Client Representative, Design Team and other invites as necessary, and will also provide and distribute records of the key features and decisions of each meeting.

3.1.2 How the project will be managed including its health & safety risks

The Client's aim is to complete this project to its satisfaction with minimal accidents or instances of work-related ill health. In addition, the Client expects any contractors and all others associated with the project that the Principal Contractor may appoint, to approach health and safety matters in a similar way in order to achieve the highest standards of safety performance.

The appointed Principal Contractor must ensure that adequate resources are given to meet these goals and as such the issued Construction Phase Plan must refer to the health and safety competence reviews of all contractors used for the project. The plan should contain where reasonable to do so an example of the process undertaken in this evaluation process, i.e. example of typical questionnaires/forms contractors are required to submit.

The Construction Phase Plan should also contain details/arrangement and/or management process the Principal Contractor has in place for monitoring and effecting behavioural safety on site. Upon appointment the Principal Contractor is to develop and detail such systems as are relevant to the works and include within the Construction Phase Plan.

The Principal Contractor shall engage suitably qualified site managers who shall possess, as a minimum, a current, 5-day, Site Managers Safety Training Scheme (SMSTS) certificate or equivalent.

The Principal Contractor is to comply with all current Health and Safety Legislation and Approved Codes of Practice

3.1.2.1 Permitted Working Hours

Working hours are anticipated to be as below but will be subjected to confirmation by local planning authority:

Monday to Friday	08.00 to 18.00
Saturday	08.00 to 13.00
Sunday and Bank Holidays	By arrangement with the Project Manager and Client only

Additional hours are permitted subject to conforming to the DfE's Safety policies for contractors working on site.

3.1.2.2 Site Hoarding Requirements

All security fencing/hoarding is to be of adequate design and construction to enclose site boundaries with health and safety warning signs to the public and children in agreement with the Client.

3.1.2.3 Client Permit to Work Systems

The Principal Contractor will be required to implement a system of permits or agree an alternative system with the Client. Items that will require a 'Permit to Work' include but are not limited to:

- Removal of asbestos containing materials
- Hot works permits
- Confined Spaces Working.
- Demolition Works.
- Work on Live Electrical Services.
- Work on roofs or at Height.
- Work in Excavations and permit to dig.

3.1.2.4 Fire Precautions

The Principal Contractor should consider the following issues:

- Ensure that all necessary fire precautions are implemented and that site personnel are aware of all fire drills, all escape and rally points and positions of all firefighting equipment in the event of a fire.
- Ensure that all existing fire evacuation routes are safely maintained throughout the construction works and that hoarding lines do not interfere with final exit routes.
- A responsible person in charge of fire safety who can assess fire risks, understands fire growth and spread, will prepare and up-date site evacuation plans as necessary, and will prepare a salvage operation plan.
- Ensure that the location of the client's muster points is known and not interfered with.
- Frequency of client's fire drills where they may affect or impinge on the construction site.
- The Principal Contractor shall comply with the Joint Code of Practice 'Fire Prevention on Construction Sites' and the recommendations of HSG 168 – Fire Safety in Construction
- A fire safety plan and Fire Risk Assessment in compliance with the Regulatory Reform (Fire Safety) Order 2005 or the 'Joint Code' is to be prepared prior to any works commencing. It shall include procedures to reduce the risk of fire and for dealing with fires, explosion and other major incidents.

3.1.2.5 Emergency Procedures and Means of Escape

The Principal Contractor is to have a formulated emergency procedure for the site. This procedure is to include details of the nearest accident and emergency unit, local police details and a marked-up site plan for use by the emergency services.

Details of the client's site emergency procedures will be provided as part of the preparations for site set-up and the Principal Contractor's plan must include suitable procedures to notify other building users of an emergency situation and to receive notification where such an incident occurs elsewhere on the site.

The Principal Contractor is to ensure that in the event of an emergency updated site plans are taken to the muster point and made available to the fire and rescue service. The plans must give details on the following as stated in the Joint Code of Practice:

- Fire and rescue service access, firefighting shafts, fire lifts and temporary hoist facilities?
- Dedicated emergency escape routes and staircases?
- Sprinkler installations?
- Floor loading limitations?
- Positions of hydrants on or near the site, dry riser inlets and wet risers?
- Fire points?
- Temporary buildings and temporary accommodation?
- Hazardous items (e.g. flammable liquids, gas cylinders, gas mains, electrical risers, temporary holes in floor slabs)?

3.1.3 Timeframes

Anticipated project dates are as below & subject to Contractor's Proposals:

Heating Distribution	
Start on site	17 th July 2023
Completion	25th August 2023

3.1.4 Clients single point of contact

Name: **Stuart Wager**

Email: **stuart.wager@arcadis.com**

Mob: **+44 (0) 7818 526025**

4 Description of the Project

4.1 Project Description

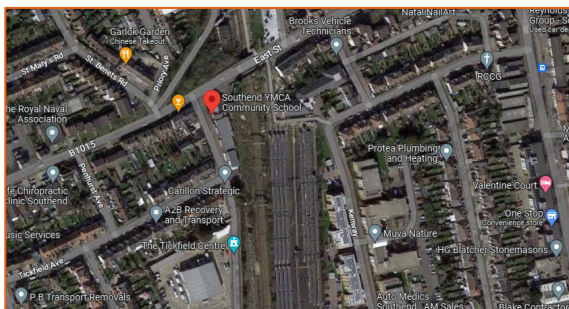
It is intended to undertake the following works: -

- Installation of supplementary heating equipment, including:
 - New boiler, pump, flue and ancillaries
 - Pressurisation unit
 - Classroom radiant panels
- Thermal insulation of the new and modified pipework.
- Associated pipework upgrade, alteration and extensions to heating and mains water service
- Gas pipework upgrade
- Improvements to ASHP surface water drainage
- Builder's works, opening up, making good and painting etc.
- Testing, commissioning, flushing, chlorination, etc associated with the above works.
- Strip out of existing items rendered redundant by the work

- Modifications to mechanical control panel and associated controls
- Minor electrical works in connection

4.2 Location of the Project

Southend YMCA Community School, Tickfield Avenue, Southend-on-Sea, SS2 6LH



Southend YMCA Community School - Google Maps

4.3 Details of Parties Involved

Company Name	Address	Phone No.	Contact
Project Director - DfE	Department for Education, Fifth Floor	07789 137087	Toby Chambers Email: toby.chambers@education.gov.uk
Project Manager - DfE	Sanctuary Buildings 20 Great Smith Street London, SW1P 3BT	07393008424	Poornima Karthik Email: Poornima.karthik@education.gov.uk
Project Manager (Lead TA)	2nd Floor Tempus Court, Onslow Street, Guildford, GU1 4SS	+44 (0) 7818 526025	Stuart Wager Email: stuart.wager@arcadis.com
Arcadis			
Cost Consultants	80 Fenchurch Street, London EC3M 4BY United Kingdom	07769 364 799	Arshad Ali Email: arshad.ali2@arcadis.com
Arcadis			
Principal Designer (Pre-Contract Stage Only)	80 Fenchurch Street, London EC3M 4BY United Kingdom	07500 101933	Chris Longmire Email: christopher.longmire@arcadis.com
Arcadis			
Principal Contractor			
TBC			
Local Authority	Civic Centre Victoria Avenue, Southend-on-Sea, Essex, SS2 6ER		
Southend-on-Sea City Council			
Health and Safety Executive	Osprey House, Hedgerows Business Park, Colchester Road, Springfield,		
HSE			

4.4 Arrangements for the Co-operation Between Duty Holders

Under CDM 2015, each element of design including temporary works, designed access equipment, individual specialist contractor and specialist designer packages, is required to be developed with due consideration for the health and safety of all concerned both during construction, subsequent occupancy and maintenance. Each element of design will be co-ordinated for health and safety aspects by the Principal Designer using design team meetings and risk workshops as appropriate.

To facilitate this, the following shall apply:

- Each element of design shall be developed by the design team based on hazard identification and control considering the Principles of Prevention.
- The design team must also consider buildability, future maintenance, repair and subsequent demolition and dismantling.
- The Principal Contractor must ensure that any designer appointed by him shall be provided with all necessary information to enable the design to consider other works and other design elements in selecting the most appropriate options.
- Each element of design shall be submitted in sufficient time to permit proper consideration of health and safety, to ensure that the designers have taken due regard to health and safety as part of their design.
- The Principal Contractor shall be required to update, amend and modify as necessary the detailed Construction Phase Plan in order to address any health and safety risk associated with individual design elements developed during the works, so that at all times the plan may be considered suitable and sufficient.

5 Existing Information, Records & Plans

5.1 Existing Structure(s)

Southend YMCA Community School is located the junction of the B1015 East Street and Tickfield Avenue, Southend-on-Sea. A railway line runs adjacent to the site to the north., The school building comprises two main parts; the original ticket office – a Victorian era two-storey red-brick and slate roofed building, which is now joined by a new 'link block' to a modular type block, installed by McAvoy under the Free School programme in 2013. There is also a standalone boiler room which is a single storey structure with flat roof and solid brick wall which consists of a plant room and external store separated by an internal masonry partition.

5.2 Health & Safety Hazards of the Site

5.2.1 Asbestos Containing Materials

The building was completely refurbished and extended in 2014 and it is not envisaged that any asbestos material remains. However, the original part of the building pre-dates 1998 and care should be taken when opening up and accessing voids. Ensure that operatives are "asbestos aware" and report any material suspected of containing asbestos.

Request and review all current asbestos surveys and registers. The Principal Contractor must also have in place a protocol for dealing with contaminants found during the works that are not listed or fully identified. Should asbestos be detected or suspected during the works, all works shall cease in that area until further tests are undertaken, and safe removal can be arranged, in accordance with the Control of Asbestos Regulations 2012.

The Principal Contractor shall ensure that all operatives have received (as a minimum) basic asbestos awareness training. Training records may be requested prior to any operations commencing on site.

5.2.2 Existing Storage of Hazardous Materials

Rockwool and glass fibre are known skin irritants which will be present in the thermal insulation to the pipes. Avoid contact with the skin and minimise disturbance of the material. Care must be taken when handling chemicals, such as water treatment, paint, cleaning agents, etc. Avoid contact with the skin and ensure high levels of ventilation when the chemicals are open to atmosphere.

5.2.3 Ground Conditions

This project does not include substantial excavations; however, the Principal Contractor should consider the ground stability / bearing capacity of proposed locations for permanent slabs for plant and equipment and temporary positions for containers, plant, equipment or materials, prior to positioning.

5.2.4 Difficulties within premise

It is possible these works will be undertaken at the same time as another contractor is undertaking works on site. This will be confirmed prior to commencement. It is possible that other maintenance works may be scheduled by the current maintenance provider. This will be subject to confirmation with the school and the timing of any such works will be communicated to the successful Bidder by no later than Contract Award. Access for parking is limited on site. The successful bidder will have access to the school's welfare facilities. They will be expected to keep these in a good clean standard during and at completion of the works. It is recommended that the contractor undertake a photographic record of condition at the start and completion of the works.

The construction phase will have the potential to create dust. It will therefore be necessary to undertake a construction dust risk assessment to determine the level of mitigation required during the construction phase.

Based on the result of local air quality monitoring, there is a risk of exceedances of the annual mean NO₂ air quality objective at the application site. Detailed air quality dispersion modelling is recommended to determine whether there would be any constraints to the design of the proposed development with regard to air quality.

When available, the level of trips generated by the proposed school would need to be compared with screening criteria to determine whether further investigation of the potential air quality impact on the local area would be required. In order to meet the Air Quality Neutral requirements of London Plan Policy SI1 Improving Air Quality, an Air Quality Neutral Assessment would need to be completed when the relevant data are available.

Principal Contractor shall ascertain the localised site conditions pertinent to the proposals. The Principal Contractor shall continually monitor the conditions of any retained structures throughout the construction phase, both inside and outside, immediately reporting any observed defects to the Employer & CDMA.

5.2.5 Smoking Restrictions

Smoking is not permitted anywhere on the site.

5.3 Extent and Location of Existing Records and Plans

All existing information by way of existing drawings, reports, structural appraisals etc., and other relevant information, are included in the tender documents and are available on SharePoint.

5.3.1 Available Information

The Principal Contractor must ensure that the information provided is sufficiently detailed to allow identification of the risks associated with any hazards that may exist.

Where surveys and reports must be included within the tender documentation, they are referred to here and will not be duplicated.

5.3.2 Location of Existing Services

The duty remains with the Principal Contractor to ensure that he has sufficient information to plan, manage and safely undertake his construction works, and where this involves potential for accidental strike of buried services.

It will be necessary to undertake a careful appraisal of the existing services on site prior to the commencement of the development. This will ensure that all live services have been identified, traced, marked and protected to avoid damage or disconnected as required by the works to be undertaken. There is also the possibility of unrecorded services to which the Principal Contractor is to remain vigilant. The Principal Contractor should assume that any/all services found as part of the investigation works are live until otherwise proven.

No excavation is to be undertaken unless the area has been checked for the presence of underground services. Observance of the recommendations in HSE Guidance Note HS (G) 47 'Avoidance of underground services' may be prudent.

The Principal Contractor is to ensure that any services connected to adjacent occupied premises or other facilities are not disconnected or interfered with without due notice.

5.4 Site Constraints

5.4.1 Boundaries and access, including temporary access.

Adequate warning signs, traffic management systems and temporary barriers etc., will need to be in place prior to construction works commencing on site, and proposals for the site signage will be required within the site set up plan.

Throughout the period of the works, adequate means of escape must be continually maintained for contractor's personnel, visitors to the site and the public and tenants using the car parks and adjacent occupied buildings. Routes for emergency vehicles entering and exiting the adjacent sites must always be maintained.

5.4.2 Adjacent land use

The site/building is located in a mixed use (mainly residential area in Southend-on-Sea. To the East of the site is the trainline to Prittlewell Station. No access is available to this area at any time.

5.4.3 No-go areas or other authorisation requirements for those involved in the project.

The areas surrounding the site will remain occupied, and the Principal Contractor is to emphasize to all his contractors and operatives on site that their behaviour and treatment of not only the site but surrounding areas will reflect upon the project. Noisy, rowdy, or inappropriate behaviour or littering in the adjacent areas will not be tolerated, and the effects of the site and behaviour of operatives in and around the site on the local tenants should always be considered.

5.4.4 Any areas the client has designated as confined spaces.

The associated risks and management controls required should be acknowledged within the initial draft of the Construction Phase Plan, though the specific on-site measures and precautions may be addressed in risk assessments and method statements prepared nearer to these works taking place on site.

5.4.5 Parking Restrictions

There is limited available parking at the site. Parking of contractor's vehicles should be limited to those necessary for the effecting discharge of the works. All other vehicles will have to park on-street abiding by the local authority parking restrictions.

5.4.6 Restrictions on Deliveries or waste collection or storage

Deliveries can be made at any time, during holidays, if the Contractor is on site to accept the delivery. Deliveries are to be via the vehicle entrance to the car park in Tickfield Avenue.

Skips should be avoided, where necessary, by using regular "stop and collect arrangements", or removal on vans. No waste is to be left outside the building unattended. If unavoidable, skips should be positioned in an agreed position that will not impede staff and emergency access. They must be of the covered type and left secure. Skips left on site overnight must be of the lockable type.

The Principal Contractor must ascertain and comply with any requirements or restrictions concerning access to the site, road traffic, standing vehicles and any restricted times or places for loading, unloading of materials, plant, equipment etc., those imposed by the highway authority, the police and other relevant bodies.

Vehicle access for deliveries etc. should be managed and the Principal Contractor is required to make allowance for suitably robust site arrangements, a gateman to attend all deliveries, and where necessary a qualified and trained banksman to escort deliveries or waste removal where reversing vehicles are unavoidable due to site constraints.

The adjacent roads, car parking areas and pedestrian routes will be in use throughout the course of the Works in consideration of the needs.

5.4.7 Security of the Site

The Principal Contractor will be wholly responsible for the security of the site and provide all necessary measures as are reasonably practicable to prevent un-authorised access by any member of the public or other person.

The health, safety and security of the public is paramount and relevant measures shall be adopted by the Principal Contractor to ensure that the same is always maintained for the duration of the works. The client and project manager consider all breaches of security serious and breaches that occur as the result of a failure by the Principal Contractor will be deemed to be a serious failure in performance.

The Principal Contractor is to ensure that unauthorised access to the site, particularly by children, is prevented for the duration of the works. Please refer to HS(G) 151 "Protecting the Public – Your Next Move" for guidance. All arrangements shall be agreed prior to their implementation through inclusion in the Construction Phase Plan.

The Principal Contractor will be required to provide appropriate security such that unauthorised access to any works is prevented; the following are suggested as the minimum requirements:

- Access passes on completion of a site induction course.
- Provide adequate security resources and management to maintain physical security of the site.
- PC shall establish an access control point for the duration of the site works and establish a suitable control method to manage authorised access/egress of personnel.
- Ensure enclosure is fully secure from unauthorised access to prevent pilfering, theft, damage and access to the works. The PC shall ensure that all regulatory licenses and approvals are sought and achieved for the required hoardings.

APPENDIX A

Clients Site Rules

The Contractor shall ensure that his personnel and contractors adhere to the following principles of good conduct, good practice, and workmanship.

The Principal Contractor shall apply the following site rules and ensure that they are observed and complied with by everybody working on or visiting the site:

1. No personnel, including visitors, are to have access to the site without fully complying with site access permit requirements. Visitors must always be accompanied.
2. All staff to be issued photographic identification which is always to be worn whilst on site, staff are also required to wear clothing clearly signifies for whom they work, entry on to site is to be strictly controlled.
3. All personnel shall be properly and correctly trained for the work on which they are employed.
4. Personal protective equipment appropriate to the task being carried out shall always be worn.
5. No drugs or alcohol shall be allowed on the site, or any person who is under the influence of drugs or alcohol.
6. Smoking is not permitted on site.
7. All dust and pollution shall be prevented, all measures are to be taken to prevent any nuisance to the public and building occupiers.
8. Radios, cassette players, personal stereos or similar are prohibited.
9. Any person using abusive language, wolf whistling or similar will be expected to be removed by the Principal Contractor from the site.
10. No fires on site; the Principal Contractor must comply with the Joint Code of Practice Fire Prevention on Construction Sites, Latest Edition.
11. Lone working on site is not permitted.
12. All site operatives and personnel, including visitors, shall be aware of the evacuation procedures in the case of an emergency.
13. All escape routes must be kept clear of plant, tools, materials and rubbish always.
14. All fire exit doors to be always maintained and must be left unobstructed.
15. Hours when the contractor is permitted to work must be strictly adhered to.

APPENDIX B

Designers Information on Significant Risk

Risk Register for FS 0137 SOUTHEND YMVCA COMMUNITY SCHOOL - HEATING DISTRIBUTION WORKS

Risk ID	Risk & Issue (description)	Current Owner	Date Raised	Baseline Prob	Baseline Impact	Proj Severity	Countermeasures/Contingency plans	Current Status
1.0	Client issues							
1.1	Opening of school in a timely manner to enable works to proceed in line with programme	School	28/02/2023	2	3	6	Ensure good communication with school and review opportunity for contractor to hold one set of keys.	Open
1.2	Limited parking on site	Contractor	28/02/2023	2	3	6	Contractor to limit parking on site and ensure this is managed during the course of the works. Car parking area to be left in same condition with any damage incurred made good. Survey to be undertaken prior to commencement of works.	Open
1.3	Asbestos. The building was completely refurbished and extended in 2014 and it is not envisaged that any asbestos containing materials remain.	Contractor	28/02/2023	2	4	8	However, the original part of the building pre-dates 1998 and care should be taken when opening up and accessing voids. Ensure that all site operatives are 'asbestos aware' and report any material suspected of containing asbestos. Request and review all current asbestos surveys and registers.	Open
2.0	Design Issues							
2.1	Proximity to neighbouring properties and possible damage to third party buildings/fences etc.	DfE	28/02/2023	2	3	6	Works are well inside site boundary and generally contained within buildings. Contractor to undertake schedule of condition survey prior to commencement of works.	Open
3.0	Statutory							
3.1	No materials risks noted.		28/02/2023			0		
4.0	Utilities & Services							
4.1	Discovery of unidentified services / location of services not as record plans.	DfE	28/02/2023	2	2	4	None anticipated based on previous surveys and investigations but Contractor to remain vigilant during the works.	Open
4.2	Live services in building and below ground	Contractor	28/02/2023	3	3	9	Test for buried services using suitable instruments, particularly when setting out ASHP channel drainage.	Open
4.3	Working with gas supplies.	Contractor	28/02/2023	3	3	9	There is a new gas-shut off system being installed prior to the works. Contractor to take due care to protect and prevent damage to the safety system.	Open
5.0	Site Management & works execution							
5.1	Site/building staff, other contractors and public. Unauthorised personnel wandering into working locations and areas that are not handed over.	Contractor	28/02/2023	2	3	6	Erect substantial screens to maintain security or keep areas locked wherever possible. Inform head teacher/site supervisor/Employers Representative and request assistance in all cases.	Open
5.2	Working at height and/or from platforms.	Contractor	28/02/2023	3	3	9	Ensure that proprietary mobile platforms/scaffold erected and moved as required, complete with handrails properly assembled, ladders tied and removed in the evenings and at weekends. All personnel to wear appropriate PPE for works. Note that the boiler room is circa 3.6m high.	Open
5.3	Fibreglass	Contractor	28/02/2023	2	3	6	Avoid any contact by using appropriate PPE.	Open
5.4	Painting	Contractor	28/02/2023	2	3	6	Contractor to apply in well ventilated areas to prevent fumes. Open windows and doors and follow instructions on product literature. Avoid contact by using appropriate PPE.	Open
5.5	Fire or hot works	Contractor	28/02/2023	2	3	6	Means of escape to be maintained at all times. Fire extinguisher to be at hand where hot works are taking place. A press-fit crimping pipe jointing method has been specified to significantly reduce the need for hot works. However where hot works are required, employ good practice and Permit to Work to control risks.	Open
5.6	Tripping hazards	Contractor	28/02/2023	2	3	6	Carefully move all cables, wires etc and make safe. Avoid leaving tools and materials lying on the floor. Risk to be controlled through the implementation of good practice.	Open
5.7	Noise	Contractor	28/02/2023	2	3	6	Ear protection to be worn. Silencers to be fitted on compressors etc. Risk to be controlled through the implementation of good practice.	Open
5.8	Lifting & handling large components	Contractor	28/02/2023	2	3	6	Proprietary lifting equipment to be used. Operatives to be trained on correct lifting techniques. PPE to be worn as appropriate. Risk to be controlled through the implementation of good practice.	Open
5.9	Confined spaces	Contractor	28/02/2023	3	3	9	Where works are involved within confined spaces such as roof voids, lofts, risers etc, adequate ventilation and lighting should be provided and safe adequately supported access walkways provided.	Open
6.0	Financial							
6.1	Cost increase and programme prolongation due to unexpected installations following commencement of works.	DfE	30/01/2023	2	3	6	Close monitoring of cost during works. Any perceived change in scope to be communicated to client as soon as possible.	Open
6.2	Cost increase and programme prolongation due to discovery of additional defects following commencement of works.	DfE	28/02/2023	3	3	9	Contractor to advise Employers Rep upon discovery of unexpected defects and agree a plan for remedy.	Open
7.0	Uncontrollable Risks							

Risk ID	Risk & Issue (description)	Current Owner	Date Raised	Baseline Prob	Baseline Impact	Proj Severity	Countermeasures/Contingency plans	Current Status
7.1	Adverse weather.	DfE	30/01/2023	2	2	4	Contractor to monitor and advise Client of any significant delays and propose plan for recovering delays	Open
8.0	ICT Issues							
8.1	Disruption and/or damage to existing ICT installations	DfE	28/02/2023	2	4	8	Contractor to identify locations of ICT installations and take precautions to protect these, working carefully around them. If removal is essential for the works, Contractor to advise the Employers Representative prior to commencement of works.	Open

APPENDIX C

Health & Safety File

The health and safety files are defined as a file appropriate to the characteristics of the project, containing relevant health and safety information to be considered during any subsequent project.

The file must contain information about the current project likely to be needed to ensure health and safety during any subsequent work, such as maintenance, cleaning, refurbishment, or demolition. When preparing the health and safety file, information on the following should be considered for inclusion:

- a. A brief description of the work carried out.
- b. any hazards that have not been eliminated through the design and construction processes, and how they have been addressed (e.g., surveys or other information concerning asbestos or contaminated land).
- c. key structural principles (e.g., bracing, sources of substantial stored energy – including pre- or post-tensioned members) and safe working loads for floors and roofs.
- d. hazardous materials used (e.g., lead paints and special coatings).
- e. information regarding the removal or dismantling of installed plant and equipment (e.g., any special arrangements for lifting such equipment).
- f. health and safety information about equipment provided for cleaning or maintaining the structure.
- g. the nature, location, and markings of significant services, including underground cables; gas supply equipment; fire-fighting services etc; and
- h. information and as-built drawings of the building, its plant and equipment (e.g., the means of safe access to and from service voids and fire doors).

There should be enough detail to allow the likely risks to be identified and addressed by those carrying out the work. However, the level of detail should be proportionate to the risks. The file should **not** include things that will be of no help when planning future construction work such as pre-construction information, the construction phase plan, contractual documents, safety method statements etc.

Information must be in a convenient form, clear, concise, and easily understandable:

Electronic Copy: Final transfer of documentation is yet to be agreed. However, Electronic media copies of all documents are required with the following characteristics:

Complete Health and Safety file and drawings in Bookmarked PDF format.

Drawings only, in .pdf and .DWG or similar CAD format.

Hard Copy: Bound paper manuals are required with the following characteristics:

Covers: EMGEE (or similar) A4 PVC 4 D White ring binders with clear pocket on full face and spine

Sizes: 25, 38, 50, 65mm

Part Tab Dividers: White stepped 1 to 5 Concord Ref. 06201

Section Tab Dividers: White stepped 1 to 31 Concord Ref. 06701

Paper Print of Drawings: Plain paper prints of record drawings are required, folded to A4, for all contractor and manufacturer's drawings, and placed with the title outermost in clear plastic pockets.

APPENDIX D

Principal Contractor's Construction Phase Plan

The Construction Phase Plan (CPP) must record the:

1. Health and safety arrangements for the construction phase
2. Site rules; and
3. Where relevant, specific measures concerning work that falls within one or more of the categories listed in Schedule 3 (Work involving particular risks).

The plan must record the arrangements for managing the significant health and safety risks associated with the construction phase of a project. It is the basis for communicating these arrangements to all those involved in the construction phase, so it should be easy to understand and as simple as possible.

In considering what information is included, the emphasis is that it:

1. Is relevant to the project.
2. Has enough detail to clearly set out the arrangements, site rules and special measures needed to manage the construction phase; but
3. Is still proportionate to the scale and complexity of the project and the risks involved.

The plan should not include documents that get in the way of a clear understanding of what is needed to manage the construction phase, such as generic risk assessments, records of how decisions were reached or detailed safety method statements. The following list of topics should be considered when drawing up the plan:

1. A description of the project such as key dates and details of key members of the project team.
2. The management of the work including:
 - a. The health and safety aim for the project.
 - b. The site rules.
 - c. Arrangements to ensure cooperation between project team members and coordination of their work, e.g., regular site meetings.
 - d. Arrangements for involving workers.
 - e. Site induction.
 - f. Welfare facilities; and
 - g. Fire and emergency procedures.
 - h. The control of any of the specific site risks listed in Schedule 3 where they are relevant to the work involved.

Work involving risks

1. Work which puts workers at risk of burial under earth falls, engulfment in swampland or falling from a height, where the risk is particularly aggravated by the nature of the work or processes used or by the environment at the place of work or site.
2. Work which puts workers at risk from chemical or biological substances constituting a danger to the safety or health of workers or involving a legal requirement for health monitoring.
3. Work with ionizing radiation requiring the designation of controlled or supervised areas under regulation 16 of the Ionising Radiations Regulations 1999.
4. Work near high voltage power lines.
5. Work exposing workers to the risk of drowning.
6. Work on wells, underground earthworks and tunnels.
7. Work carried out by divers having a system of air supply.
8. Work carried out by workers in caissons with a compressed air atmosphere.
9. Work involving the use of explosives.
10. Work involving the assembly or dismantling of heavy prefabricated components.
11. Covid-19 arrangements on site & control measures.

*Where they are relevant to the work involved.

Where Asbestos Containing Materials (ACM's) have been identified within the Asbestos Refurbishment & Demolition Survey and where the project will require work on, or which will disturb or is liable to disturb, materials containing asbestos the Construction Phase Plan must include specific measures for managing the risk and avoiding risk of exposure.

APPENDIX E

Asbestos Reports

The building was completely refurbished and extended in 2014 and it is not envisaged that any asbestos material remains. However, the original part of the building pre-dates 1998 and care should be taken when opening up and accessing voids. Ensure that operatives are “asbestos aware” and report any material suspected of containing asbestos.

ASBESTOS DEMOLITION SURVEY REPORT




Ticket house,
110 East street,
Southend,
SS2 6LH

Prepared for
Blue sky architects

REC Report ASB-BT-S-207

26th November 2013



Issue/revision	Issue 1	Revision 1	Revision 2	Revision 3
Remarks	Final			
Date	26-11-13			
Prepared by	Michael Walker			
Signature				
Checked by	Brendan Coleman			
Signature				
Authorised by	Michael Walker			
Signature				
Project number	ASB-BT-S-207			

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2.0	INTRODUCTION
3.0	AUTHORISATION
4.0	PURPOSE, AIMS AND OBJECTIVES
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6.0	EXTENT OF SURVEY
7.0	SURVEY METHODS
8.0	LEVEL OF IDENTIFICATION
9.0	MATERIAL ASSESSMENT GUIDE SHEET

APPENDICES:

APPENDIX A SUMMARY TABLE AND MATERIAL ASSESSMENT SHEETS

APPENDIX B LABORATORY RESULTS OF SAMPLES

APPENDIX C PLANS

1.0 EXECUTIVE SUMMARY

No asbestos was located during the course of this demolition survey subject to the exclusions detailed in this report. It is recommended that demolition activities are undertaken with caution.

Specific areas / items not included in this survey were:

Location	Comments
Rubble Stockpile	Stockpile was visually inspected, no asbestos containing materials were discovered. Further testing and screening will be required if the rubble is to be removed from site.

Any areas not accessed should be presumed to contain asbestos until proven otherwise.

2.0

INTRODUCTION & SCOPE OF WORK

<i>Name of Surveying Organisation</i>	REC Ltd Environment House Bullocks Lane Takeley Bishops Stortford CM22 6TA
<i>Name of Lead Surveyor(s)</i>	Michael Walker
<i>Name of Assistant Surveyor (s)</i>	Brendan Coleman
<i>Date(s) of Survey</i>	26-11-2013
<i>Name and address or person who commissioned the survey</i>	Blue Sky Architects, Building 1000 Kings Reach, Yew Street, Stockport, Cheshire SK4 2HG
<i>Name and Address of Premises Surveyed</i>	Ticket House, 110 East Street, Southend, SS2 6LH
<i>Description of premises surveyed</i>	Ticket house, outhouse and rubble to the rear of the main building.
<i>Description of Areas Included in the Survey</i>	All
<i>Purpose of Survey</i>	Identification of all asbestos prior to demolition
<i>Description of Areas Excluded From the Survey</i>	The rubble to the rear of the building was inspected visually but further testing is needed.
<i>Survey Method Used</i>	HSG 264 Documented in House Surveying Procedures
<i>Type of Survey Undertaken</i>	Demolition
<i>Any Variations or Deviations From Methods</i>	None
<i>Agreed exclusions and inaccessible areas (state reasons). These should be specific to the survey and not generic.</i>	

3.0 AUTHORISATION

- 3.1 Should the client wish to pass copies of the report to other parties for information, the whole of the report should be copied but no professional liability or warranty shall be extended to other parties by REC (Asbestos) Ltd in this connection without the explicit written agreement thereto by REC (Asbestos) Ltd.
- 3.2 This document is submitted in connection with a contract to supply goods/services and is issued only on the basis of strict confidentiality.
- 3.3 All pages of this report must be read in conjunction with one another; they must be kept together and NOT singled out or copied individually as descriptions and locations are not always cross-referenced.

4.0 PURPOSE, AIMS AND OBJECTIVES

- 4.1 The purpose of this survey was to undertake an asbestos demolition survey as described in HSE document HSG 264.
- 4.2 The aim was to locate, as far as reasonably practicable, the presence and extent of any suspect materials that may contain asbestos in the premises and assess their condition, vulnerability, surface treatment, product type and extent.
- 4.3 The purpose of this Demolition Survey is
- To provide accurate information on the location, amount and condition of asbestos containing materials (ACMs) prior to the demolition / refurbishment activities described.
 - To allow the required demolition / refurbishment activities to proceed with caution.
- 4.4 This was a Demolition Survey as defined by HSE publication HSG 264 "Asbestos: the survey guide".
- 4.5 Any diagrams in the report are not to scale and are illustrative only to indicate approximate locations. The descriptions used are for location identification purposes only.
- 4.6 All the recommendations described in this report are standardised and based upon material assessment sheets for each individual inspection. The assessments take into account the type of asbestos, extent of any damage and surface treatment to generate the associated risk evaluation. Recommendations should still be reviewed for suitability for each circumstance, however, statutory authorities or other bodies, may require amendments based upon local knowledge, change in legislation, change in use or other criteria.

5.0 DESCRIPTION OF THE SITE

- 5.1 The site drawings drawn by the surveyor (see Appendix C) show the boundaries within which the work was to be undertaken. REC (Asbestos) Ltd can take no responsibility for buildings not defined accurately by these drawings.

6.0 EXTENT OF SURVEY

- 6.1 Areas included in the inspection are as described in the Material Assessment sheets in Appendix A only.
- 6.2 This report is based upon an intrusive, destructive inspection of the areas defined by the client. During the course of the inspections all reasonable efforts were made to identify the presence of materials containing asbestos within these areas of the building. The survey was limited to those areas accessed at the time of the survey as described in the table in Section 2. Areas not accessed by this survey should be presumed to contain asbestos until proven otherwise.
- 6.3 It is known that asbestos materials are frequently concealed within the fabric of buildings or within sealed building voids so therefore it is not possible to regard the findings of any survey as being definitive. It shall always remain a possibility that further asbestos containing materials may be found. For reasons set out in this report, REC (Asbestos) Ltd cannot give an assurance that all asbestos materials have been found.
- 6.4 Asbestos may be concealed from view by other materials that have been used for over-cladding. In-filling, alteration and refurbishment work, which has taken place in the past, may also hide asbestos containing materials. All reasonable and practical measures have been taken to uncover hidden asbestos where the use of ACMs can be assessed as realistic based on the age, type and condition of the structure or element. This includes core samples of pipe insulation to check for residual asbestos insulation and sampling behind panels where possible. Where such inspections revealed possible ACMs, samples were taken as described herein. The results of these inspections, tests and samples are only representative of the location inspected.
- 6.5 The survey did not include asbestos-containing materials found as ground litter, except as reported; this survey should therefore not be considered as a ground survey. Unless specified within the scope of work.
- 6.6 A limited inspection only has been carried out of pipe work concealed by overlaying non-asbestos insulation. Previous asbestos removal may not have been undertaken to today's standard and may have left pieces of debris lying in concealed areas (especially pipe work). Inspection of pipe work has therefore been restricted to the insulation visible. The presence of debris to pipe work, which is readily visible or would require the removal and replacement of overlying non-asbestos insulation, has been considered outside the scope of this survey.
- 6.7 Samples have not been taken where prohibited or prevented by the client, tenant or their representative.
- 6.8 Where asbestos containing materials have been presumed or detected, it is possible that past degradation (or future deterioration) may contaminate localised areas. The presence or extent of any such contamination cannot be visually identified or assessed without the

use of airborne fibre monitoring and swab sampling techniques etc being employed, unless visible debris was present at the time of undertaking the survey. This exercise would require a separate instruction and would be the subject of further charges.

- 6.9 Floor tiles (or similar material) may include a bitumastic adhesive. It is known that some proprietary brands of bitumen have an asbestos content and this will be included as an integral part of the bulk sample or presumptive analysis unless otherwise stated.
- 6.10 Whilst every effort will have been made to identify the true nature and extent of the asbestos material present in the building to be surveyed, no responsibility has been accepted for the presence of asbestos in materials other than those sampled at the requisite density.
- 6.11 Air monitoring to determine fibre levels in the atmosphere was not undertaken.

7.0 SURVEY METHODS

- 7.1 Inspection, sampling and assessment were carried out in accordance with in house UKAS accredited procedures written from HSG 264 published by the Health & Safety Executive.
- 7.2 The areas set out within the survey brief were inspected for suspect asbestos containing materials (ACMs). Each room/area was viewed for materials suspected to contain asbestos and representative samples taken for confirmation.
- 7.3 Materials of a similar type were representatively sampled. It was assumed that surfaces identical to a sampled location were of a similar composition. Samples from each type of suspect material found were collected and analysed to confirm asbestos type and content. Where the materials sampled were found to contain asbestos, other similar homogeneous materials used in the same way have been presumed to contain asbestos.
- 7.4 The asbestos survey/inspection records state information recorded at the time of the survey only based on visual assessment, intelligent assumption and sampling, where appropriate.
- 7.5 Descriptions for locations were obtained from site signs or site users. Where no descriptions were available, suitable terms have been used for this report and accompanying drawings.

8.0 LEVEL OF IDENTIFICATION

- 8.1 Bulk sample analyses were carried out at a laboratory in accordance with HSE publication HSG 248 under UKAS (United Kingdom Accreditation Service) accreditation.
- 8.2 Presumptions in the absence of sample analysis are noted as 'Presumed' and 'Strongly Presumed'.
- 8.3 Where a material cannot be 'sampled', for example where an area is not accessible (e.g., high ceiling) or safe sampling cannot be undertaken because areas are in occupation, the asbestos type will be presumed by reasoned argument or considered as containing amphibole asbestos, similarly asbestos content will be presumed as high in absence of the above. Therefore, the level will be denoted as 'Presumed', unless:
- Sample analysis of similar materials within the building show a different asbestos type (mastered samples)
 - There are visible fibres within the material
 - There is reasoned argument that another type of asbestos was almost always used and will be based on professional judgement and experience.

In the above cases, the level of identification will be denoted as 'Strongly Presumed'.

9.0

MATERIAL ASSESSMENT GUIDE

9.1

Material Assessment

For each sample/inspection, a material assessment has been compiled using the algorithm described in HSG 264. A point score (weighting) is allocated on the basis of the examination of a number of parameters. The value assigned to each of these parameters is added together to give a total score, the higher scores indicating high-risk materials.

Table 1: Material Assessment Scores

Sample Variable	Score	Examples of Scores
Product type (or debris from product)	1	Asbestos - reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi - rigid paints or decorative finishes, asbestos cement etc)
	2	Asbestos insulating board, millboards, other low-density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.
	3	Thermal insulation (eg pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.
Extent of damage/deterioration	0	Good condition: no visible damage.
	1	Low damage: a few scratches or surface marks; broken edges on boards, tiles etc.
	2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres.
	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris.
Surface treatment	0	Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles.
	1	Enclosed sprays and lagging, AIB (with exposed face painted or encapsulated), asbestos cement sheets etc.
	2	Unsealed AIB, or encapsulated lagging and sprays.
	3	Unsealed lagging and sprays.
Asbestos type	1	Chrysotile.
	2	Amphibole asbestos excluding crocidolite.
	3	Crocidolite.

9.3

Guide to evaluation of material assessment scores (2 = lowest 12 = highest)

- High Risk Material - 10 points or more
- Medium Risk Material - 7-9 points
- Low Risk Material - 5-6 points
- Very Low Risk Material - 4 or less points
- N/A – Not Applicable as No Asbestos Detected in Sample (NADIS)

APPENDIX A

**SUMMARY TABLE AND
MATERIAL and ASSESSMENT SHEETS**

SUMMARY TABLE

NSR = No Sample Required, NA = No Access, NAD = No Asbestos Detected, AWS = Associated With Sample

Sample No.	Location	Product Type	Extent of Material	Sampled / Presumed / Strongly Presumed	Material Assessment (to be completed by the surveyor)					Surveyors Recommendations
					Product Type (1 to 3)	Damage / Deterioration (0 – 3)	Surface Treatment (0-3)	Asbestos Type (0 – 3)	Material Score (2-12) - M	
1	01- Lobby	Board	10m ²	Sampled	NAD					No action required
NSR	01a- Electrical cupboard	NA			NAD					NA
NSR	02- Front office	NA			NAD					NA
NSR	03- Downstairs hall	NA			NAD					NA
NSR	04- Toilet	NA			NAD					NA
NSR	04a- Toilet cupboard	NA			NAD					NA
NSR	05- Female toilet	NA			NAD					NA
NSR	06- Small room	NA			NAD					NA
NSR	07- Rear office	NA			NAD					NA
NSR	08- Rear main office	NA			NAD					NA

SUMMARY TABLE

NSR = No Sample Required, NA = No Access, NAD = No Asbestos Detected, AWS = Associated With Sample


Sample No.	Location	Product Type	Extent of Material	Sampled / Presumed / Strongly Presumed	Material Assessment (to be completed by the surveyor)					Surveyors Recommendations
					Product Type (1 to 3)	Damage / Deterioration (0 – 3)	Surface Treatment (0-3)	Asbestos Type (0 – 3)	Material Score (2-12) - M	
NSR	09- Second office front	NA			NAD					NA
NSR	010- 3 rd office front	NA			NAD					NA
2	011- Front stairs & hall	Stair tread	21m ^L	Sampled	NAD					No action required
NSR	011a- Void over plan ref 02	NA			NAD					NA
3	012- Rear stairs & hall	Stair tread	16m ^L	Sampled	NAD					No action required
NSR	013- Rear main office	NA			NAD					NA
NSR	014- Rear middle office	NA			NAD					NA
NSR	015- Rear right office	NA			NAD					NA
NSR	016- Front second office	NA			NAD					NA

SUMMARY TABLE

NSR = No Sample Required, NA = No Access, NAD = No Asbestos Detected, AWS = Associated With Sample

Sample No.	Location	Product Type	Extent of Material	Sampled / Presumed / Strongly Presumed	Material Assessment (to be completed by the surveyor)					Surveyors Recommendations
					Product Type (1 to 3)	Damage / Deterioration (0 – 3)	Surface Treatment (0-3)	Asbestos Type (0 – 3)	Material Score (2-12) - M	
NSR	017- Front main office	NA			NAD					NA
4	External- Porch	Bitumen	2m ²	Sampled	NAD					No action required
5	External- entire roof of main house	Bitumen	195m ²	Sampled	NAD					No action required
NSR	018- Outhouse main room	NA			NAD					NA
NSR	019- Outhouse second room	NA			NAD					NA
6	External- entire outhouse roof	Bitumen	40m ^L	Sampled	NAD					No action required

INSPECTION RECORD AND MATERIAL / PRIORITY ASSESSMENTS

Building Name / Number		110 East Street	Room	All
Location / Description		All		
Sample No	All	Material Assessment Score		NA
Product Type	NA	Comments / Recommendations	No asbestos was found in any of the samples taken- No further action required	
Asbestos Type	NA			
Extent	NA			
				

APPENDIX B
LABORATORY RESULTS OF SAMPLES

**Certificate of Analysis for
Bulk Identification**

Job No. BT-13-B 2128

Customer Address

Blue Sky Architects

Site Address

110 East Street
Southend
SS2 6LH

Customer Order No	13/BT/S/207
Samples Submitted By	Michael Walker
Sampled By	Michael Walker
No. of Samples Submitted	6
Date Samples Submitted	26/11/2013
Date Samples Analysed	27/11/2013
Samples Analysed In	Braintree
Samples Analysed By	Tam Smith

Analyst / Authorised Signature

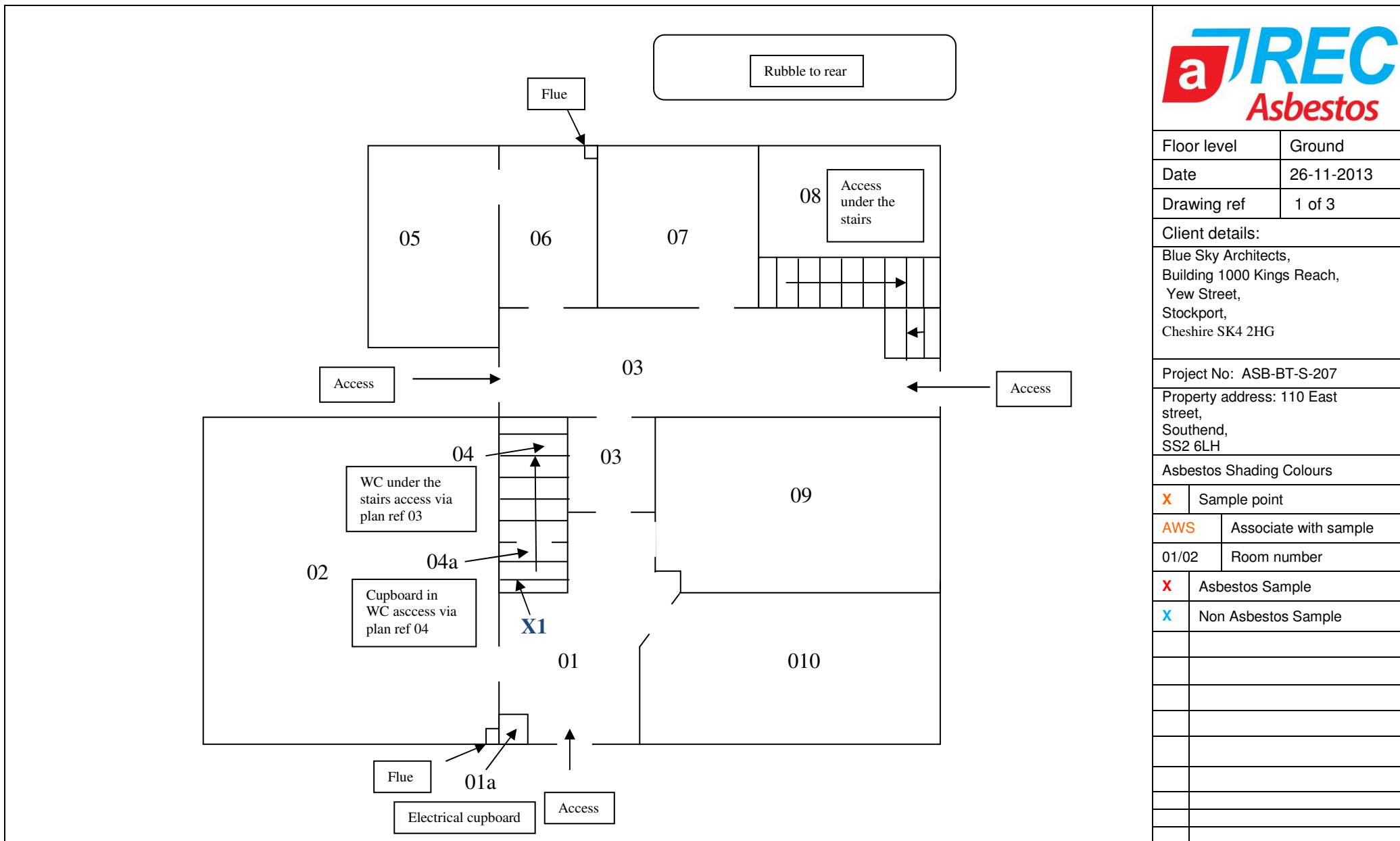
[Signature]

REC (Asbestos) Ltd. accepts no responsibility for sampling activities undertaken by the client. Analysis is conducted in accordance with HSG 248 / RECASB01. Where soil analysis requires the taking of representative sub samples, the cone and quarter technique is used as described in RECASB01. The material description shall be regarded as tentative and is not included in the UKAS Accreditation for this laboratory. Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation. Where this document has been digitally signed, printed copies are uncontrolled.

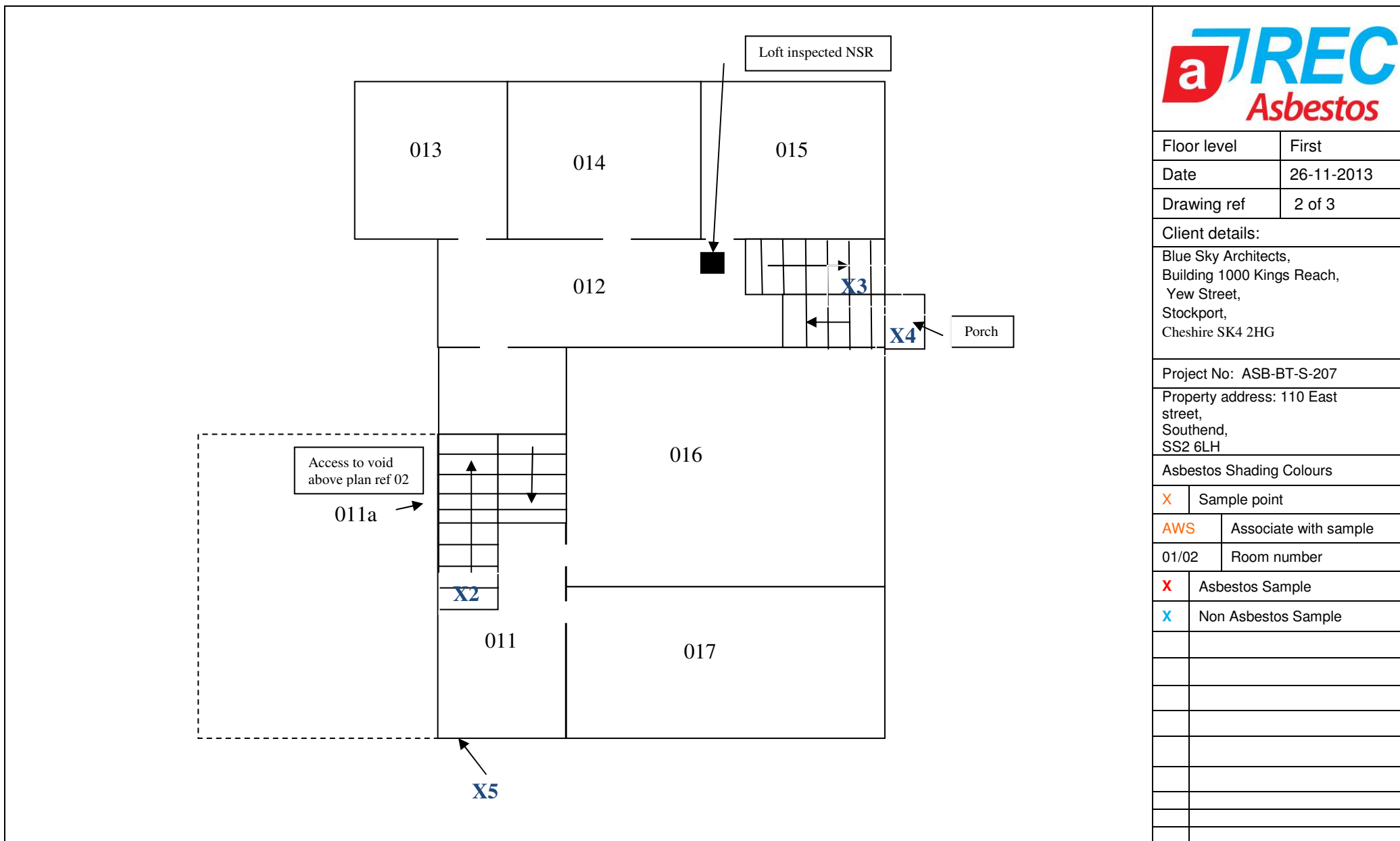
Samp No	Origin / Location of Material	Material Type	Asbestos Type(s)	Comments
1	01 - Lobby - Ceiling	Board	No Asbestos Detected	
2	09 - front Stairs	Stair Tread	No Asbestos Detected	
3	012 - Rear Stairs & Hall	Stair Tread	No Asbestos Detected	
4	External - Porch	Bitumen	No Asbestos Detected	
5	External - Under Entire Roof	Bitumen	No Asbestos Detected	
6	External - Outhouse	Bitumen	No Asbestos Detected	

APPENDIX C

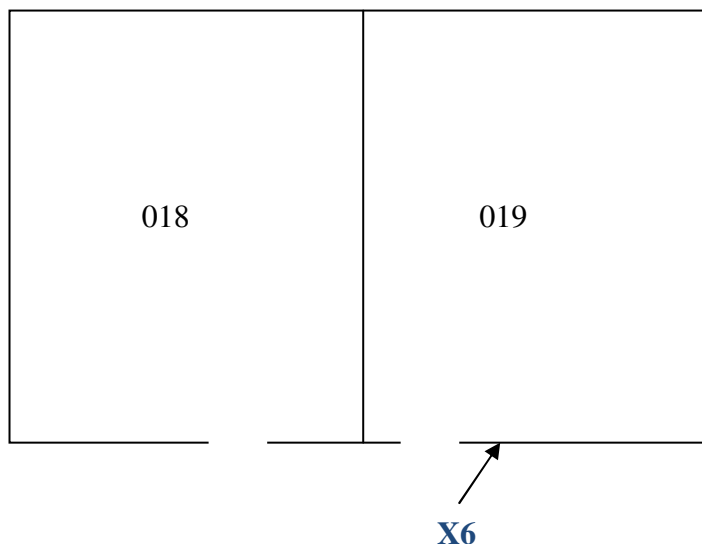
PLANS



Floor level	Ground
Date	26-11-2013
Drawing ref	1 of 3
Client details:	
Blue Sky Architects, Building 1000 Kings Reach, Yew Street, Stockport, Cheshire SK4 2HG	
Project No: ASB-BT-S-207	
Property address: 110 East street, Southend, SS2 6LH	
Asbestos Shading Colours	
X	Sample point
AWS	Associate with sample
01/02	Room number
X	Asbestos Sample
X	Non Asbestos Sample



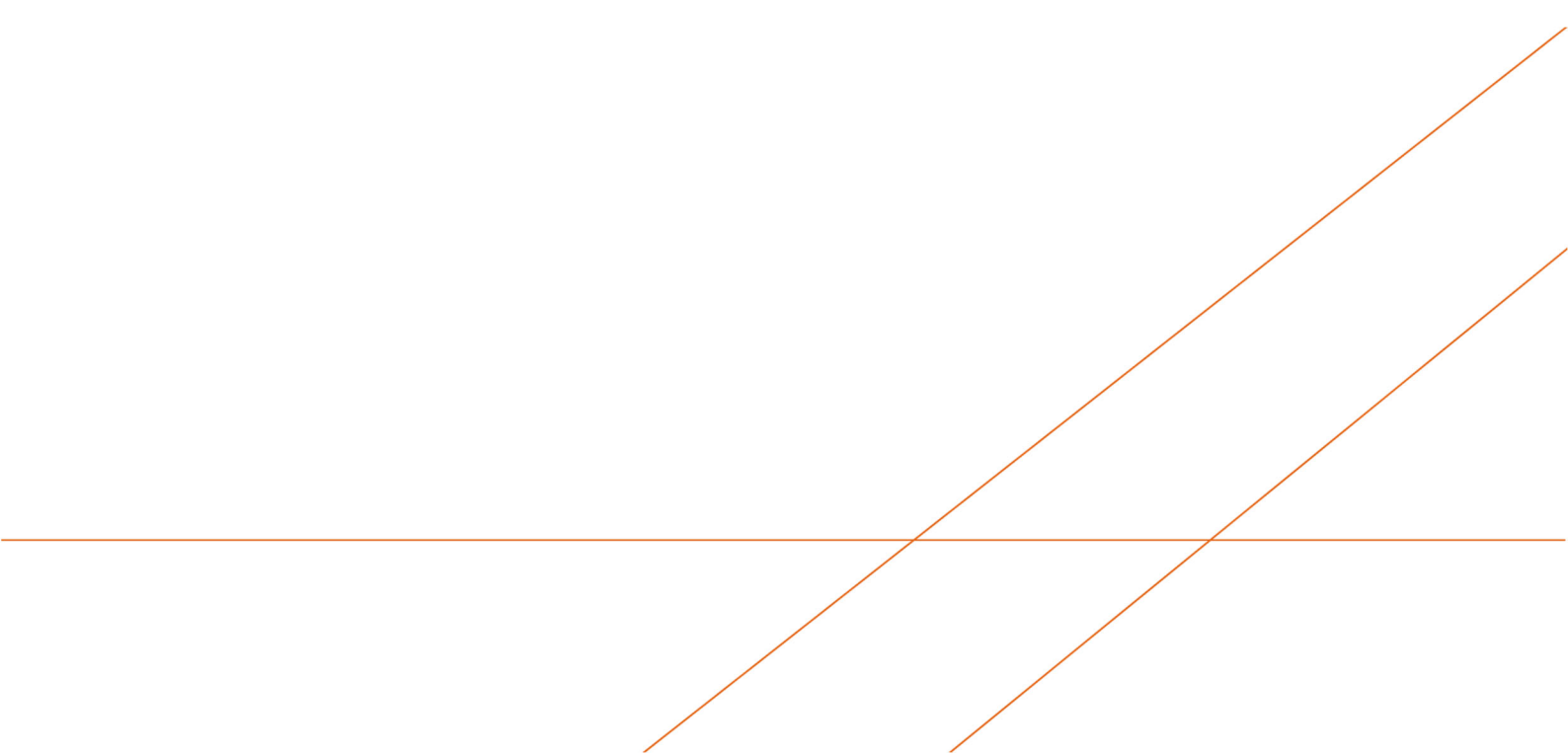
Floor level	First
Date	26-11-2013
Drawing ref	2 of 3
Client details:	
Blue Sky Architects, Building 1000 Kings Reach, Yew Street, Stockport, Cheshire SK4 2HG	
Project No: ASB-BT-S-207	
Property address: 110 East street, Southend, SS2 6LH	
Asbestos Shading Colours	
X	Sample point
AWS	Associate with sample
01/02	Room number
X	Asbestos Sample
X	Non Asbestos Sample



Floor level	First
Date	26-11-2013
Drawing ref	3 of 3
Client details:	
Blue Sky Architects, Building 1000 Kings Reach, Yew Street, Stockport, Cheshire SK4 2HG	
Project No: ASB-BT-S-207	
Property address: 110 East street, Southend, SS2 6LH	
Asbestos Shading Colours	
X	Sample point
AWS	Associate with sample
01/02	Room number
X	Asbestos Sample
X	Non Asbestos Sample

Arcadis LLP

[arcadis.com](https://www.arcadis.com)



Appendix G – Qualitative Questions

Appendix G

FS - 0137 Heating Distribution Works

Local Procurement ITT for Mechanical Works

Questions and Evaluation Matrix

Appendix G
FS - 0137 Heating Distribution Works
Local Procurement ITT
for Mechanical Works

Quality Sub-criteria	Criteria Weighting*	Question No.	Question	Question Weighting (B)**
A. Experience	0.40	A1	Please provide 3 examples of previous schemes you have successfully completed that are similar in size, duration and scope.	100
B. Programme	0.20	B1	Please confirm your programme for completing the works	100
C. Company Information	0.40	C1	Please confirm your company details including 1. Company turnover for 2021/2022 2. Number of people employed 3. Company registration number	100
Total	1.00			

*Note: if sub-criteria not used enter a "0" weighting

**Note: this is the question weighting, allocated a figure totalling 100 across the questions for the sub-criteria. This will be used as the function "B" in the Evaluation Scorecard calculation.

Appendix G
FS - 0137 Heating Distribution Works
Local Procurement ITT
for Mechanical Works

Quality Sub-criteria	Criteria Weighting*
A. Experience	0.40
B. Programme	0.20
C. Company Information	0.40
Total	1.00

Appendix G
FS - 0137 Heating Distribution Works
Local Procurement ITT
for Mechanical Works

Evaluation of Quality Sub-criteria	Marks
A high standard with no reservations that meets the requirements of the Invitation to Tender	1.00
A high standard with minor reservations that largely meets the requirements of the Invitation to Tender	0.80
An acceptable standard with minor reservations that largely meets the requirements of the Invitation to Tender	0.60
Below an acceptable standard with a number of significant reservations that largely does not meet the requirements of the Invitation to Tender.	0.40
Generally fails to meet the requirements of the Invitation to Tender and in isolation is not to an acceptable standard.	0.20

Appendix H – Report(s)

SOUTHEND YMCA COMMUNITY SCHOOL SURVEY REPORT

ON

EXISTING HEATING PLANT & DISTRIBUTION SYSTEMS



Prepared By:

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PROPERTY AND CONSTRUCTION CONSULTANTS

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EC2R 8AY
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Ref: JR/EN/12369

Date: January 2022

SOUTHEND YMCA COMMUNITY SCHOOL
REPORT ON HEATING PLANT & DISTRIBUTION SYSTEMS

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2. Introduction, Brief and Information Received	4
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1. Executive Summary

- 1.1 Beveridge Associates have undertaken an inspection of the existing heating system and other mechanical services at Southend YMCA Community School. The nature and extent of services has been identified and is described in this report
- 1.2 The systems have suffered a significant number of failures and underperformances, since the installation was completed, approximately 6 years ago and the School has lost confidence in the ability of the services to maintain reasonable conditions.
- 1.3 Beveridge Associates have reviewed the installation, as well as previous reports prepared by the incumbent maintainer.
- 1.4 Commentary has been made on the design and operation of the system and the main issues identified are:
 - 1.4.1 The system has little resilience to failure
 - 1.4.2 The different design temperatures of the gas and air source heat-pump systems has not been adequately considered in the design
 - 1.4.3 The Building Management System does not appear to have been configured correctly and has not been suitably commissioned.
 - 1.4.4 Classroom fresh air ventilation systems have been used for space heating, resulting in conflicts between the control of air quality and temperature
 - 1.4.5 Supplementary DX systems have been added, without full consideration of the impact on the central systems
 - 1.4.6 Critical plant and control components have suffered failures which have not been addressed
 - 1.4.7 System basic maintenance tasks do not appear to have been undertaken.
- 1.5 Budget estimates have been prepared for the proposed remedial scope of work. The total estimated cost is £86,450. This excludes professional fees, Value Added Tax and contingencies

2. Introduction, Brief and Information Received

- 2.1 Beveridge Associates were instructed to undertake a survey of the existing heating installation at Southend YMCA School. The scope of the survey brief was as follows:
 - 2.1.1 Inspect existing boiler and determine adequacy to serve heating and hot water demand for school
 - 2.1.2 Inspect all accessible heating pipework, heat emitters and hot water outlets
 - 2.1.3 Advise on remaining life expectancy of existing boiler & heating installation, benchmarking against published guidance
 - 2.1.4 Liaise with existing services maintenance company to seek feedback on existing systems, which would ideally be undertaken during a site visit
 - 2.1.5 Review existing information including available design & installation, O&M Manuals, maintenance reports and any other defect reports made available to the consultant by the client
- 2.2 The survey findings are summarised in this report, which (as indicated in the brief) comments on the above and the following specific points:
 - 2.2.1 Whether the heating system has been installed in accordance with the design & specification
 - 2.2.2 Heating & hot water control, including a summary of how the heating installation should work, how users control the heating & hot water
 - 2.2.3 Specific issues advised by the users and existing services maintenance company and reasons for those issues
 - 2.2.4 Recommendations on any works, modifications or training required on the existing heating and hot water installations
 - 2.2.5 Photos with references to specific issues identified in the report
- 2.3 A site visit was made to the school on 4 January 2022.
- 2.4 Note that, except where noted otherwise, inspections were of a visual nature, with no opening up or testing.
- 2.5 In addition to the survey brief, Beveridge Associates have been issued with the following information:
 - 2.5.1 Mechanical and electrical engineering services scope of work document, issued by Blue Sky Engineering in April 2013.
 - 2.5.2 Mechanical services particular specification, issued by Blue Sky Engineering in May 2013

-
- 2.5.3. Email trail from 31 January 2019 to 19 March 2019, regarding a number of reported issues with the heating performance, reported by the school to McAvoy Smart Offsite
- 2.5.4. Quotation and report from Blake Contractors Ltd, dated 8 March 2021, detailing findings of a review of the heating and ventilation controls. Correspondence between Beveridge Associates and Blake Contractors has identified that the issues identified in March 2021 have not been instructed.
- 2.6 Note that the school could not provide any drawings for the system. Under the Construction (Design and Management) Regulations, a Health and Safety File should have been provided, complete with all associated record drawings and operation and maintenance manuals.

3. Schedule of Abbreviations

3.1 The following abbreviations have been used in this document.

ASHP	Air Source Heat Pump
BA	Beveridge Associates Partnership Ltd.
BMS	Building Management System
CO	Carbon monoxide
CO ₂	Carbon Dioxide
°C	Degrees Celsius
DX	Direct Expansion
FGas	Fluorinated gas
HFC	Hydrofluorocarbon
HVAC	Heating, Ventilation and Air Conditioning
HWS	Hot Water Service
LST	Low Surface Temperature
kW	Kilowatt
kWh	Kilowatt Hour
LTHW	Low Temperature Hot Water
MCC	Motor control panel
MVHR	Mechanical Ventilation Heat Recovery
PEX	High density polythene
PPM	Parts per million
PU	Pressurisation unit
PVC	Polyvinyl Chloride
TRV	Thermostatic Radiator Valve
WRAS	Water Regulations Advisory Scheme

4. Description of Existing Systems

4.1 Mains Cold Water

- 4.1.1. A 50mm MDPE mains water service enters the school in the boiler room, where it converts to 54mm copper. The supply is fitted with stopcock, single check valve, meter (with pulse output connection).
- 4.1.2. A pressure gauge is fitted to the incoming supply, which indicated a pressure of approximately 3 bar.
- 4.1.3. The specification prepared in 2013 calls for a boosted water system to be provided, but this was not evident on site. It appears that the whole site is directly fed by mains water.
- 4.1.4. Mains water service is installed in copper and is insulated in the plant room, with mineral wool. Labelling bands and direction arrows are fitted to pipework.
- 4.1.5. Mains water service rising in the plant room feeds two pressurisation units (one for the gas-fired boiler circuit and the other for the air source heat pump system. The connections are fitted with quick-fill hoses, which are fitted with suitable double-check valves and disconnected flexible hoses.
- 4.1.6. Mains water service drops back into the ground and crosses the playground, to feed the rest of the school

4.2 Gas Service

- 4.2.1. 50mm steel natural gas service rises externally, adjacent to the plant room. The main school gas meter was not inspected.
- 4.2.2. Gas consumption is monitored on the BMS, as a cumulative volume of gas used (in m³).
- 4.2.3. The 50mm supply is fitted with an isolation valve and solenoid valve, after which the service reduces to 28mm copper and feeds a Potterton condensing boiler.
- 4.2.4. Pipework is identified using "gas service" adhesive tape.
- 4.2.5. The plant room is fitted with an S&S Northern gas safety panel, mounted on the side of the boiler room MCC. The panel has an integral shut-off button, to close the solenoid valve.

4.3 Low Pressure Hot Water Heating Plant

- 4.3.1. The building is fitted with a dual fuel heating system, with electric air source heat-pump (ASHP), designed to provide efficient low-grade heating to underfloor heating and heat-recovery air handling units and a gas-fired condensing boiler providing heat to radiators, radiant heating and a "top-up" plate heat-exchanger (injecting heat to the ASHP circuit).
- 4.3.2. The two systems are hydraulically separated by the plate heat exchanger and operate at different temperatures.
- 4.3.3. Gas-Fired Boiler System

- a) A Potterton Sirius Two WH60 wall-mounted condensing boiler is installed in the plant room. The boiler is fitted with a balanced flue, passing through the plant room wall. Ventilation and combustion air is provided by louvred plant room doors.
- b) The boiler is fitted with a 20mm PVC condensate drain, terminating over a gulley in the plant room.
- c) There is an integral Grundfos glandless shunt pump within the casing, designed to maintain minimum flow through the boiler
- d) The boiler heating circuit is pressurised by a Grundfos CN 125HL packaged wall-mounted fill unit, with integral break-tank and pump. System expansion is by a Grundfos GT-HR-300 V, floor-mounted vessel, rated at 6 bar.
- e) A boiler primary loop is installed, including combined air/dirt separator, low loss header. Isolation valves, etc
- f) The boiler circuit is fitted with a Jet 6 litre manual dosing pot, piped across the flow and return.
- g) The gas-fired plant directly feeds radiators and radiant panels in the school, via a pumped circuit labelled "boiler primary". The circuit is fitted with twin-head (duty/standby) Grundfos circulation pumps. The circuit also feeds a plate heat-exchanger, designed to inject high-grade heat into the ASHP circuit
- h) Heat injection to the plate heat-exchanger is controlled by a 2-port valve on the primary return. A high limit control valve is fitted on the PHX flow connection, to prevent overheating of the ASHP circuit
- i) A second 2-port valve is fitted on the common heating flow leaving the plant room, which runs underground, to serve radiators and radiant panels.
- j) Heating pipework in the plant room generally appears to be installed in steel, although some sections of copper may be present. Pipework converts to plastic, where it enters the ground. Heating pipework is insulated with foil-faced mineral, with identification bands and direction arrows fitted.

4.3.4. Air Source Heat-Pump (ASHP) system

- a) A single air source heat pump is installed in an external timber fenced enclosure, adjacent to the boiler plant room. The heat-pump is a Carrier 30RQS-039-0223-PE, operating on refrigerant R410A (12.5kg charge).
- b) The system appears to be configured to operate under low pressure mode, with an outlet temperature of 48°C. The unit is capable of operating at high pressure, allowing flow temperature up to 68°C
- c) The air source heat-pump is fitted with a Grundfos twin-head pump, located in the plant room, which circulates water between the ASHP and a packaged, pre-insulated buffer vessel. No capacity label was identified on the vessel. The function of the buffer vessel is to reduce the number of starts of the heat-pump
- d) The heat-pump primary circuit is fitted with a heat-meter, measuring flow rate and flow/return temperatures.

- e) The ASHP circuit is fitted with a Jet 6 litre manual dosing pot, piped across the flow and return.
- f) A twin-head Grundfos pump (duty/standby) is fitted on the secondary side of the buffer vessel and circulates water through the plate heat exchanger and to the underfloor heating and MVHR units within the school. A 2-port valve is fitted on the underfloor heating branch
- g) ASHP heating pipework in the plant room and the external enclosure generally appears to be installed in steel. Pipework converts to plastic, where it enters the ground. Heating pipework is insulated with foil-faced mineral, with identification bands and direction arrows fitted.

435. Heating Distribution and Delivery.

- a) There are two separate heating distribution systems leaving the plant room and running underground to the school building. One (fed by the gas-fired boiler) feeding radiators and radiant panels and the other (connected to the ASHP circuit) feeding underfloor heating and heat-recovery ventilation units.
- b) Staff areas are generally heated by conventional panel radiators and storerooms are fitted with pipework coils. Emitters are fitted with thermostatic radiator valves on the flow connections and lockshield valves on the returns
- c) Circulation areas are heated by radiant panels, complete with remote-sensing TRV's, which have generally been retrofitted with protective Perspex covers, following issues with repeated malicious damage
- d) The gym is fitted with a low surface temperature type radiator. It is not clear whether this is fed from the gas boiler or ASHP circuit
- e) The main hall is fitted with PEX underfloor heating, connected to Emmeti manifolds, located in the hall store. Manifolds are fitted with electrothermic heads. It was noted that the underfloor heating manifolds are not fitted with secondary pumps or local control valves. The system appears to be entirely controlled by a single 2-port valve.
- f) Above-ground heating pipework is installed using low carbon steel pipework, with press-fit joints. Generally exposed pipework was only evident in areas which are not accessible to pupils.
- g) The BMS indicates that there are seven MVHR units, providing heating and ventilation to the following areas. The units are located above the suspended ceilings.:
 - Humility Room
 - Maths room
 - English Room
 - Domestic Science Room
 - Princes Trust
 - 1st Floor Princes Trust

- Film Studio

- h) It is understood that the MVHR units are fitted with crossflow heat-recovery devices and heating/cooling coils. From the specification, the same coils are used for heating and cooling, with the ASHP running in cooling mode in Summer. No coils are apparent on the BMS.
- i) Except where supplementary DX systems are fitted, there is other means of heating to the rooms with MVHR's
- j) Each room fitted with an MVHR has an extension timer installed on the wall and a room sensor.

4.4 DX Heat-Pump Systems

- 4.4.1. The original specification for the building called for direct expansion (DX) cooling to be provided for the computer server room. Note that this room also houses the BMS head-end computer
- 4.4.2. A Mitsubishi Electric high-level wall-mounted room unit is installed in the server room, which connects to an outdoor unit located to the rear of the building
- 4.4.3. A second Mitsubishi system (installed as part of the original installation) feeds one of the 1st floor air handling units.
- 4.4.4. Both systems operate using R410A and neither is indicated on the BMS.
- 4.4.5. Additional Panasonic supplementary DX systems have been installed in a number of rooms, including the gym (cassette unit), offices (high level wall). These do not appear to be part of the original installation

4.5 Mechanical Ventilation

- 4.5.1. The building is fitted with a variety of local mechanical ventilation systems. Whilst the brief does not call for these systems to be inspected, they are included, since some are used for space heating and for completeness
- 4.5.2. Note that the classroom MVHR systems are described under heat distribution above.
- 4.5.3. The hall is fitted with mechanical extract. Whilst the BMS indicates that a single fan is installed, complete with CO2 sensors, the system comprised 3No high-level wall fans, which have now been removed. The school advised that removal followed one of the fans falling out, due to impact from footballs.
- 4.5.4. There are a number of local extract fans in toilets areas, kitchens and ancillary areas which were not inspected. They are not indicated on the BMS.

4.6 Domestic Hot Water

- 4.6.1. It was noted that the original mechanical specification for the building calls for a central, gas-fired condensing water heater, delivering hot water to the school. It would appear that this was "value engineered" out of the scheme and local electric water heaters used instead

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- 4.6.2. Water heaters were not surveyed in detail, and no BMS or time controls were identified.

4.7 Building Management System and Controls

- 4.7.1. The building is fitted with a Cylon BMS system, complete with Command Centre front-end, located in the server room. The system controls the main heating plant, classroom MVHR units, which are fitted with their own Delta BMS outstations. The system is connected via a BACnet network.
- 4.7.2. The main heating plant controls are housed within a 2-compartment wardrobe style panel in the main plant room. There are a number of facilities identified for “future use”.
- 4.7.3. Packaged local controls are provided for DX systems and most local extract systems
- 4.7.4. Refer to Section 5 below for details of issues with the control system.

5. Design and Operation of Systems

5.1 Mains Cold Water Service

- 5.1.1. Mains cold water service appears to be suitably sized for the number of outlets in the building.
- 5.1.2. The 50mm water meter has a maximum flow capacity of 40m³/hr, which is oversized for the building. The meter is connected to the BMS, which is indicating significantly lower demand than the meter itself.
- 5.1.3. The incoming mains pressure at a gauge in the plant room was indicated to be 3 bar. Note that the school was not occupied and a residual pressure test, with all outlets open was not carried out. Generally, water suppliers will only guarantee 1 bar at the meter.
- 5.1.4. The incoming supply is fitted with a single check valve and a double-check valve is required to meet Water Supply Regulations.

5.2 Gas Service

- 5.2.1. The existing boiler has a gas flow requirement of 6m³/hr and the 50mm supply to the plant room is oversized for this appliance. The Blue Sky Engineering specification calls for a gas-fired hot water heater to be provided, but hot water is instead provided by local electric heaters. The gas supply may have been sized to take into account the water heater
- 5.2.2. The main gas meter is connected to the BMS, which was indicating a total use of 2m³. This is less than one hour of boiler use and the value is obviously incorrect. The datalogging routine needs to be checked and corrected.
- 5.2.3. No electrothermal link was identified over the boiler and no carbon monoxide or natural gas detectors were noted in the plant room, as recommended for modern commercial boiler rooms.
- 5.2.4. The gas knock-off button is not clearly identified

5.3 Low Pressure Hot Water Heating System

5.3.1. Gas-Fired boiler installation

- a) The single boiler installation provides no resilience against failure
- b) Reports provided by the system maintainer have identified that the boiler flue discharges into an adjoining property, outside the curtilage of the school, which is not compliant.
- c) The current design philosophy is based on radiant panels and radiators directly fed from the gas-fired plant, with underfloor heating and HRU coils from the ASHP. Unless the emitters are sized to operate at low temperature (as the ASHP), this does not provide true resilience. Boiler failure will always result in loss of heat output to radiators.
- d) It appears that the gas-fired boilers are designed to operate at 80 °C flow and 60 °C return.

- e) The boiler was found to be locked-out under high temperature condition. When a reset was attempted, the boiler operated for a few minutes, until the flow temperature reached over 90 °C, at which point, it locked-out. The most likely cause of this is inadequate flow through the boiler and there are a number of possible causes:
- The internal boiler shunt pump could have failed (note this is shown as running on the BMS).
 - The boiler heat exchanger could be blocked by dirt or scale. The primary air/dirt separator was opened and, whilst there was some dirt in the device, it ran clear in a short space of time. Checks should be made on the system water treatment level, as untreated water could result in scaling up of the boiler.
 - There are two unnecessary double regulating valves in series on the boiler return and these could be adjusted too low. Since there is only one boiler on the circuit, the system does not require balancing valves before the low loss header.
- f) The school advised that they had been informed by the maintenance contractor that the main primary pump had failed. This was checked by manually changing over the pumps on the panel, and it appears to be operational.
- g) The BMS is indicating the plate exchanger high limit valve as 35% open. This should either be open or closed
- h) When the boiler was locked out, there was no apparent heat input to the radiator circuit from the ASHP, resulting in underheating to a number of areas. This needs review
- i) The main hall temperature is indicated on the BMS as 3 °C, with a set point of 4.5°C. This is incorrect and did not reflect temperatures in the hall (which were significantly higher).
- j) Dosing pot inlet and outlet pipework is incorrectly identified as hot water flow and return and the expansion line from the pressurisation system is incorrectly labelled as boosted cold water
- k) Refer to BMS section below for detailed control related issues

5.3.2. Air Source Heat-Pump system

- a) The air source heat-pump is of the single refrigerant circuit type and has little in the way of resilience. Note that the radiators and radiant panels are fed directly from the gas-fired boiler circuit, which operates at higher temperature than the ASHP. Unless the emitters are sized for low temperature operation, this will result in significantly reduced output when operating under ASHP heating.
- b) Whilst the connection to the plate heat-exchanger should provide a degree of heat to the radiators and radiant panels in the event of gas-fired boiler failure, the circuit was found to be completely cold at the time of survey. This may be due to the position of the 2-port valves on the high temperature side, and this requires further investigation

- c) Lack of heating could also be due to a blockage in the plate heat-exchanger, or blocked strainers. If the resistance of the heat-exchanger is higher than the emitter circuit, the underfloor heating and MVHR will be favoured, resulting in inadequate flow to the heat-exchanger. There do not appear to be sufficient balancing facilities to prevent this.
- d) The heat meter fitted on the ASHP is not indicated on the BMS and it is not clear what its function is, if the data cannot be accessed.
- e) The ASHP operates on R410a, which is a “phase-down” refrigerant. This means that, whilst no date is set for its phase-out, as an HFC, its use needs to be reduced. New heat-pumps are generally being installed using R32.
- f) The ASHP dosing pot is installed in the corner of the boiler room and access is restricted
- g) Refer to BMS section below for detailed control related issues.

5.3.3. Heating Distribution and Delivery

- a) The principle of using two different temperature systems to heat the building has resulted in a number of shortcomings, with the failure of the gas-fired boiler meaning that no heat is available to the staff areas or circulation spaces.
- b) There may be a controls issue or a balancing problem, but even if the systems are operating as intended, there will be a significant drop in emitter output when using the ASHP, rather than the boiler. For example, a radiator operating at 80/60°C under boiler heating will drop to around 40% of its output when running at ASHP temperatures of around 48°C. A radiant panel will lose even more, dropping to around 37% of its output.
- c) Unless the emitters are sized based on the lower operating temperature, the areas fed by the boiler circuit will always underheat should the boiler fail (as was found to be the case during the inspection)
- d) The underfloor heating manifold has no secondary pump or mixing valve fitted to the manifold and the system relies on a single 2-port valve. This arrangement means that there is not constant flow through the underfloor heating, which can result in less stable control.
- e) The hall underfloor temperature set point are indicated as 4.5 °C on the BMS and the measure hall temperature was indicated as 3.8°C. The hall was actually relatively warm, and the temperatures are erroneous. Despite the low indicated temperatures, the demand on the UFH control valve was shown as 0%. The control system needs to be commissioned and set-up
- f) The coils in the MVHR’s are not indicated on the BMS, and it is not clear how they are controlled (see details under BMS below).
- g) The design philosophy of utilising MHVR units for space heating, as well as ventilation results in higher energy use than utilising separate emitters to offset heat-loss. This is because they operate on a full fresh air basis, and the heat input to the ventilation system is dictated by the number of people in the space.

- h) MVHR unit set points vary from 20 °C in the first floor Princes Trust room to 27 °C in the ground floor Princes Trust. Achieved temperatures vary significantly from set-points in a number of rooms
- i) The wall-mounted override/extension controls switch on, but cannot then be overridden off
- j) Other than the hall, there is no evidence of CO₂ monitoring or control on the BMS. This would normally be provided on installations of this type.
- k) MVHR units in the Humility Room and Princes Trust Room were indicated as being in fault. This requires investigation (see BMS commentary below)

5.4 DX Heat-Pump Systems

- 5.4.1. Whilst no history has been provided on summer overheating, the addition of supplementary DX systems suggests that it has been an issue in a number of rooms.
- 5.4.2. The various original and supplementary DX systems operate on R410a, which is a “phase-down” refrigerant. This means that, whilst no date is set for its phase-out, as an HFC, its use needs to be reduced. New heat-pumps are generally being installed using R32.
- 5.4.3. Where supplementary cooling systems have been installed, there is no evidence that system controls were integrated with the MVHR ventilation systems, to prevent “fighting”.
- 5.4.4. Note that the DX units installed have the facility to provide heating and cooling. This does add some resilience to the LPHW system, but since the systems are only fitted in a few areas, this is not a comprehensive back-up solution. The school have purchased a number of back-up electric heaters. They should be informed that using the DX systems (where fitted) for heating would be more efficient and less costly than using direct electric heating

5.5 Mechanical Ventilation

- 5.5.1. Note that the classroom MVHR systems are described under heat distribution above. Since these systems provide both space heating and fresh air ventilation, the control strategy should incorporate air quality monitoring. No evidence of this was found on site
- 5.5.2. There are a number of controls issues with the MVHR units, which need to be addressed.
- 5.5.3. The hall ventilation fans installed were not mechanically protected and have now been removed. Note that despite the fans being removed, they are indicated on the BMS as running. Note that the lack of ventilation to the hall is likely to lead to poor air quality and summer overheating.
- 5.5.4. Suitably robust ventilation should be provided, to meet the occupation and use of the hall.
- 5.5.5. The BMS indicates a CO₂ detector in the hall, with a set-point of 15.1ppm and a measured value of 16.1ppm. These parameters appear to be spurious, as generally external air has a CO₂ level in excess of 450ppm and internal environments should generally be maintained below 1000ppm

5.6 Domestic Hot Water

- 5.6.1. Note that the installation deviated from the original specification, to provide gas-fired water heating.
- 5.6.2. The school reported no issues with the domestic hot water installation.

5.7 Building Management System and Controls

- 5.7.1. The BMS and controls have been subject to numerous faults, defects and issues, and the school commissioned an inspection and report by a controls specialist in March 2021. The report was obtained from the incumbent maintainer, Blake Contractors Ltd. Beveridge Associates have reviewed the report and distilled its content, as described below.
- 5.7.2. The general given by the report impression is a system that was never correctly configured or fully commissioned under the original installation
- 5.7.3. Correspondence with the maintainer has identified that none of the remedial works identified have subsequently been undertaken.
 - a) Cylon software strategy has not been configured correctly and also include items of equipment that are not installed. It appears that the software was not commissioned on completion of the project.
 - b) There are a number of discrepancies on the graphics in terms of values and plant status (e.g., the overheat protection valve is indicated as 35% open, when this is an on/off protective function).
 - c) It is suspected that the boiler shunt pump has failed but is indicated as running on the BMS.
 - d) The Carrier ASHP has suffered numerous historic trips on over-pressure (although was operating during Beveridge Associates survey).
 - e) 1st stage frost condition has been set at 24°C and this needs to be reduced
 - f) Heating pumps and valves have been overridden in the “on” position in the software, so are not being automatically controlled on demand. The pumps have not been set for independent (BMS) control
 - g) The hall underfloor heating 2-port valve in the chair store ceiling has failed and requires replacement
 - h) MVHR unit controls needs to be addressed as they are currently set-up to operate under on/off temperature control. This means that ventilation is lost when the room reaches set-point temperature.
 - i) BACnet enable and extension controls for the MVHR units are erratic and sometimes do not work. This was also found during the Beveridge Associates inspection in January 2022.
 - j) Humility room MVHR controls not working, with heating coil remaining open regardless of input. This was left isolated by the controls engineer, meaning the room has no heating

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- k) Heating control valves are pulsing (rather than modulating), resulting in supply air continually switching from hot to cold. Routines should be updated to allow modulation of control valves
 - l) Configuration and communication with Delta outstations is not correct and need setting up and commissioning
 - m) Volt free enable signals from the boiler room control panel have been removed and replaced with BACnet enables
 - n) Hall fan is indicated as running when it has been removed.
 - o) As identified above, under ventilation systems, the hall CO₂ require replacing and protection provided (they have been removed).
 - p) Once fans and controls have been reinstated, controls should be set up to operate under CO₂ and temperature control (not timeclock as currently).

6. Condition, Maintenance and Life-Expectancy

6.1 Mains Cold Water Service

- 6.1.1. Mains cold water service appears to have been installed at the same time as the rest of the building services and is estimated to be approximately 6 years old
- 6.1.2. The installation is generally in reasonable condition and should provide a life of at least 20 years, subject to correct maintenance.
- 6.1.3. No water management records were made available or inspected.

6.2 Natural Gas Service

- 6.2.1. Gas service appears to have been installed at the same time as the rest of the building services and is estimated to be approximately 6 years old
- 6.2.2. The installation is generally in reasonable condition and should provide a life of at least 20 years for pipework and 15 years for controls, subject to correct maintenance.
- 6.2.3. Some corrosion was noted to copper pipework close to the boiler purging point.
- 6.2.4. No gas safety records were made available or inspected.
- 6.2.5. No gas service schematic was identified in the plant room.

6.3 Low Pressure Hot Water Heating Plant

- 6.3.1. If the boiler has been subject to regular low flows, or is found to be blocked, the heat-exchanger should be replaced.
- 6.3.2. The boiler, air source heat-pump, circulation pumps and associated ancillaries were installed approximately 6 years old (most equipment manufactured in 2014), are in reasonable physical condition and should provide a life of at least 20 years for pipework and 15 years for plant, subject to correct maintenance
- 6.3.3. The boiler room has a significant amount of rubbish, waste and cleaning materials stored in it and these should be removed, as they constitute a fire hazard
- 6.3.4. A number of openings between the boiler room and adjacent store/electrical intake room have not been fire stopped. There is also a large crack in the wall in the corner of boiler room, which needs to be remedied.
- 6.3.5. The air source heat-pump has standing water on the top, which should drain (suggesting that the top is damaged). This should be rectified.
- 6.3.6. Leaves and standing water have collected around the air source heat-pump, which could accelerate corrosion of supports. The concrete base has not been laid to fall.
- 6.3.7. A number of historic issues have been experienced with damage and malicious adjustment of TRV's, but those in accessible areas are now generally fitted with guards
- 6.3.8. No service records for boilers, ASHP or other equipment were made available. It is not known if FGas inspections have been undertaken on the heat-pump

- 6.3.9. It was noted that an unlabelled recovery vessel has been left in the ASHP enclosure and this should be removed.
- 6.3.10. Timber pallets and rubbish bags have been left in the ASHP enclosure and these should be removed.
- 6.3.11. It is not known whether regular maintenance checks are in place for such items as water treatment, strainers and separators
- 6.3.12. There is no schematic or comprehensive valve chart on the wall

6.4 Heating Distribution and Delivery

- 6.4.1. Whilst the heating distribution system is only around 6 years old and in reasonable physical condition, there are a significant number of design and operational issues identified above. These need to be resolved.
- 6.4.2. Once the system is operating in the correct manner, the distribution should provide a life of between 20 and 25 years
- 6.4.3. It is not known whether routine service and maintenance is undertaken on the system. This would include regular changing of filters in the MVHR units, to ensure design flows are maintained

6.5 DX Heat-Pump Systems

- 6.5.1. The original DX systems were installed around 6 years ago and should provide a further life of 10 years, with correct maintenance. They are generally in reasonable condition
- 6.5.2. The supplementary Panasonic units appear to be relatively new, but no manufacture or installation date could be determined from the label plates.
- 6.5.3. Under the Fluorinated Gas (FGas) Regulations, there should be a register of all systems using refrigerants, including the volume of each gas. An assessment should be made of the global warming potential of each system, to ensure that compliant level of testing and inspection is in place. No register was inspected on site.
- 6.5.4. The systems should also be subject to regular routine maintenance (such as filter replacement)

6.6 Mechanical Ventilation

- 6.6.1. MHVR units are approximately 6 years old and should provide a further 15 years of operation
- 6.6.2. Heat recovery air handling units generally contain filters on both the supply and return side. These should be changed/cleaned on a regular basis, to prevent loss of performance. Note that there is no filter condition indication on the BMS.
- 6.6.3. The hall system is no longer present and is not fit for purpose

6.7 Domestic Hot Water

- 6.7.1. Electric domestic hot water heaters have a life expectancy of around 15 years and therefore have a remaining life of around 9 years

6.8 Building management System and Controls

- 6.8.1. Once fully operational, the BMS system and controls should have a life of around 15 years, subject to regular inspection and fine-tuning.
- 6.8.2. The system appears to have never been fully commissioned and there is no on-going maintenance support. This is a critical system to the operation of the school and the issues identified need to be addressed as a matter of urgency.

7. Schedule of Recommended Works and Budget Costs

Item	Scope item	Budget Cost
7.1	Mains Cold Water Service	
7.1.1	Replace single check valve with double-check valve	£500
7.1.2	Check connection and calibrate water meter pulse data	£300
7.1.3	Verify and put in place water management plan	£600
	Total Mains Cold Water Service	£1,400
7.2	Gas Service	
7.2.1	Upgrade pipework to suit two boiler installation (see below)	£1,500
7.2.2	Check connection and calibrate gas meter pulse data	£300
7.2.3	Install electrothermal links, gas leak and CO detectors	£1,200
7.2.4	Clearly identify gas knock-off	£200
7.2.5	Test, purge and issue certificates	£400
7.2.6	Provide gas schematic	£200
	Total Gas Service	£3,800
7.3	LPHW heating system	
7.3.1	Interim urgent works to investigate low flow, replace shunt pump/blocked heat exchanger	£1,000
7.3.2	Provide two boiler installation for resilience, with flues terminating in school curtilage	£16,000
7.3.3	Renew primary loop with self-balancing arrangement	£5,000
7.3.4	Replace radiators and radiant panels on gas-fired circuit (based on 48°C flow)	£12,000
7.3.5	Replace UFH manifolds with type with pumps and diverting valves	£1,200
7.3.6	Supplement MVHR's with emitters, to allow separate heating and ventilation control. Incorporate CO ₂ control of ventilation	£14,000
7.3.7	Correctly label dosing and PU pipework	£200
7.3.8	Insulation to suit modifications	£2,000
7.3.9	Flush, dose and balance heating system	£600
7.3.10	Commission boilers, service ASHP, pumps, etc	£2,000
7.3.11	Clear rubbish from plant room and ASHP enclosure	£300
7.3.12	Improve drainage to ASHP base	£200
7.3.13	Fire stop openings in plant room wall	£200
7.3.14	Provide plant room schematic and detailed valve chart	£200
	Total LPHW heating system	£54,900
7.4	DX Heat-Pump Systems	
7.4.1	incorporate controls to prevent heating and cooling fighting	£2,000
7.4.2	Set-up supplementary heat pumps to provide heating in winter and train staff	£350
7.4.3	Establish FGas register and testing/inspection regime	£800
7.4.4	Replace all filters	£400
	Total DX Heat-Pump Systems	£3,550

Item	Scope item	Budget Cost
7.5	Mechanical Ventilation	
7.5.1	Recommission MVHR's and change filters	£2,100
7.5.2	Replace removed hall extract system with new robust system, with occupancy control	£8,000
7.5.3	Check operation of local fans and carry out any remedial works	£800
	Total Mechanical Ventilation	£10,900
7.6	Domestic hot water	
7.6.1	Identify, inspect and check correct operation of all local water heaters	£600
7.6.2	Incorporate time controls (if not present)	£500
	Total Domestic hot water	£1,100
7.7	Building management system and controls	
7.7.1	Incorporate hardware and ancillaries for new boiler arrangement	£1,500
7.7.2	Replace missing or defective hardware and ancillaries	£1,600
7.7.3	Configure plant controls for boilers and heat-pump	£900
7.7.4	Configure controls for MVHR's and valves. Enhance visibility of valves and filters	£1,400
7.7.5	Provide new BMS control of replaced hall fans, based on temp and CO ₂	£500
7.7.6	Completely review, overhaul and reengineer software strategy to provide safe, stable control and monitoring	£2,700
7.7.7	Undertake comprehensive testing, commissioning and fine-tuning	£1,600
7.7.8	Undertake comprehensive user and maintainer training	£600
	Total Building management system and controls	£10,800
	TOTAL BUDGET ESTIMATE FOR RECOMMENDED WORKS	£86,450

Note: Costs are exclusive of professional fees, Value Added Tax and contingencies

8. Photograph Appendix



Photograph 1 incoming water main and meter in plant room



Photograph 2 - Gas supply & solenoid entering plant room



Photograph 3 - Wall-mounted Potterton condensing boiler – IN
FAULT (flue through wall outside curtilage)



Photograph 4 - Gas heating pressurisation unit and
expansion vessel



Photograph 5 - Grundfos boiler primary pump (connecting boilers to PHX, radiators and radiant panels)



Photograph 6 - Plate heat exchanger between gas boiler and ASHP circuits



Photograph 7 - Grundfos PHX pump (connecting PHX to buffer vessel)



Photograph 8 - Grundfos ASHP circuit pump, connecting ASHP, buffer vessel, underfloor heating and MVHR's



Photograph 9 - ASHP circuit buffer vessel in plant room (note materials stored in the plant room)



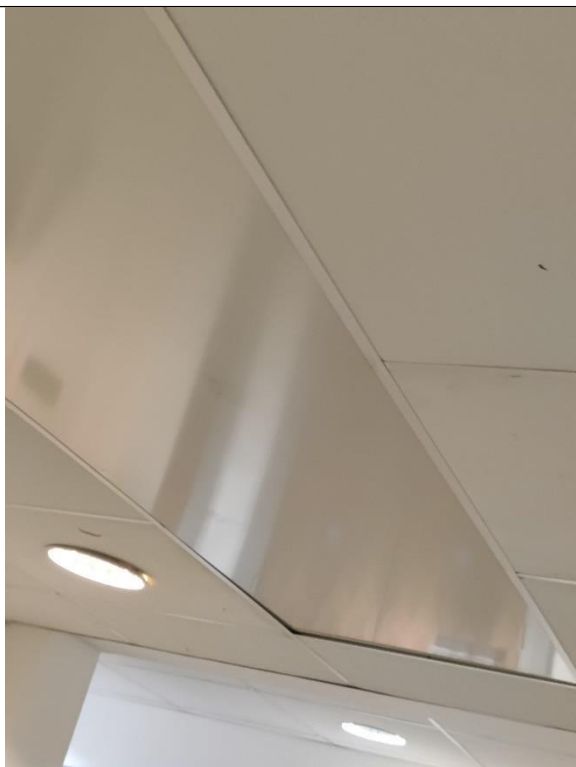
Photograph 10 - ASHP circuit heat-meter (not evident on BMS)



Photograph 11 - Carrier air source heat-pump in external enclosure (note standing water on unit and rubbish in enclosure)



Photograph 12 - typical steel panel radiator in office (with TRV) - fed by boiler circuit



Photograph 13 - typical ceiling radiant panel in circulation area (fed from boiler circuit)



Photograph 14 - LST radiator in gym



Photograph 15 - Radiant panel remote TRV head in protective Perspex box



Photograph 16 - underfloor heating manifold in hall chair store cupboard



Photograph 17 - Original installation Mitsubishi server room outdoor unit



Photograph 18 - Original installation Mitsubishi outdoor unit



Photograph 19 - Original build server Mitsubishi room unit



Photograph 20 - Retrofitted Panasonic wall unit in office



Photograph 21 - Retrofitted Panasonic classroom cassette unit



Photograph 22 - Retrofitted Panasonic room controllers



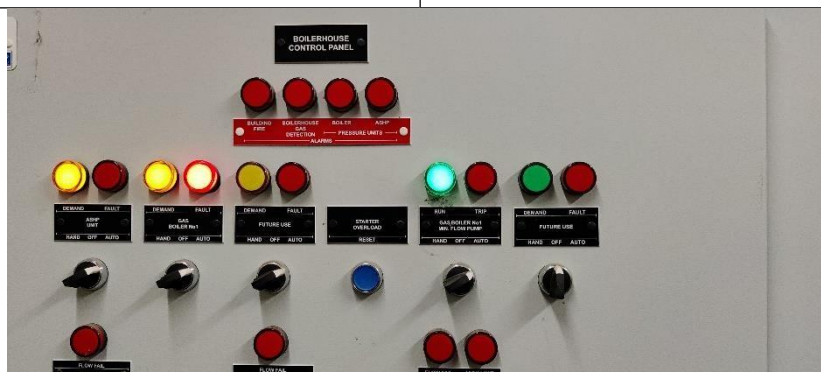
Photograph 23 - Missing hall high level extract fans (removed)



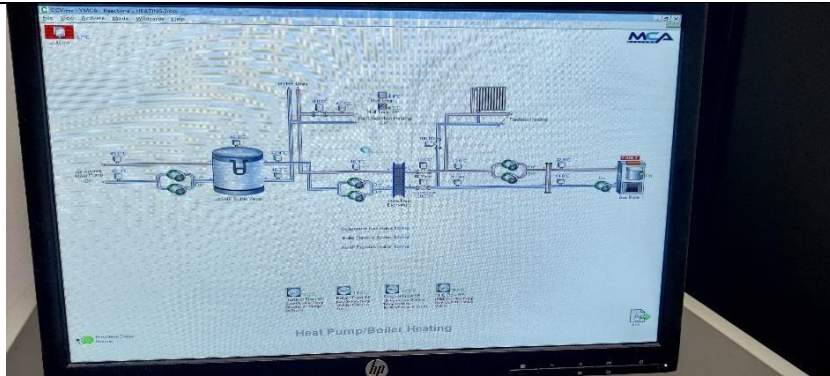
Photograph 24 - local ventilation extend/override control
(stock in on position)



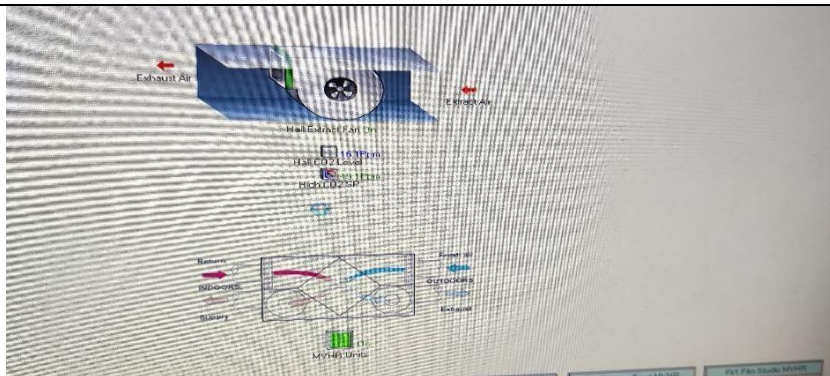
Photograph 25 - Typical classroom MVHR diffusers



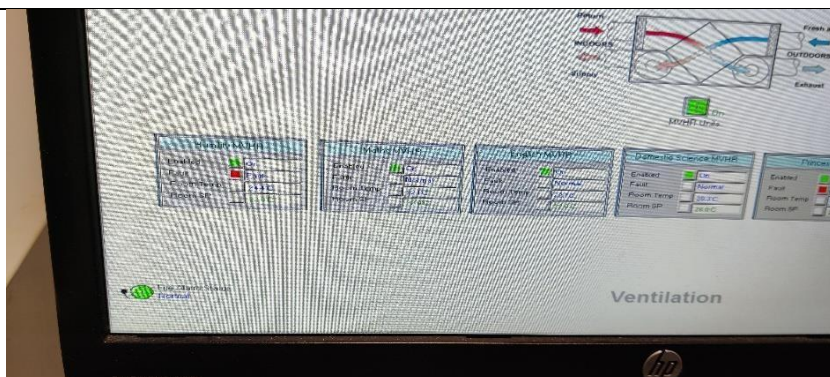
Photograph 26 - boiler fault lamp illuminated on plant room control panel



Photograph 27 - Heating system graphic on Cylon head end



Photograph 28 - hall extract graphic on Cylon head end, showing incorrect arrangement and operating (system removed)



Photograph 29 - MVHR status graphic indicating some units in fault. Note coils not shown on graphic



Photograph 30 - gas, water and ASPH logging not indicating correct values on BMS