



Town Hall
Magdalene Street
Glastonbury
Somerset
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GLASTONBURY TOWN COUNCIL

www.glastonbury.gov.uk

Decision Minute Reference:		FC-2022-95	
Prepared by	Version	Date	Contact
Conor Ogilvie-Davidson	1	16 August 2022	townclerk@glastonbury.gov.uk

SCOPE OF WORKS TO INSTALL ONE NEW BOILER IN NEW PLANT ROOM POSITION

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.

3. GENERAL DESCRIPTION

This specification detail the requirements for the Mechanical Services associated with the proposed refurbishment of the existing Basement boiler and plant room and new First Floor Boiler/Plant Room for Glastonbury Town Hall.

Mechanical Contractors will be invited by tendering based on these tender documents.

4. SCOPE OF WORKS

The Mechanical Services Sub-Contract will include the following:

- Site preparation isolation, drain down & removal of existing plant and services
- Alteration to mains cold water services and gas supplies.
- Install Boilers, flues, pumps, and all ancillary plant equipment.
- Commission and testing of all M&E systems
- Provision of ventilation system for boiler room if required
- Testing and Commissioning of M&E Services
- O&M manuals

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 SOW and the accompanying drawings.

5. ENABLING & REMOVAL WORKS

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

Asbestos survey required related to redundant boilers and flange gaskets on LTHW pipework removal.

Make provisions for continued operation of the Heating. Heritage.

This applies to the whole Town Hall building which has multiple occupiers related to their welfare facilities i.e., toilets and hot & cold-water outlets. Any interruption to utility services for Gas, Water and Electrical supplies while carrying out enabling works **must be approved before isolation works starts**. Purpose to reduce limit the disruption to the multipliable occupiers who use the building daily.

6. MAINS COLD WATER

Carry out alterations to existing mains cold water within the Boiler plant room to new pressurisation units and installed and facility to quick fill LTHW heating system. Copper Tube will be to BSEN 1057-R250, capillary fittings to BS EN 1254 Part 1 and manufactured by Pegler Yorkshire or similar.

7. NATURAL GAS

The existing gas distribution pipework within the boiler room serves several appliances throughout the building. On completion of all pipework alterations carry out soundness and strength test. To comply with gas regulations, 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.

A gas solenoid valve is installed on the incoming service in the boiler room closure by operation of an Emergency Stop actuated by a push button located adjacent to the plant room door.

To fully identify all Gas Service Pipework Distribution in accordance with the British Standard required colour yellow ochre by means of painting. 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.

8. LTHW HEATING SYSTEM

There is an individual boiler heating system which is serving the main building and offices provision for zoning to be provided.

Note: No on-site welding fabrication to be carried out on site.

1 in number fully modulating pre-mix gas fired condensing boiler shall be installed within the ground floor plantroom. All heating distribution pipework and mechanical services within the plant room, insulated in accordance with this specification. All pumps, actuator control valves, PHE, pressurisation units, expansion vessels and including any other ancillary plant components are installed and accessible for access to valves for maintaining and servicing. A temperature gauges shall be provided to each main circuit flow and return pipe, to the main header and boiler flow & return circuit. De-aerators, dirt separators, isolation, commissioning valves etc. will be used to enable proper venting, protection and commissioning and maintenance of the building services. A chemical dosing system shall be installed. Once complete the LTHW Heating Services installed as part of these works shall be fully flushed by the Contractor. All isolation valves to be clearly labelled with engraved plastic tags.

9. BOILERS

Fully modulating pre-mix gas fired condensing boiler to be installed within the New Plant Room situated behind the Town Hall Kitchen area. The boilers shall be supplied by Potterton Boilers Ltd, from their Sirius Three range.

- Potterton Sirius Three 130kW
- Operating temperatures to be 80/60°C Flow & Return.
- Electrical supply 230v 1ph 50Hz
- Flue diameter 110 (I/D)
- Flow and Return connections R11/2" male
- Gas connection R1" male
- Condensates drain 32mm dia.
- All necessary control and safety devices sequence boilers via control panel are installed in accordance with manufacturer's instructions
- Supply and install PHEX to separate the existing system from the new boiler
- Provide condensate drainage from the boiler including flue system
- Arrange for commissioning of boilers on site by boiler manufacturer

10. CIRCULATING PUMPS

The primary and heating distribution pumps selected from Grundfos Magna range variable speed inverter driven pumps. The Mechanical Services Contractor will identify current site pump duties and make allowance based on the reconfiguration and installation of new plant equipment to take in account of selection for new pump duties.

11. LTHW HEATING CIRCUITS

1 in number twin head circulation pump arranged as duty / standby shall be fitted to each heating circuit the flow pipework. Pump to be suitable for a single-phase electrical supply and shall be complete with line size full bore isolation valves pressure gauges and gauge cocks.

12. PRESSURISATION UNITS

A packaged pressurisation set comprising pressurisation unit and expansion vessel for closed boiler circuit and LTHW heating circuits to be installed within the plant room. The system expansion vessels requirement to be determined by mechanical contractor

Preferred Suppliers / Manufacturers: - Flamco Flexfiller Mini 230D Pressurisation Unit - Twin Pump

- Max Flow and Return Temperatures 80/60°C
- Anti- Gravity Loop
- MCWS feed and isolation
- Include for the equipment to be commissioned

13. THERMAL INSULATION

All pipework insulated in accordance with Building Regulations and Water Regulations and the contractor is to ensure the insulation will have a GWP (Global Warming Potential) of less than 0.5. Insulation mineral wool rigid pre-formed sections, having a factory applied vapour barrier facing of Bright Class O reinforced aluminium foil having the following standard density 35 kg/m³ however all valves and flanges will be insulated with jackets & covers.

Proposed control functionality 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 switch

14. TESTING & COMMISSIONING WORKS

- Pressure testing of all heating, hot & cold-water circuits
- Heating circuits would be flushed, chemically cleaned, and chemical corrosion inhibitor

- Commissioned equipment such as boilers, cylinders, pumps, pipework, and controls should be commissioned in accordance with the manufacturer's instructions.
- Test Certificates will be provided for the following. Full test / Gas safe certificates (CP12 or similar) Boiler commissioning certificate
- Electrical testing
- Controls testing /completion of works

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 31 December 2022.

16. CONTACT

Contact the Town Clerk, Conor Ogilvie-Davidson, for more information such as plans and an viewing of the site via email at: townclerk@glastonbury.gov.uk

17. SUBMISSION OF TENDERS FOR WORK

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

Private and Confidential
FAO Town Clerk
Town Hall
Magdalene Street
Glastonbury
BA6 9EL

All documents must be received by 5pm on Wednesday 28 September 2022 at 23:59