

# CHICHESTER CITY COUNCIL



The Council House • North Street • CHICHESTER • West Sussex • PO19 1LQ  
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Town Clerk : R Duggua RD BA (Hons)

Reference:	CH Heating 22	Date	Contact
Prepared by	Version		
Peter Roberts	1	25 August 2022	<a href="mailto:p.roberts@chichestercity.gov.uk">p.roberts@chichestercity.gov.uk</a>

**SCOPE OF WORKS:** REMOVAL OF THREE BROAG QUINTA 65KW BOILERS AND REPLACEMENT WITH TWO WORCESTER BOSCH GB162 100KW BOILERS AND COMPENSATED CONTROLS IN THE COUNCIL HOUSE, NORTH STREET, CHICHESTER, PO19 1LQ

## 1. PRELIMINAIRES

The M&E sub-contractor is to include for his own site set up including storage containers and plant/required tools etc. to carry out the full extent of his works.

## 2. REGULATIONS & GUIDES

The execution of all mechanical and electrical services design and installation works shall comply with all applicable laws, rules, regulations, and codes of practice including but not limited to the latest standards, codes, rules and regulations of the following Institutions and bodies:

- Chartered Institute of Building Services Engineers
- CIBSE Society of Light and Lighting
- The Institution of Engineering and Technology
- Institute of Plumbing
- British Standards and Codes of Practice (including harmonised versions of European Standards)
- Health & Safety Executive
- The Institute of Gas Engineers
- Heating and Ventilation Contractors Association
- BS 7671 - Requirements for Electrical Installations (18th edition).
- Control of Asbestos at Work Regulations
- Personal Protective Equipment at Work Regulations
- Other relevant Safety Regulations
- Water Supply (Water Fittings) Regulations 1999
- Water Supply (Water Quality) Regulations 2010
- Relevant CIBSE design guides / commissioning codes / technical memoranda etc.

Twinned with Chartres, France and Ravenna, Italy

### **3. RAMS**

The Contractor shall produce and issue to the Client a full Risk Assessment & Method Statement relating to the works being carried out as part of the CDM Regulations requirements. RAMS should be submitted 14 days prior to commencing any works, No works will be permitted without approval of RAMS.

RAMS shall include for the provision but not necessarily limited to the following;

- Erection & Use of Access Towers, Platforms & Staircases
- Extraction of fumes in enclosed spaces
- Hot Works
- Working in confined spaces
- Protection of New & Existing Structure, Appliances & Equipment
- Craneage
- Hoisting & Positioning of Plant or Materials
- Noise & Vibration Control
- Working on Electrical Services
- Working on Mechanical Services
- Structural Alterations
- Fire Prevention of New & Existing
- Removal & Strip Out of any parts or Items
- Modification of any Building Services
- Management of Plant & Work Areas
- Permits for Specific Works
- Testing, Commissioning & Setting to Work

### **4. GENERAL DESCRIPTION**

This specification details the requirements for the Mechanical Services associated with the proposed decommissioning, removal and replacement of the existing second floor plant room boilers for The Council House, North Street, Chichester, PO19 1LQ. Mechanical Contractors will be invited by tendering based on these tender documents.

### **5. SCOPE OF WORKS - LTHW HEATING SYSTEM**

The Mechanical Services Sub-Contract will include the following:

- Site preparation isolation, drain down & removal of 3no. existing Broag boilers and ancillary equipment
- Remove old vertical flue kits
- Supply and install 2no. Worcester Bosch GB162 100kw condensing boilers
- Connect to the existing flow, return and condense pipe work as necessary
- Alter the existing gas supply as necessary and connect to new boilers. Purge and carry out a gas tightness test
- Supply and install a new vertical flue system to each boiler. Install flashing plates on the roof and weatherproof as necessary
- Connect new boilers to existing BMS panel and set up for full modulation and weather compensation functionality.
- Fill, vent and test boilers
- Testing and Commissioning of M&E Services
- Provision of O&M manual in hard backed ring binder with title and index, to include detailed description and operating instructions of all equipment, copies of

test records, certification and commissioning documents and a full set of 'as fitted' record drawings. One paper copy and one electronic copy to be provided.

The Mechanical & Engineering Services installation shall generally comprise the purchase, delivery to site, off-loading, hoisting, erection, fixing, testing, setting to work, commissioning, and providing 12 months warranty of the works described in this specification of works.

## **6. ENABLING & REMOVAL WORKS**

Ensure existing mechanical and electrical services are isolated, drained down, purged, and made safe. Remove identified redundant boilers, flues, pumps and ancillary equipment and associated controls, including power and control wiring to mechanical services.

Any interruption to utility services for Gas, Water and Electrical supplies while carrying out enabling works must be approved before isolation works starts.

## **7. MAINS COLD WATER**

Carry out alterations to existing mains cold water within the boiler Plant Room to new equipment as necessary. Copper Tube will be to BSEN 1057-R250, capillary fittings to BS EN 1254 Part 1 and manufactured by Pegler Yorkshire or equivalent.

## **8. NATURAL GAS**

On completion of all pipework alterations, carry out soundness and strength test to comply with gas regulations so as to deliver and maintain demand to design flow rate and required pressures.

All pipework to be medium grade steel pipe to BS 1387 with screwed joints up to 50mm above 50mm to be welded and flanged or Press fit Stainless Steel.

Fully identify all Gas Service Pipework Distribution in accordance with the British Standard required colour yellow ochre by means of painting or marker tape and indicate flow direction. All isolation valves to be clearly labelled with engraved plastic tags.

Provide and install new gas chart in main plantroom area containing gas fired appliances.

## **9. BOILERS**

2no. fully modulating gas fired condensing boilers to be installed within the second-floor Plant Room, accessed via the staircase from the Mayor's Parlour ante-room. The boilers shall be supplied by Worcester Bosch Ltd, from their GB162 commercial range or nearest equivalent if this boiler has been superceded.

- Worcester Bosch GB162 100kW
- All necessary control and safety devices are to be installed in accordance with manufacturer's instructions
- Supply and install PHEX to separate the existing system from the new boilers
- Provide condensate drainage from the boiler, including flue system

- Arrange for commissioning of boilers on site by boiler manufacturer

## **10. BMS**

The BMS shall perform the following functions:

- Provide optimised, weather compensated heating by enabling and disabling the gas boilers based on readings from master internal and external thermostats for each of the principal heating zones
- Provide temperature and time clock control of the heating (at least 3 different programmable temperature time profiles per day) for each of the principal heating zones
- Provide 2-stage frost protection at 5°C and 3°C
- Provide summer/winter/holiday switching

## **11. INSULATION & IDENTIFICATION MARKING**

All pipework insulated in accordance with Building Regulations and Water Regulations. Once suitably tested & commissioned, allow for insulation of all LTHW Heating pipework. Lagging shall be a min. 50mm Foil Faced Mineral/Rock Wool with suitable ID tape to prove direction at each bend and 1.5m distance. All Valves shall be numbered and labelled with Taffolite etched connector and A4 System Legend mounted to the wall of the second-floor Plant Room. A simple Plantroom Schematic shall be provided to A3 size showing the new system layout and design, again mounted to second-floor Plant Room wall.

## **12. TESTING & COMMISSIONING WORKS**

All complete Mechanical & Electrical installations, both new and existing, shall be tested at completion in compliance with relevant codes. A record of all testing during each part of the project shall be made available for inspection and attached to the O&M manual.

## **13. CLIENT TRAINING & HANDOVER**

Prior to handover the Contractor shall provide a full demonstration of operation of all Mechanical & Electrical installation to allow a full understanding to the client for use and maintenance. Prior to handover the Contractor must provide a list of maintenance items required for the next 24 months, which can be attached to the O&M manual.

## **14. RECORD DRAWINGS AND O&M MANUAL**

The Contractor and their Sub-Contractor(s) shall provide a fully detailed set of Mechanical & Electrical 'as fitted' drawings as well as all installation and operating instructions presented in an O&M document. The O&Ms shall include any existing services and routes identified during the period of the works. Where areas are exposed, a photographic record shall be taken prior to closing off any parts.

All Drawings shall be produced to A1 size with all description and detail shown. The Contractor shall provide a laminated and framed A3 size drawing of all Plantroom equipment, pipework and controls.

O&Ms shall include the following:

- Individual detailed description of each installation
- Schedule of all Plant and Equipment with details of Manufacturer, Type, Model & Duty
- Instructions for the Servicing and Maintenance of all installed equipment
- Copies of all Test Records & all Certifications & Commissioning Documents
- Full set of all Record Drawings

The O&M Manual shall be presented in a hard backed ring binder with title and index. Prior to issue, provide a draft submission for approval. On approval, provide 2no. copies of the complete O&M, one paper copy and one electronic copy.

## **15. COMPLETION OF WORKS**

Works can be facilitated by mutual arrangement from the week following the award of the contract. Works will need to be completed by 21 October 2022.

## **16. CONTACT**

Contact the Property Manager, Peter Roberts, for more information, such as plans and a viewing of the site, via email at: [p.roberts@chichestercity.gov.uk](mailto:p.roberts@chichestercity.gov.uk)

## **17. SUBMISSION OF TENDERS FOR WORK**

Tender documents are to be provided in hard copy within a sealed envelope marked:

**Private and Confidential**

**Not to be opened before midday Friday 9th September 2022**

Addressed to:

Town Clerk  
Chichester City Council  
The Council House  
North Street  
Chichester  
PO19 1LQ

**Please note: All documents must be received by 12 noon on Friday 9th September 2022.**