THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

LANCASTER WEST
NEIGHBOURHOOD TEAM
W11

Notting Dale Het Network

Procurement Reference 270

Operations and Maintenance – Scope of Works

Contents

1 Introduction

The key objectives of the Operations and Maintenance phase are:

- Ensuring reliable heat supply to customers
- Efficient and economic operation of the plant
- Ensuring longevity of the plant
- Adhering to health and safety requirements
- Customer satisfaction

In summary the DBOM Contractor will be responsible for:

- Adoption of Secondary and Tertiary Networks
- Routine (Planned Preventative) Maintenance and checks
- Reactive Maintenance and repair of unexpected faults
- Continuous monitoring of Heat Network (LWREH) operations
- Metering of customer usage
- Provision of customer helpline, support and on-boarding
- Reporting to the SPV

The provided Operations and Maintenance Schedule in the DBOM Contract includes the following:

- Contractor's responsibilities
- Adoption of networks
- Operations and Maintenance Schedule of the Contract
- Services to be provided
- Contractor Responsibilities
- Client Responsibilities

The appendices to the Operations and Maintenance Schedule of the Contract will be developed during the second stage of the tender process incorporating responses to the ISIT and negotiation stage.

2 Scope of Work - Summary

The DBOM Contractor shall undertake and be responsible for all necessary operation, testing, maintenance, replacement and repair services for the Notting Dale Heat Network (LWREH) ("the Network"; as set out in Section 2), including but not limited to plant, equipment, services and all other associated systems and apparatus to ensure that the components of the Network operate and are in good condition in accordance with this Contract the requirements of this appendix, the heat supply agreements and this Contract including (but not limited to):

1. Adoption of Secondary and Tertiary Networks – as set out in Operations and Maintenance Schedule of the Contract
2. routine, periodic and visual inspection and testing (including any availability tests, system tests or annual insurance inspections) of the Network including all safety systems, as required under this Scope of Works or as reasonably directed by the Client and including any works arising from or associated with such tests;
3. undertaking inspection, maintenance and cleaning works of the Network in accordance with this Scope of Works;

4. routine, scheduled, non-scheduled and emergency maintenance and repair of any component parts of the Network;
5. repair or replacement of component parts of the Notting Dale Heat Network (LWREH) as necessary and rectify any failure, damage, deterioration or malfunction to any building, landscaping, road, item of plant, equipment or services forming a part of the Network;
6. updating operating and maintenance manuals for the Network and marking up changes to "as built" drawings, resulting from work carried out by the DBOM Contractor;
7. complying with the relevant manufacturer's recommendations at all times;
8. if requested, supply to the Client on a timely basis or on reasonable demand such pertinent operating information and maintenance records relating to the components of the Network as may be required under this Contract or as may be reasonably requested by the Client from time to time;
9. provide all requisite qualified and trained staff in accordance with this Contract obtain any other such resources and sub-contractors as are necessary to provide the Services and operate and maintain the components of the Network on a day-to-day basis and carry out all necessary administration in respect of such staff and sub-contractors (statutory and otherwise); and
10. with respect to the heat meters (bulk meters and those in each HIU), the Contractor shall verify that the meters in respect of the Network provide data to the Contractor to allow compliance with the requirements of this Scope of Works and the Heat Network (Metering and Billing) Regulations 2013.
11. Constant monitoring of the smart control system/BMS to identify any performance issues that may need correction as well as indicative of need for preventive maintenance.
12. Quarterly analysis of the heat network (LWREH) performance and recommendation to the Client of how the smart control system/BMS's operating "scenarios" might be adjusted to improve overall system performance and to make such adjustments as instructed.
13. Provision of onboarding service for existing heat users who are migrating to using the Heat Network (LWREH) and all incoming new residents, including how to use the new system. and technical support to the RBKC Resident Liaison Officers
14. Provision of a Helpdesk service for use of all heat users (i.e. residents, Leisure Centre and Academy) as well as Notting Dale Heat, which may itself want to report faults.
15. Use of a CRM (to be conversant with that maintained by the Client), including full compliance with confidentiality, to any communication required by the O&M Contractor with heat users e.g. to gain access for onboarding, maintenance purposes
16. Maintaining fire integrity of the building fabric when carrying out maintenance and replacement works.

The above O&M services are to commence on Practical Completion of each relevant section of the DBOM and D&B works.

More detailed requirements are set out in Sections 4, 5 and 6 below.

3 Scope of Plant (the Notting Dale Heat Network; "the Network")

These O&M services will cover the plant referred to as "the Network" as defined by the Stage 3 report, which will include:

- The Air Source Heat Pump(s) on the roof of Kensington Leisure Centre (LWASHP1)

- The Air Source Pump in Treadgold House (LWASHP2)
- Electric boiler and ancillary plant within the Renewable Boiler Room (LWRBR)
- The Thermal Store Plant Room adjacent to the Kensington Leisure Centre (LWHRS)
- The primary heat network .
- Existing Gas boilers and ancillary plant retained within the Leisure Centre (KLCPR) for use as a back-up source of heat for the Network.
- The secondary networks from the substations to the individual properties (as set out in the Stage 3 Report)
- The tertiary networks (as set out in the specification) within each residential dwelling; which will include an the HIU, heat meter, temperature controller, radiators, pipework and radiator valves.

Exclusions to the O&M Services

- O&M services to the networks within the Leisure Centre and Academy downstream of their respective Substations.
- Maintenance and / or repair of the domestic hot water (DHW) systems in dwellings, with the exception of the HIU itself; although this may be included by the [Client] as an additional requirement at Stage 2 of this procurement.
- Maintenance and or repair of cold-water systems in dwellings; although this may be included by the Client as an additional requirement at Stage 2 of this procurement.
- Any interim connection from a Substation to the existing secondary network of a residential property created by the DBOM Contractor (see reference in Project Description and Objectives) in advance of that property being refurbished by the Council
- Purchase of energy/electricity, gas and/or water supplies to the Heat Network
- Collection of customer payments or any bad debt risk; to be borne by RBKC

4 Planned and Preventative Maintenance:

Delivery of the following Planned and Preventative Maintenance Tasks:

Task	Minimum Frequency
General	
Put in place and maintain throughout the term of this Contract, a performance monitoring system designed to ensure that the Services are carried out in accordance with the Bidders' Proposals to align with the Project Requirements, Contract and achieve the requirements set out in the KPIs.	Continual
The Contractor shall submit to the Client details of its Quality Management System which has been developed specifically for the Network and requirements of this Contract and shall comply with the requirements of ISO9001.	Prior to adoption
Visual inspection of above ground sections of primary energy system for damage / leaks, etc; to include inspection of the BMS dashboard, site walk around to view all exposed primary network pipework up to and including all Substations plus secondary networks to the residential blocks.	weekly

Manually check meter readings of the bulk heat meters	weekly
Manual check and record heating system pressure and water meter reading	weekly
Maintain full operation, maintenance repair and replacement records for the relevant Network; records of operating performance data; a register of all equipment subject to statutory inspection including recording all test dates and results; a record of the history of buildings and major items of plant such record to indicate the current condition and details of maintenance in respect thereof.	continual
Cleaning of Renewable Boiler Room, Renewable Heat Store area and ASHP1	As required and no less frequently than monthly
Cleaning and Maintenance of external energy centre windows, roof, gutters, etc	As required and no less frequently than annual
Establish and operate a stores and spares inventory recording and requisition system (including key spares) – refer Section 8 below.	continual
Supply and installation of consumables and wearing parts (e.g. sealants, cleaning materials, lubricants, filters, etc)	As required
Submit planned preventative maintenance schedule to client for comment at least 3 months before start of each operational year from the commencement of services to include: all statutory inspections; the tasks identified as 'Amber' in the colour-coded critical rating system in SFG20; the Maintenance Schedules; any other operation and maintenance obligations as set out in this Contract; and maintenance in accordance with Good Industry Practice. All comments by Client to be resolved with client within 14 days so that final draft issued 2 months before start of operational year.	Annual
Submission to Client of O&M report (to agreed format) to include: PPM undertaken, reactive maintenance carried out, future maintenance plan, resident on-boarding completed / underway and helpdesk summary report.	monthly
Submission to [Client] of condition report (to agreed format)	annual
Heat Pump(s)	
Visual inspection – e.g. Inspect filters, ducts, blower and indoor coil for dirt and other obstructions and resolving as required.	quarterly
Periodic checks and Maintenance - in accordance with manufacturer's instructions	As manufacturer's recommendations
Check refrigerant levels and pressure	Annual
Other Energy Centre Plant	
Electric boilers - in accordance with manufacturer's instructions	As manufacturer's recommendations
Circulation pumps / DH pumps – in accordance with manufacturer's instructions	Annual or as manufacturer's recommendations
Plant within existing Leisure Centre energy centre plant (for back-up use) – in accordance with manufacturer's instructions	Annual or as manufacturer's recommendations
Periodic firing of back-up gas boilers in Leisure Centre to maintain back-up capability	As required to ensure response capability maintained
Check safety valves and interlocks	Quarterly

Expansion and pressurisation unit - in accordance with manufacturer's instructions	Annual
Visual inspection of thermal store (LWHRS)	quarterly
Drain down thermal store (LWHRS) – inspect internally and externally	5 years
Electrical systems – periodic testing	Annual
Internal lighting – replacement of failed lamps	As required
External lighting – check operation	Monthly
Emergency lighting - testing	Quarterly
Fire alarm system maintenance – in accordance with manufacturer's instructions	Annual
Primary Heat Network	
Water sample – send for analysis – adjust chem regime as necessary	quarterly
Add chemical to maintain dosing level	quarterly
Water sample – send for analysis - pH, total hardness, TDS, chlorides and alkalinity	annual
Magnetic dirt separator– in accordance with manufacturer's instructions	annual
Remove and clean strainers	Quarterly for 1st year then annual
Operate isolation valves – close and open and grease stems of underground valves	5 years
Secondary Heat Network	
Visual inspection and check water pressure	quarterly
Remove and clean strainers	annual or more frequently as required
Operate isolation valves – close and open and grease stems of underground valves	annual
Water sample – send for analysis – adjust chem regime as necessary	annual
Tertiary - In dwelling Systems	
inspection of HIU – clean internally, check/set temperature set points	biennial
Company shall provide a schedule of dwellings to be visited and agreed with the SPV at least 1 month in advance of commencing inspections.	As required
Inspection of in dwelling heating systems - condition of radiators and internal pipework	biennial
Check condition of consumer metering equipment and calibrate	biennial – or aligned with Heat Trust or Regulatory requirements if more frequent.

5 Reactive Maintenance

Delivery of the following Reactive Maintenance:

Fault Category	**Rectification**
Energy System and Buried/Primary HN	
Plant / network fault causing total loss of heat supply – attend site and rectify	4 hours
Plant / network fault causing partial loss of heat supply – attend site and rectify	If causing loss of heating supply to individual

	dwellings then Tertiary/Dwelling Heating System Fault requirements apply. Otherwise 12 hours
Plant / network fault / inadequacy – not causing loss of heat supply, but affecting efficiency / operations	48 hours
Leak detection alarm – attend site, trace and rectify	48 hours
Leak reported or from pressure - attend site, trace and rectify	48 hours
Secondary DH Network	
Fault causing total loss of heat supply to block – attend site and rectify	4 hours
Fault causing partial loss of heat supply – attend site and rectify	If causing loss of heating supply to individual dwellings then Tertiary/Dwelling Heating System Fault requirements apply. Otherwise 12 hours
Serious leak in building – attend site, damage limitation and rectify	4 hours
Minor leak (not causing damage) in building not causing loss of heating – attend site and rectify	48 hours
Damage to pipe cladding/insulation within communal building areas or on faces of buildings - rectify	48 hours
Other non-service which causes damage outside of communal areas or building faces - rectify	48 hours
Tertiary/Dwelling Heating Systems and HIUs – single dwelling affected	
Fault causing total loss of heating supply to individual dwelling – attend site and rectify	• 4 hours for Vulnerable Persons; • 12 hours for other persons in the period 1st October to 30th April and 24 hours for the remainder of the year except where outside air temperature has fallen below 5°C, when the time period shall be 4 hours for all persons.
Fault causing total loss of hot water supply to individual dwelling – attend site and rectify	
Partial failing of heat or hot water at the HIU (e.g. not achieving minimum temp) – attend site and rectify	48 hours
Leakage / burst pipe – affecting single property – attend site and rectify	12 hours
Damage limitation – in event of serious leak/issue	4 hours
Non-critical fault (not causing loss of heating) – attend site and rectify	48 hours

All response and remediation actions are subject to access being obtained under the rights identified within the contract. In an emergency the Council has the right under each lease and tenancy agreement to make access for which on appointment the Contractor will be given the relevant contact details at the Council

6 Resident and Customer Support

Customer Helpdesk

- provide single direct duty telephone helpline and single duty email access to which the Customers or the Client can report faults or emergencies (24/7 manned) or seeking advice or make complaints (working hours of 0900 to 1700; Mondays to Fridays) outside of which time a message facility is available, with response during working hours.
- Any calls to the Helpline shall be record as a minimum the following information:
    - individual call reference number;
    - time and date of call;
    - duration of call;
    - caller's name;
    - caller's address;
    - description of fault;
    - agreed fault category and response time;
    - contact details (i.e. phone number or e-mail address);
    - responsibility for call – i.e. contractor or RBKC. Where the call relates to a fault which is not within the scope of the Contractor notify RKBC.

Resident Transition

- Onboarding to the system for existing heat users who are migrating to using the Heat Network and all incoming new residents
- Resident User guide (written) for customers (in English), to be approved with RBKC 6 months prior to first onboarding. Additional support to be provided for RBKC to produce video guides. The User Guide to include: how to use the HIU and tertiary network, i.e. the temperature control and radiator valves as well as how to detect whether the heat supply from the Network might be faulty and how to access assistance.
- Technical support and knowledge transfer to the Client's RLOs to reinforce a visible presence and deliver excellent customer experience; Bidder to include 1 x FTE for the duration of the initial contract term.

Customer Meter Readings and Billing

- download from the Consumer's Meters consumption readings half hourly for all Consumers and shall provide these to the billing system and to produce monthly billing statements on behalf of RBKC.
- Technical support and knowledge transfer to RBKC for interrogation of meter data.
- Where a Meter reading is not available for any reason, an estimated value will be produced and resolve meter problem within a month.
- Compliance with Heat Trust and the Heat Network (Metering and Billing) Regulations
- Ensure full compliance with GDPR requirements for all customer data.
- Explain the billing procedure to Residents, presentation of the invoice and how to access assistance in respect to billing and payment

7 General

Emergencies

In the event of an Emergency take such action as the Contractor reasonably considers necessary or desirable in order to prevent or minimise injury, damage or loss to the Network(s), Consumers or the Client, and will promptly report to the Client the nature of the Emergency and the action taken by the Contractor.

If the Client reasonably considers that there is an Emergency and that the Contractor is not taking the necessary and proper steps to overcome (or prevent) the Emergency, the Client shall be entitled to direct the Contractor (at the Contractor's cost) to provide all or any of the Services in such manner to maintain the proper operation of the relevant system. In such circumstances the Client will not require the Contractor to operate or maintain the relevant Network contrary to the requirements of any Consents or that puts the Contractor at risk of personal injury.

Materials

The Contractor shall ensure that materials used in the supply of the Services:

- comply with all Control of substances hazardous to health (COSHH) codes;
- are suitable and fit for purpose for the provision of the Services;
- for replacements are like for like in terms of material and product;
- have not been previously used and when installed are covered by the full extent of the available manufacturer's warranty when the product was first purchased; and
- are aligned with the sustainability requirements set out in the Project Requirements and Objectives and agreed with Bidders.

Environment & Hazardous Substances

The Contractor shall inform the Client at least 4 weeks in advance of the delivery under the Contract of any goods having a toxic hazard or other hazard or to the safety or health of persons or property, identifying those hazards and giving full details of any precautions to be taken by the Contractor on the delivery of such goods and their subsequent storage or handling.

8 Spares

6 months prior to prior to the adoption of the first secondary and tertiary network the Contractor shall prepare for approval by the Client, a recommended list of spare parts which it considers to be necessary to purchase for the continuing operation and maintenance of the Network, in order to provide security against failure of all or any part of the Network (hereafter referred to as "Strategic Spares"). This shall include all strategic spares necessary to cover plant breakdown and limit outages. The Contractor shall set such stock levels as may be reasonably expected to ensure that repair and maintenance works can be carried out as quickly and efficiently as possible.

When developing the Strategic Spares list for the Network the Contractor shall use its knowledge of the industry to ensure that the inventory provided reflects only those spares which the Contractor believes are essential to the delivery of the Services and there are no other solutions to ensuring the Services can be maintained in accordance with the requirements of the Contract.

The Contractor shall store Strategic Spares for each Network in the area set aside for this purpose in any Energy Centre. Suitable shelving and racking shall be provided by the Contractor where spares are to be located. The Contractor shall ensure a full up to date inventory of all such spares is retained on the relevant Network and that the items are stored in safe manner which prevents damage to the items.

If the Contractor uses any of the Strategic Spares for a Network then it shall advise the Client in the Monthly Report and shall replenish the Strategic Spares stock for the relevant Network accordingly at its own cost.

On the Expiry Date or earlier termination of this Contract, the Contractor shall ensure that it transfers its rights, title and interest in and to all the Strategic Spares to the Client.

9 Tools, vehicles and equipment

The Contractor shall at its own expense provide all vehicles, tools and other equipment necessary for the provision of the O&M Services and ensure that they are kept maintained in good order and stored in an easily accessible yet secure store within the relevant energy centre and in accordance with and all Consents.

On the Expiry Date or earlier termination of this Contract, the Contractor shall ensure that it transfers its rights, title and interest in and to all tools and equipment that are specific to the Heat Network