Hunter Street Health Centre

Replacement Heating and Hot Water Boilers

Property Details

Property ID: 10000505

Hunter Street Health Centre

8 Hunter Street

Kings Cross

London

WC1N 1BN

Gleeds Summary

Item	Asset Category	Budget Costs	Description of Works	Type	Programme
1	Heat source and equipment Boiler	£60,000.00	Replacement of Boilers	Design	Achievable
	Total				

Gleeds Summary

Item	Asset Category	Budget Costs	Description of Works	Type	Programme
1	Replacement of Boilers and Calorifiers	£112,995.00	Replacement of Boilers and Calorifiers	Design	Achievable
	Total	£112,995.00			

The validation budget estimate exceeds the NHS Budget by £52,995.00.

Gleeds Comments and Costs

Hunter Street Health Centre was inspected by Peter Roach and Lorna Philips of NHS Property Services and John Owen and Jake McGhee of Gleeds Building Surveying Ltd on the 26th June 2019. The scope provided by NHS PS stated:

'Mechanical Services_Heating source and equipment_Boiler'

The Basement Plant Room contains 2 No. Potterton Commercial Derwent Compact Plus gas-fired boilers, single head duty and standby pump arrangement, for both VT and Ct, controls and associated pipework and ancillaries as well as 2no hot water cylinders.

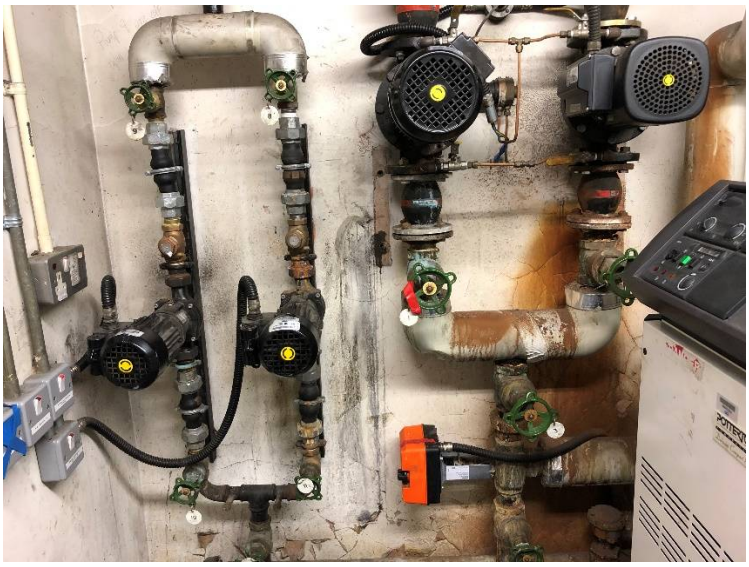
Item 1 – Replacement Heating and Hot Water Boiler

The boiler plant room is located in the basement of the building with access from the stairwell and lift from the ground floor.

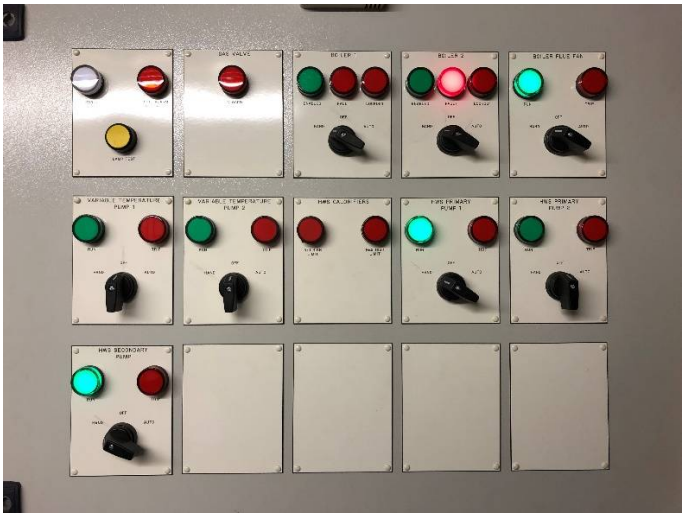
The existing boilers are floor mounted atmospheric cast iron gas fired unit with an output of estimated 100kW each and an efficiency of approximately 83%. The units are approximately 25-30 years old.

Stainless steel flues rise off the top of each boiler and join into a flue which discharges through an external wall to a lightwell below pavement level. The flues should be replaced when the new boilers are replaced because condensing boilers are proposed to be installed, and as the gases created by a condensing boiler are more acidic the existing flues may not be a high enough grade steel and may quickly corrode. The boilers appear to have been maintained regularly but appear at the end of the useful life and with CIBSE recommending maximum useful life of 20-25 years for this type of boiler. Although the simple control components such as thermocouple, gas valve and high limit thermostat can still be replaced, any fault to the heat exchanger assembly would be irreparable.

The main VT circulation pump is a duty and standby arrangement with two Grundfos close coupled single head pumps. One of the existing pumps to be replaced was changed recently and may be retained upon further testing. The main CT circulation pump is a duty and standby arrangement with two Grundfos TP 25-5- pumps. Subject to further testing, it is recommended this pump is replaced as it appears to be at the end of its service life.



The existing heating control panel appears to be from the original installation. Based on CIBSE guidance, controls have a life expectancy of 10-15 years. We therefore recommended to replace the control panel along with the boiler plant.



There are no faults shown on the control panel shown for the calorifiers, and there has been no complaints from the practice regarding a lack of hot water, this would show that the calorifiers appear to be in good working order. However, calorifiers were installed August 1988, this would make the

calorifiers 30 years old. Based on CIBSE guidance, calorifiers have a life expectancy of 20-25 years, this means that it would be recommended to replace the calorifiers along with the boiler plant.

At present it appears the plant ventilation is not suitable. The new installation shall include for installing suitable ventilation to the plant room for requirements for combustion, as well as an adequate flow system with fan assist if required. It will be necessary to undertake the detailed design process to establish the exact ventilation requirements. This may involve modifying an existing external penetration or forming a new ventilation path into the plantroom.

Based on age and condition the recommendation would be to replace the existing boiler plant and associated flue, plant room ventilation, water calorifiers, pumps unless the pumps are tested and shown to be suitable and associated controls.

Indicative Programme

Description	Period	Total
Design Development	6 weeks	6 weeks
Tender Period	4 weeks	10 weeks
Award of contract	4 weeks	14 weeks
Mobilisation and lead in time	8 weeks	22 weeks
Construction period	8 weeks	30 weeks
Statutory Consents	*13 weeks*	*Inc*

The budget costs for this work are:

Estimate Breakdown

Item Description	Qty	Unit	Rate £	Total £
Removal of redundent items	5	Days	450.00	2,250.00
Replacement Gas Fired Boiler & Flue	2	Number	9,500.00	19,000.00
New Pressuristaion and expansion	1	Number	2,500.00	2,500.00
Secondary Pumpset	4	Number	1,500.00	6,000.00
Replacemnt Controls	1	Number	10,000.00	10,000.00
Replacment Calorifiers	2	Number	1,250.00	2,500.00
Plant Room Ventilation	1	Number	2,000.00	2,000.00
Builders Work	1	Number	2,000.00	2,000.00
Temporary Heating	1	Number	10,000.00	10,000.00
Labour inc. commissioning	30	Days	450.00	13,500.00
			Sub Total (ii)	£69,750.00
			Contingency (10%)	£6,975.00
			Prelims (10%)	£6,975.00
			OHP (15%)	£10,462.50
			Total (Exc VAT)	£94,162.50
			VAT (20%)	£18,832.50
			Total (Inc VAT)	£112,995.00
			Facet Budget	£60,000.00
			Difference (+/-)	£52,995.00
			Prof. Fees (10%)	£9,416.25
			Prof. Fees VAT	£1,883.25
			Fees Total	**£11,299.50**

Estimated professional fees allowance only not included in comparison costs.

Potential Project Risks

Access to the Plantroom

Access to the plantroom is only safely available via the health centre clinic reception. It has been assumed that access will be possible through this area during normal working hours and out of hours working is not required on this project. However it may be necessary to bring in large items of plant outside of working hours, for instance before the site opens. This will have a potential impact on the length of the contractors programme.
In addition the size restrictions this will place on plant may have a bearing on cost and programme for the contractor. This will be fully considered at detailed design stage.

Maintaining Service to the Site

It will be necessary to shut down the existing heating system for the majority of the works. The current project programme suggests works will be undertaken during the winter period and it has been assumed some form of temporary heating will be required.

There is no suitable external location to site a temporary boiler for the duration of the works.

It is therefore suggested that internal electric heaters will be the required to provide the temporary heating. Prior to their use a load test will need to be undertaken on the existing distribution board to ensure sufficient capacity is available. No allowance has been included within theirs costs to upgrade the existing LV infrastructure.

The exact number of temporary heaters will be dependent on the space to be occupied during the works. This will need to be confirmed with the building occupiers at detailed design stage. A provisional cost only for temporary heating has been allowed at this stage of the project.

Asbestos

Given the age of the building it is considered a potential risk that asbestos products may be present in the working area. An asbestos refurbishment and demolition survey should be undertaken prior to works commencing. No allowance for asbestos removal works have been made within these costs.

Re-use of the existing pipework

The scope of the works provided by the client does not include replacement of the existing heating distribution pipework or radiators.

Visually the existing pipework appears in satisfactory condition with no evidence of failures seen on site. The client or NHS PS have not reported any failures with this system.

However there is always an element of risk when re-using an existing system. Any existing faults can be exacerbated by the works being undertaken. No allowance for repair or upgrade of the distribution pipework has been allowed for.

The works allowed for are to replace the heating plant only and any existing issued with the system, such as rooms not being hot enough or lack of local temperature control, will not be addressed as part of the proposed project and will remain on completion.

Statutory Consents

This site is located within a conservation area. Should it be necessary to alter the external façade in any way, for instance increasing ventilation areas, this will require statutory consent to be obtained from the local authority.

This is a programme and design risk as until this is received the final design and contract period cannot be confirmed, and any works undertaken prior to this would be done so at risk.

No extra over costs have been allowed for within the budget for issues in obtaining statutory consents.

Ownership of Rear Passage

The existing plantroom leads to a rear passage with an external entrance door. This area may be considered as part of the proposed ventilation solution, with modifications to meet current standards. However this area did not appear on the title deed plans issued by NHS PS, drawing reference HSHC01B01_PS_CAD_BS_AD.

It should be established whether this area is owned by NHS PS and if not what access rights they have over this area prior to the design phase commencing.

If this passage cannot be used as part of the system ventilation this will have a direct bearing on the final solution for the project.

These costs assume this passage can be incorporated into the design.