The Mannings - Condition 14 – Sustainability Energy

Client:	Real Places Ltd
Project Title:	The Mannings
Project No:	RL51001 – CPW Number 210052
Date:	November 2021
Revision:	1

Condition 14 – Sustainable Energy

The following mini report has been produced in response to Condition 14 (Pre-commencement) for the Mannings scheme Shoreham-on-Sea. The wording of the condition is as below:

With the exception of any demolition works, no development shall take place until the following details have been submitted to and approved in writing by the Local Planning Authority, and all development pursuant to this permission shall be carried out in accordance with the details approved under this condition:

a) Details which identify the supply of all space heating and hot water in the buildings by a centralised, communal wet system;

b) Details which identify and safeguard plant room space for the future installation of heat interface equipment, and/or other plant, required for future connection to the future Shoreham Heat Network;

c) Details of a safeguarded pipe run into, though, and out of the site to connect the plant room (s) with the proposed heat network;

d) A strategy to facilitate the connection of the network to the development; and

e) A strategy to facilitate access to the site and plant rooms for the heat network developer to carry out works required to connect the site to the Shoreham Heat Network, lay underground infrastructure within the roads, footpaths, parking areas, open space and common or public areas of the development, and carry out repair and maintenance work to any heat network infrastructure.

***Reason**: To enable the delivery and operation of the planned Shoreham Heat Network having regard to Policy 19 of the Adur Local Plan and paragraph 153 of the National Planning Policy Framework, 2019.*

This document is being produced to read alongside the existing energy strategy document, V1.0 dated 18th July 2019 which will be re-submitted as part of the effort to close out conditions. Note all the calculations included within the report were undertaken for the purpose of planning permission and will be superceded by the detailed design which is in progress.

In response to the various elements raised in the condition above:

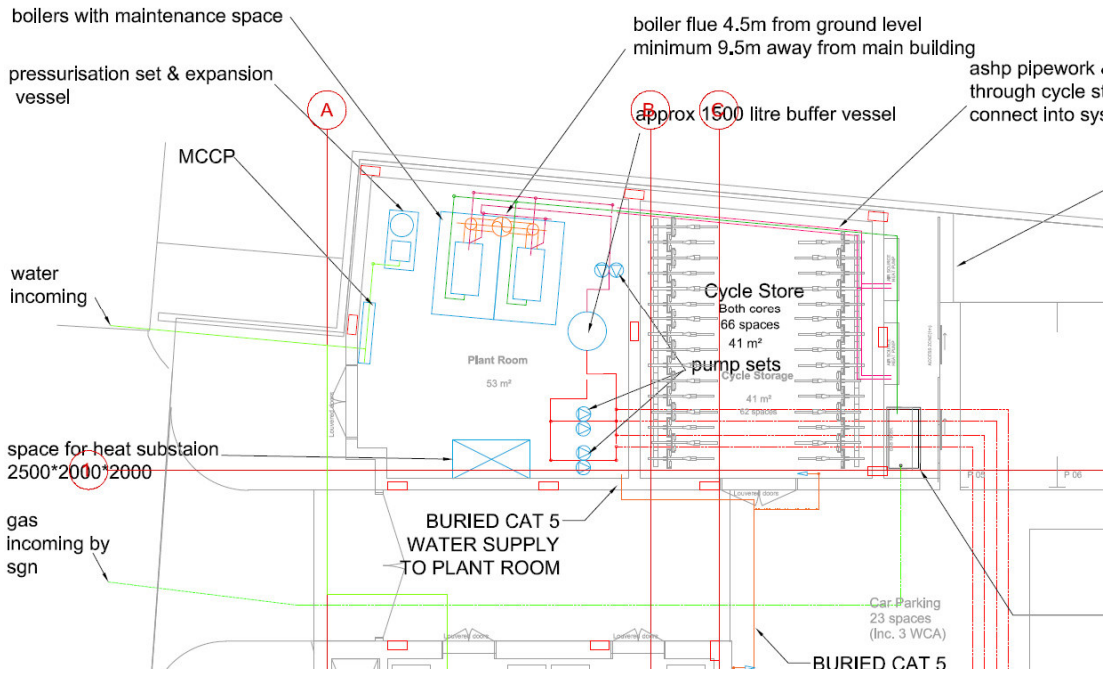
a) Details which identify the supply of all space heating and hot water in the buildings by a centralised, communal wet system;

The scheme is currently designed based on a communal wet heating system fed from a ground floor plantroom. The system is fed by a combination of air source heat pumps and gas fired boilers. Appendix A to this mini report shows the draft schematic drawing for the scheme detailing the primary plant arrangement and communal wet system distribution pipework. It should be noted that detailed design has just started and as such the hydraulic arrangement for boiler and ASHP connections will likely change as part of the design works, but it is not proposed to adjust any of the primary plant (i.e. ASHPs and boiler still being provided).

b) Details which identify and safeguard plant room space for the future installation of heat interface equipment, and/or other plant, required for future connection to the future Shoreham Heat Network;

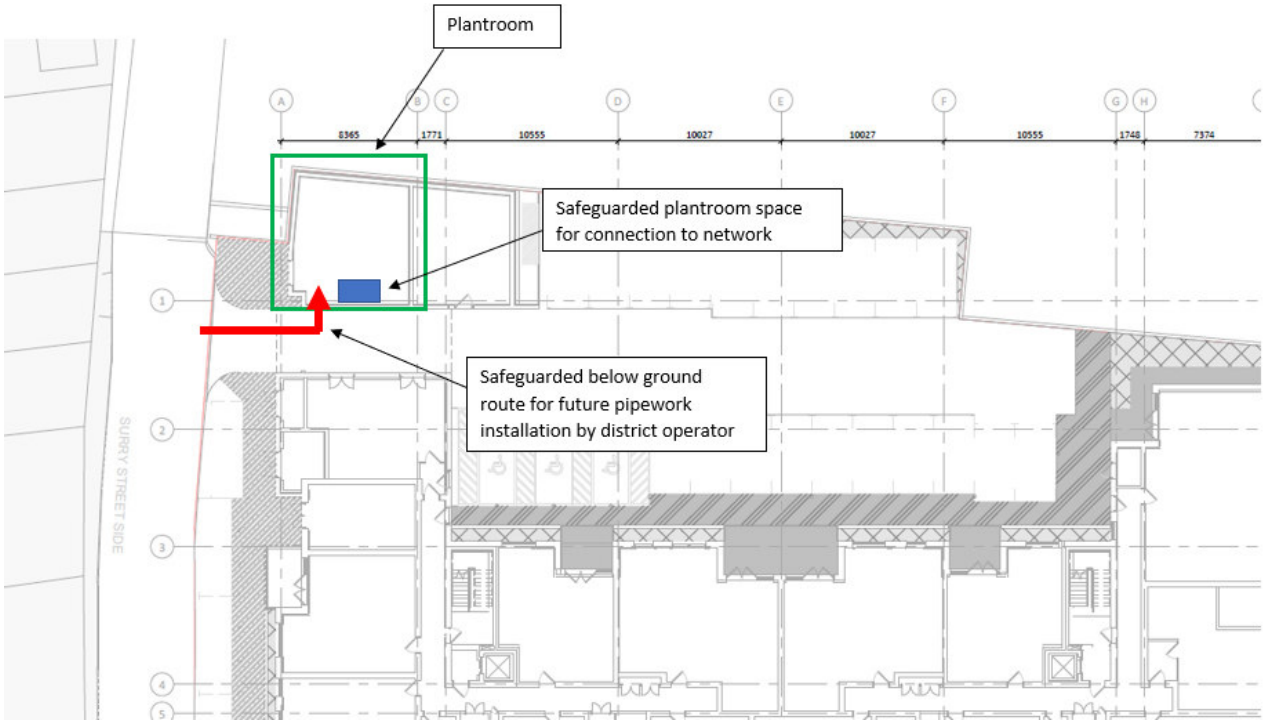
As part of the ground floor plantroom / energy centre space planning, a dedicated zone has been left / safeguarded to allow the future connection to Shoreham Heat Network. The snapshot of the proposed plantroom drawing below shows the space that has been allowed within the plantroom for the connection to the network. It

is envisaged that incoming pipework from the network will enter the plantroom and a plate heat exchanger will be provided to de-couple the main network from the secondary, building side network. If details of the required connection to the Shoreham Network are provided, these can be accommodated as part of the design of the scheme.



c) Details of a safeguarded pipe run into, though, and out of the site to connect the plant room (s) with the proposed heat network;

Following on from the above, it is envisaged that the new district pipework will enter the site from the Surrey Street side of site. A safeguarded below ground rout as detailed in the image below will be available for installation of the future pipework by the district heating system operator.

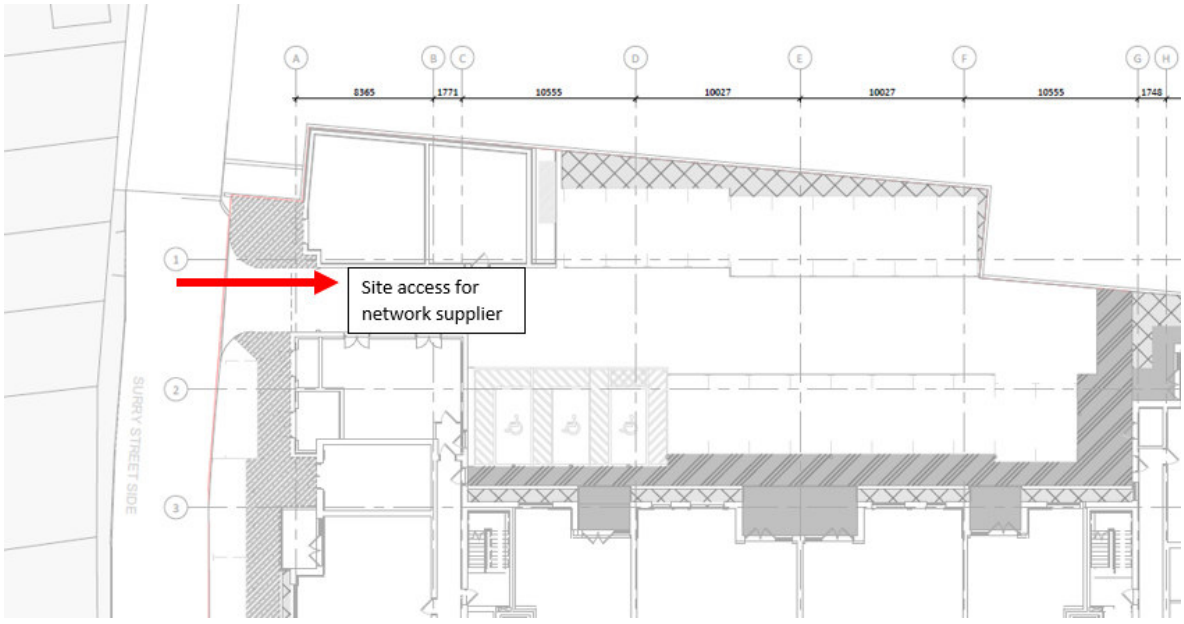


d) *A strategy to facilitate the connection of the network to the development; and*

Further to the comments above in response to items b) & c) it is proposed that a pipework route and space for the installation of network connections are safeguarded for the heat network connection in future. The current scheme is being design such that ASHPs will be the primary source of heat with gas fired boilers provided as back up / top up to meet peak demands. A connection for the future network will be designed into the plantroom detail to enable ASHPs and boilers to be bypassed such that when the network is connected it will act as the sole deliverer of heat to the site. The primary distribution pumps provided as part of the design will still act as the delivery pumps to the network but will pump from the secondary side of the PHX installed as part of the district works rather than from the thermal store. ASHPs and / or gas fired boilers should be kept as a back up if the main district network is ever down.

e) *A strategy to facilitate access to the site and plant rooms for the heat network developer to carry out works required to connect the site to the Shoreham Heat Network, lay underground infrastructure within the roads, footpaths, parking areas, open space and common or public areas of the development, and carry out repair and maintenance work to any heat network infrastructure.*

Full access to the Surrey Street bellmouth of the site can be arranged for a network supplier as and when the connection to the overall district is required. This will enable local access to the plantroom & safeguarded below ground pipework route without disrupting the major building entrances to the site. Temporary access for car parking will need to be agreed whilst this work is going on.



Appendix A – Stage 3 Energy Centre Schematic

Origin Arch.	Rev.	Cad Ref
Origin Struc.	Rev.	Drawn by IK

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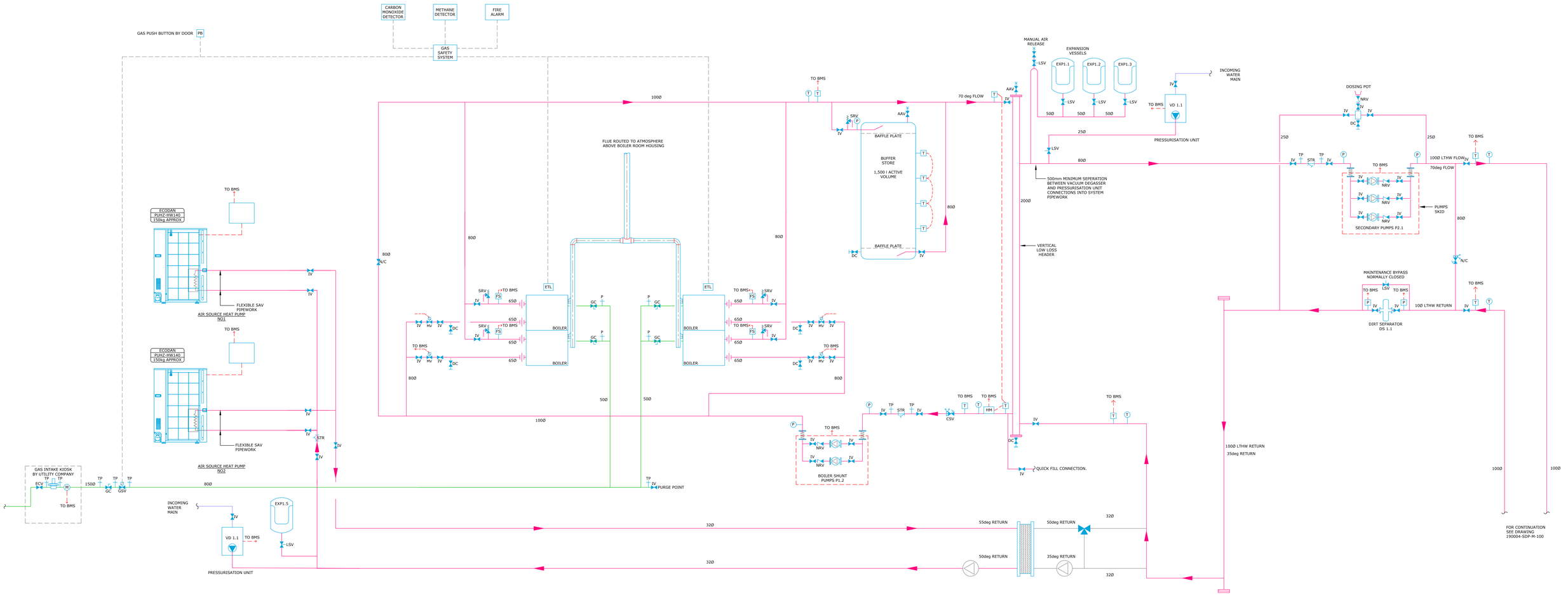
Standard Notes
1. DO NOT SCALE THIS DRAWING. WORK TO DIMENSIONS GIVEN.
2. ALL DIMENSIONS TO BE VERIFIED FROM SITE MEASUREMENT.
3. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

HIU SCHEMATIC LEGEND:

- CONT — HIU CONTROLLER - M-BUS INTERFACE
- EM — ENERGY METER (WITH TEMPERATURE PROBE)
- EXP — EXPANSION VESSEL
- DPC — DIFFERENTIAL PRESSURE CONTROL
- FC — FLOW CONTROL
- F — FLOW SENSOR
- IV — ISOLATION VALVE
- MV — 2-PORT MOTORISED VALVE
- SOV — SHUT OFF VALVE (PRE-PAYEMENT VALVE)
- STR — STRAINER
- T — TEMPERATURE SENSOR
- TP — TEST POINT
- TPr — TEMPERATURE PROBE
- N/C — ISOLATION VALVE NORMALLY CLOSED

NOTE:
1. THE REQUIREMENT FOR VIBRATION AND NOISE CONTROL TO BE CONFIRMED BY CLIENTS ACOUSTIC CONSULTANT
2. SAFETY RELIEF VALVE TO BE SET AT 5.5 BarG MAXIMUM WORKING PRESSURE 6.0 BarG



NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER SILCOCK DAWSON AND PARTNERS DRAWINGS AND SPECIFICATIONS AND MANUFACTURER'S GUIDELINES AND INSTALLATION INFORMATION.
2. THE BMS CONNECTIONS ON THIS SCHEMATIC ARE SHOWN FOR INDICATIVE PURPOSES. THE BMS CONTRACTOR IS TO COMPLETE THE CONTROLS DESIGN IN LINE WITH THIS DRAWING AND THE SDP SPECIFICATION.
3. ALL HIGH POINTS SHALL BE FITTED WITH AUTOMATIC AIR VENTS WITH DRAINS TO LOW LEVEL.
4. ALL LOW POINTS TO BE FITTED WITH DRAIN COCKS.
5. ALL CONDENSATE / TPRV PIPEWORK TO BE RUN IN COPPER TUBE AND CONNECT TO DRAINAGE VIA WATERLESS TRAP (NOT SHOWN).
6. THIS SCHEMATIC SHOWS TYPICAL ARRANGEMENTS, THE CONTRACTOR SHALL ENSURE ALL VALVE AND EQUIPMENT ARRANGEMENTS ARE SUITABLE FOR THE EQUIPMENT USED AND IN LINE WITH THE MANUFACTURER'S GUIDANCE AND REQUIREMENTS CONSIDERING ALL ITEMS OF PLANT AND EQUIPMENT.
7. THE CONTRACTOR SHALL ALLOW FOR ALL EXPANSION DEVICES AND ANCHORS IN THE LTHW SYSTEM

KEY:

- AVM — ANTI-VIBRATION MOUNTING
- AAV — AUTOMATIC AIR VENT
- CSV — COMMISSIONING STATION
- DC — DRAIN COCK
- DPV — DIFFERENTIAL PRESSURE CONTROL VALVE
- ECV — EMERGENCY CONTROL VALVE
- ETL — ELECTRO THERMAL LINK
- GC — GAS COCK
- GSV — GAS SOLENOID VALVE
- HM — HEAT METER
- IV — ISOLATION VALVE (LEVER OPERATED)
- LP — LOW PRESSURE SENSOR
- LSV — LOCK SHIELD VALVE
- MV- — 2-PORT MOTORISED VALVE
- MV- — 3-PORT MOTORISED VALVE
- NRV — NON RETURN VALVE
- P — PRESSURE GUAGE
- P — PRESSURE SENSOR
- PUMP
- RPZ — REDUCED PRESSURE ZONE VALVE
- STR — STRAINER C/W DRAIN COCK
- SRV — SAFETY RELIEF VALVE
- T — TEMPERATURE SENSOR
- TP — BINDER TEST POINT
- NC — ISOLATION VALVE NORMALLY CLOSED
- DC — DRAIN COCK
- P — TEMPERATURE GUAGE

Version	Date	Description	By	Chkd
T3	20.07.20	BOILER ARRANGEMENT UPDATED	NB	
T2	05.03.20	TENDER ISSUE RADS OMITTED UNDERFLOOR HTG ADDED	PHC	EM
T1	07.02.20	TENDER ISSUE	PHC	EM
P1	10.01.20	PRELIMINARY	PHC	EM

Drawing Status: TENDER

Client: SOUTHERN HOUSING GROUP
LONDON

Project: THE MANNINGS

Drawing Title: MECHANICAL SERVICES
BOILER PLANT ROOM
HEATING AND GAS SERVICES
SCHEMATIC

Drg No.: 190004 SDP M 300-001
Rev.: T3

Scale	Date	Engineer	Checked
NTS@A0	JAN '20	PHC	EM

SILCOCK DAWSON & PARTNERS

Princes Risborough
T +44 (0)1844 347 474
www.silcockdawson.co.uk