

		Our ref: HGY/2023/1677 Contact: Kwaku Bossman-Gyamera Date: 26/07/2023
Town and Country Act 1990 (As amended)		
Location:	45-47, Garman Road, London, N17 0UN	
Proposal:	Approval of details reserved by a condition 14 (Energy) and condition 15 (BESEEN) attached to planning permission HGY/2022/2293	
Wording of condition:	<u>Condition 14:</u> (a) Prior to above ground construction, a revised Energy Strategy shall be submitted to and approved by the Local Planning Authority. This must include: - Confirmation of how this development will meet the zero-carbon policy requirement in line with the Energy Hierarchy, in line with Part L 2013; - Confirmation of the necessary fabric efficiencies to achieve a minimum 15% reduction in emissions, including details to reduce thermal bridging; - Location, specification and efficiency of the proposed ASHPs, their heating and cooling loads where relevant (Coefficient of Performance, Seasonal Coefficient of Performance, and the Seasonal Performance Factor), with plans showing the ASHP pipework and noise and visual mitigation measures; - Specification and efficiency of the proposed Mechanical Ventilation and Heat Recovery (MVHR), with plans showing the rigid MVHR ducting and location of the unit; - Details of the PV, demonstrating that a minimum of 200 sqm of the roof has been utilised and located to avoid any overshadowing, delivering a minimum 30 kWp array roof area has been maximised, with the following details: a roof plan; the number, angle, orientation, type, and efficiency level of the PVs; how overheating of the panels will be minimised; their peak output (kWp); - A metering strategy. The development shall be carried out strictly in accordance with the details so approved prior to first operation and shall be maintained and retained for the lifetime of the development. The solar PV array shall be installed with monitoring equipment prior to completion and shall be maintained at least annually thereafter. (b) Within six months of first occupation, evidence that the solar PV and ASHPs installations have been installed correctly shall be submitted to and approved by the Local Planning Authority, including photographs of the solar array, a six-month energy generation statement, and a Microgeneration Certification Scheme certificate. Reason: To ensure the development reduces its impact on climate change by reducing carbon emissions on site in compliance with the Energy Hierarchy, and in line with London Plan (2021) Policy SI2, and Local Plan (2017) Policies SP4 and DM22. <u>Condition 15:</u> (a) Prior to the completion of the superstructure a detailed scheme for energy monitoring has been submitted to and approved in writing by the Local Planning Authority. This shall include details of suitable automatic meter reading devices for the monitoring of energy use and renewable/low carbon energy generation. The monitoring mechanisms approved in the monitoring strategy shall be made available for use prior to the first occupation of each building. (b) Prior to each Building being occupied, the Owner shall provide updated accurate and verified 'as-built' design estimates of the 'Be Seen' energy	

	performance indicators for each Reportable Unit of the development, as per the methodology outlined in the 'As-built stage' chapter / section of the GLA 'Be Seen' energy monitoring guidance. (c) Within one year of first occupation, evidence shall be submitted to and approved by the Local Planning Authority to demonstrate how the development has performed against the approved Energy Strategy and to demonstrate how occupants have been taken through training on how to use their homes and the technology correctly and in the most energy efficient way and that issues have been dealt with. This should include energy use data for the first year and a brief statement of occupant involvement to evidence this training and engagement. (d) Upon completion of the first year of Occupation or following the end of the Defects Liability Period (whichever is the later) and at least for the following four years after that date, the Owner is required to provide accurate and verified annual in-use energy performance data for all relevant indicators under each Reportable Unit of the development as per the methodology outlined in the 'In-use stage' chapter / section of the GLA 'Be Seen' energy monitoring guidance document (or any document that may replace it). All data and supporting evidence should be submitted to the GLA using the 'Be Seen' reporting webform (https://www.london.gov.uk/what-wedo/planning/implementing-london-plan/london-plan-guidance-and-spgs/be-seen-energy-monitoring-guidance).) If the 'In-use stage' evidence shows that the 'As-built stage' performance estimates have not been or are not being met, the Owner should investigate and identify the causes of underperformance and the potential mitigation measures and set these out in the relevant comment box of the 'Be Seen' in-use stage reporting webform. An action plan comprising measures shall be submitted to and approved in writing by the GLA, identifying measures which would be reasonably practicable to implement and a proposed timescale for implementation. The action plan and measures approved by the GLA should be implemented by the Owner as soon as reasonably practicable. REASON: To ensure the development can comply with the Energy Hierarchy in line with London Plan 2021 Policy SI 2 and Local Plan Policy SP4 before construction works prohibit compliance.
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Carbon Management Response 26/07/2023

Documents submitted:

- Revised Energy Statement prepared by Ensphere Group Ltd (dated June 2023)
- 230623 SHU Tott Condition 14 and 15 Cover Letter prepared by ROK Planning (dated 23rd June 2023)
- Other supporting documents

Response:

The applicant had submitted an Energy Strategy at application stage using the Part L 2021, which had not been implemented by the GLA, and therefore was not policy compliant. So, this condition was included to secure the sustainability benefits of the scheme as it demonstrated carbon reduction from the notional building.

A revised energy strategy using the Part L 2013 is to be submitted as per the secured conditions, but the submitted statement still reports the carbon reduction under Part L 2021. The development currently does not meet the requirements of the condition.

The table below set out the difference between the proposed and as built developments.

SAP 10.2\	ES (July 2022)			Revised ES (June 2023)		
Part L 2021	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Baseline emissions	9			8.3		
Be Lean savings	7.6	1.4	16%	7.1	1.2	15%
Be Clean savings	7.6	0	0%	7.1	0.0	0%
Be Green savings	4.1	3.5	38%	4.3	2.8	34%
Cumulative savings		4.9	54%		4.0	49%
Shortfall in emissions	4.1			4.3		
Carbon offset contribution	£95 x 30 years x 4.1 tCO ₂ /year = £11,685			£95 x 30 years x 4.3 tCO ₂ /year = £12,255		
10% management fee	£1,168.5			£1,225.5		

Overall:

The overall predicted reduction in CO₂ emissions for the development is proposed to be 49% in carbon emissions with SAP10.2 carbon factors, from the Baseline development model (which is Part L 2021 compliant). However, the energy strategy is to be submitted under Part L 2013.

Action:

- Please re-submit a revised Energy Statement using Part L 2013.
- Please submit full GLA's Carbon Emission Reporting Spreadsheet.

Energy – Lean

The following u-values, g-values and air tightness are proposed:

Floor u-value	0.12 W/m ² K
External wall u-value	0.20 W/m ² K
Roof u-value	0.12 W/m ² K
Window u-value	1.4 W/m ² K
Air permeability rate	3 m ³ /hm ² @ 50Pa
Ventilation strategy	MEV (through EAHP)
Thermal bridging	Accredited Construction Details
Low energy lighting	100%
Heating system Be Lean only	ASHP with 2.64 heating efficiency
Ventilation strategy	Natural ventilation Mechanical ventilation with heat recovery for office areas, with 90% efficiency
Fabric energy efficiency improvement	TBC

Actions:

- Please submit the specification and efficiency of the proposed Mechanical Ventilation and Heat Recovery (MVHR), with plans showing the rigid MVHR ducting and location of the unit;
- Provide the average % improvement on the FEES.
- Submit the individual end use BER for specific end users in line w CIBSE Guide F.

- Model the energy demand for the active cooling. Then include these energy demands into the carbon footprint of the development and update any offsetting requirements based on this.

Energy – Clean

No further comments.

Energy – Green

The report proposes VRF Heat Pumps for space heating for the office areas only. Hot water is proposed to be provided by electric heaters. Solar PV covering approximately 200 m² of roof is proposed ensuring compliance with the 20% carbon reduction from on-site renewable energy generation.

The proposed heat pump specification is the 'Mitsubishi Electric PUMY-P R410A Inverter Heat Pump' (12.5-22.4kW) – PUMY-P112VKM5 with a COP 4.61 and EER 4.48 with a nominal heating capacity of 14 kW and cooling capacity of 12.5 kW. The outdoor unit is proposed to be wall mounted at a high level in the car park.

The solar array peak output would be 30 kWp with an efficiency between 22-23%. The panels will be mounted on a roof area of 200 m², facing south. Some more details of the PV is missing such as the number of panels, orientation angle and its type. It is also unclear how overheating of the panels will be minimised.

Actions:

- Please provide a roof plan including the solar PV and details of the number, angle, and type of the PVs.
- Please provide some commentary on how the available roof space has been maximised to install solar PV. Has your feasibility shown that other roofs will not be viable / will they be used for other purposes?
- A living roof should be installed under the solar PV, or if this is not feasible, the roof should be light coloured to reduce solar heat gains and to improve efficiency of the solar panels.
- Please identify on the plans where the internal and external parts of the air source heat pumps will be located and how the units will be mitigated in terms of visual and noise impact.
- How much of the heating/hot water demand will be met by the proposed type of heat pump? If this cannot be met fully, how will this be supplemented?

Energy – Be Seen

The applicant proposed to undertake aftercare support programme as part of their handover process. The applicant proposed extensive installation of smart meters, with distribution boards at every other floor and integration with an energy monitoring system. The metering strategy is to be optimised to reduce the overall embodied carbon of the electrical distribution of the scheme.

Actions:

- Please provide more details and the specification of the automatic meter reading devices.

Conclusion

Further information is required so we therefore **do not recommend** discharging Condition 14 & 15. The applicant should provide a response to all the points raised above under each section and issue updated plans/information where required.

Carbon Management Response 25/08/2023

Documents submitted:

- 22-E066-018 Garman Road - Condition 14&15 Letter prepared by Ensphere Group Ltd (dated 21st August 2023)
- 22007GA_20_010D_Roof
- Other supporting documents

Response:

The submitted information addresses the issues raised with regards to the appropriate building regulations, MVHR details, building emission rate, cooling requirements, and details on PV, heat pumps and automatic meter reading devices.

The applicant confirms the use of the building regulations Part L 2021 instead of Part L 2013 as the application was validated on the 15th of August 2022 and the Energy Assessment guidance 2022 took effect on 15th June which encouraged the use of Part L 2021.

MVHR: The MVHR (Nuair XBC25-H-NNT) with min. heat exchanger efficiency of 80%, max. SFP of 1.6 W/l/s is proposed. The plans showing the MVHR unit and duct are submitted.

Building Emission Rate: The BER of the latest (Be Green) model of the development is confirmed to be 0.37 kgCO₂/m².annum.

Heat Pump: The confirmed the proposed heat pump to provide heating/cooling to shop, breakroom & IT room, and will meet all the heating demand. A radiant panel is proposed to be installed for space heating within WC.

The location of the indoor and outdoor unit of the proposed ASHP is annotated in the plans and the outdoor unit is proposed to be wall mounted at a high level in the car park.

Automatic meter reading devices: The energy meters is proposed to be fitted to the TPN distribution boards (EM3255, subject to contractor's review) which will help users better manage and control power usage. Additionally, pulse output measurement method is also proposed for monitoring consumption specifically.

Conclusion

The submitted information is acceptable and we can recommend that Condition 14 & 15 is discharged.