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**Background:** This small hospital has now shut down and is due to be demolished in the new financial year and replaced with a new health centre. This new development will be the first to be BREEAM assessed and will have to achieve an excellent rating.

**Target:** A host of energy efficient measures are included within the design of the building fabric. The design brief for the building services will include looking at building services solutions where efficiency is key.

#### 3.4 Heating and Cooling Plant

The heat plant shall consist of a gas fired micro CHP unit and an air source heat pump system made up of an external condenser/evaporator unit linked to a number of internal heat pump boiler units positioned within the second floor plant room.

The micro CHP unit will act as the lead boiler with the air source heat pump system providing additional head load. The gas fired micro CHP heat pump boiler units will provide the heating load to all LTHW radiant panels throughout the building.

Electricity generated by the CHP will be directly by the building.

The external condenser/evaporator units will also serve the DX heating and cooling coils within the AHU and VRV fan coil units serving the Treatment and Minor Procedures areas.

#### 3.5 BMS System

A dedicated Building Management System (BMS) shall be incorporated that will provide automated control to all air handling plant, fan extract plant, heat pump boiler plant, and domestic hot water plant with associated ancillaries.

The external condenser/evaporator units will be provided with the manufacturer's own automatic and safety controls such that they operate as required by the internal units.

#### 4.3 Hot Water Service

Hot water shall be generated by a gas fired hot water heater linked to a solar array on the second floor roof. The solar array will contribute to the renewable obligations of the proposed building.

The design will incorporate the requirements of HS(G) 70 for the control of legionellosis.