



To: Formation Design & Build Ltd

Date: 22nd January 2024

Dear Formation,

Cranwood, 100 Woodside Avenue, Haringey – *Be Seen* (Planning Condition 24)

This Technical Note has been created to address the following comments by the London Borough of Haringey during determination of Planning Condition 24 of application ref: HGY/2021/2727:

Actions:

- Discussions were had to use the electricity in different way on site and maximise the on-site usage. Demonstrate how this has been addressed?
- Will the generated electricity power the heat pump?
- How will the heat pump system be set up in terms of the time profiles, and can it make the most of the daytime generation? It is recommended that the heat pump is also powered by the PV i.e., maximise electricity generation to power the thermal stores.
- Is there a meter to measure the generated electricity from the PV system?
- Will there be a meter at the heating source as well as at individual units? Will individual flats be billed for their used heat.

Following receipt of these comments, we have discussed with the Design Team and the below table contains our formal replies to the elements raised.

Technical Note	
Discussions were had to use the electricity in different way on site and maximise the on-site usage. Demonstrate how this has been addressed?	I am not familiar with any other way to use electricity – Save for using batteries to store the generation I can't see any other option.
Will the generated electricity power the heat pump?	Yes, some of the PV generated (Block A2) will in theory contribute to the heat pump generation as they are on the same supply: The Solar PV as currently designed is 5 systems: Block A1 – This will be 25.23 kWp and it will feed into the landlords of A1 – so supplying to communal lights, small power and other services (lifts etc). Block A2 (Block where the heat pumps are located) – This will be 22 kWp is will feed into the landlords of A2, so in theory it will power the heat pumps Block B – This will be 12.18Kwp This will feed into the landlords of Block B Block C – 2 systems here for each semi detached house – This feeds back into each individual house.

How will the heat pump system be set up in terms of the time profiles, and can it make the most of the daytime generation? It is recommended that the heat pump is also powered by the PV i.e., maximise electricity generation to power the thermal stores.	Heat Demand will be 24/7 as they are supplied as a district system (i.e via a HIU) so the heat pumps will react to temperature demand instead of timed, but there can be a logic in the controls to “load” the buffer vessels to an elevated temp during daylight hours, and a lower “setback” temp during night hours. This would prevent some of the usage of the heat pumps during hours where there is no solar generation. The heat pumps will be powered from PV generation within Block A2. Most hot water demand is morning and early evening, while heating will be evening into night. The heat pumps will operate when there is a demand and will be set-up to try and fully charge the thermal store during the day.
Is there a meter to measure the generated electricity from the PV system?	Yes. There are two meters measuring generation: There is a meter as part of the inverter system, and there is also a separate generation meter per each system as per MCS requirements.
- Will there be a meter at the heating source as well as at individual units? Will individual flats be billed for their used heat.	Yes. There will be: • An electricity consumption meter supplying the heat pumps (this will be on the landlords board) • A bulk heatmeter in the energy centre for heat generated. • Sub heat meters for each block in that there is an energy meter just before the pumps for each block so heat can be measured for each block. • Individual heat meters for each property, this is built into the heat interface unit supplied by Evinox, and it will be recorded in a data logger in the energy centre.
Table 1: Description of table	

As a note, Block C will be fully stand alone: The houses will have individual supplies from UKPN, and individual heat-pumps in these units. The solar generation within these units will be directly inverted and thus first be consumed by the house, and anything not consumed will be exported back to the grid (with payments received via the Smart Export Guarantee). Also there will be a generation meter on these properties.

I trust that this is satisfactory to your requirements and clarifies the provision for the scheme but if we can be of any further assistance, please do not hesitate to contact us.

Yours sincerely,



Ryan Thrower
Director

For NRG Consulting (GB) Ltd