

		Our ref: HGY/2022/4167 Contact: Valerie Okeiyi Date: 26/06/2023
Town and Country Act 1990 (As amended)		
Location:	Unit M, Arena Business Centre, 71 Ashfield Road, Tottenham, London, N4 1FF	
Proposal:	Approval of details for Conditions 5 (CMP), 6 (sustainability) & 7 (green roofs) of HGY/2022/0211.	
Wording of condition:	<u>Condition 6</u> The development hereby approved shall be constructed in accordance with the Design Access Statement (Rev A) and Sustainability Statement refurbishing and retrofitting the existing building, air source heat pumps with a hot water cylinder (ASHPs), Mechanical Ventilation with Heat Recovery (MVHR), external shading features, light coloured and insulated roofing. (a) Prior to above ground construction, details of the Energy Strategy shall be submitted to and approved by the Local Planning Authority. This must include: - Location, specification and efficiency of the proposed ASHPs (Coefficient of Performance, Seasonal Coefficient of Performance, and the Seasonal performance Factor), capacity of the hot water cylinder, with plans showing the ASHP pipework, hot water cylinder 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; - Further feasibility demonstrating that a solar PV array is not viable on the east/west roofs, or if feasible, confirming the proposed number, angle, orientation, type, and efficiency level of the PVs; and their peak output (kWp). 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. (b) Within six months of first occupation, evidence that the ASHPs and hot water cylinder have been installed correctly shall be submitted to and approved by the Local Planning Authority, including photographs 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 7</u> Prior to the commencement of development, details of the living roofs must be submitted to and approved in writing by the Local Planning Authority. Living roofs must be planted with flowering species that provide amenity and biodiversity value at different times of year. Plants must be grown and sourced from the UK and all soils and compost used must be peat-free, to reduce the impact on climate change. The submission shall include: i) A roof plan identifying where the living roofs will be located, and the proposed food growing areas; ii) A section demonstrating settled substrate levels of no less than 120mm for extensive living roofs (varying depths of 120-180mm), and no less than 250mm for intensive living roofs (including planters on amenity roof terraces); iii) Roof plans annotating details of the substrate: showing at least two substrate types across the roofs, annotating contours of the varying depths of substrate iv) Details of the proposed type of invertebrate habitat structures with a minimum of one feature per 30m2 of living roof: substrate mounds and 0.5m high sandy	

piles in areas with the greatest structural support to provide a variation in habitat; semi-buried log piles / flat stones for invertebrates with a minimum footprint of 1m2, rope coils, pebble mounds of water trays;

v) Details on the range and seed spread of native species of (wild)flowers and herbs (minimum 10g/m2) and density of plug plants planted (minimum 20/m2 with roof ball of plugs 25cm3) to benefit native wildlife, suitable for the amount of direct sunshine/shading of the different living roof spaces. The living roofs will not rely on one species of plant life such as Sedum (which are not native);

vi) Roof plans and sections showing the relationship between the living roof areas and photovoltaic array;

and

vii) Management and maintenance plan, including frequency of watering arrangements.

(b) Prior to the occupation of the development, evidence must be submitted to and approved by the Local Planning Authority that the living roof have been delivered in line with the details set out in point (a). This evidence shall include photographs demonstrating the measured depth of substrate, planting and biodiversity measures. If the Local Planning Authority finds that the living roofs have not been delivered to the approved standards, the applicant shall rectify this to ensure it complies with the condition. The living roofs shall be retained thereafter for the lifetime of the development in accordance with the approved management arrangements.

Reason: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall. In accordance with London Plan (2021) Policies G1, G5, G6, SI1 and SI2 and Local Plan (2017) Policies SP4, SP5, SP11 and SP13.

Carbon Management Response 27/04/2023

Documents submitted:

- ASHP, MVHR and PV panels location plan by WP Architecture
- aroTherm Plus quick guide
- arotherm Plus specifications
- Blauberg MVHR specifications
- Heat Recovery Ventilation Calculation Sheet
- Living Roof Location and details
- Maintenance Schedule for green roof systems by Wallbarn

Response:

Sustainability

The submitted plan shows the proposed locations for the ASHP, MVHR and 12 PV panels.

The 7kW ASHP's external units is proposed to be wall mounted on the external terrace outside the kitchen area supplying 124% of the heat demand. It is specified to have a sound level of 55dB. It is not clear how the noise and visual impact is mitigated and how the two ASHP will be placed together. The plans do not include hot water cylinder.

The proposed MVHR having 80-98% efficiency is proposed to be suspended from the ceiling above landing of stairs. The MVHR ducting is not included in the plans.

The 2.64kWp PV system with twelve 250W panels will be mounted on the roof in East/West orientation. With 22-degree pitch of the roof, the efficiency of the panel is said to be 88%.

Actions:

- Please include in the plans, how the two exterior units of the proposed ASHP will be placed together, its distance between each other and the distance from the exterior wall of the living space (for eg: kitchen as per current proposed plan).
- The ASHP's exterior unit is located right next to the kitchen, provide the safety, noise, and visual mitigation measures for this placement.
- What is the efficiency (Coefficient of Performance, Seasonal Coefficient of Performance, and the Seasonal performance Factor) of the proposed ASHP and the capacity of hot water cylinder?
- Please include the location of the hot water cylinder, ASHP pipework and rigid MVHR ducting in the plan.

Living Roofs

A 25m² living roof over existing sub-station flat roof with minimum 120mm substrate depth and 4 2m² allotment/food growing areas with minimum substrate depth of 250mm is proposed on the rear terrace. A mix of sedum and wild-flower species is proposed. The living roofs should not rely on one species of plant life such as Sedum (which are not native).

Action:

- Please annotate contours of the varying depth of substrate in the roof plan.
- Provide details of the proposed type of invertebrate habitat structures with a minimum of one feature per 30m² of living roof: substrate mounds and 0.5m high sandy piles in areas with the greatest structural support to provide a variation in habitat; semi-buried log piles / flat stones for invertebrates with a minimum footprint of 1m², rope coils, pebble mounds of water trays.
- Provide details on the range and seed spread of native species of (wild)flowers and herbs (minimum 10g/m²), and the density of plug plants planted (minimum 20/m² with root ball of plugs 25cm³).

Conclusion

Further information is required so we therefore **do not recommend** discharging Condition 6 and 7. The applicant should provide a response to the points raised above and issue updated plans/information where required.

Carbon Management Response 23/06/2023

Documents submitted:

- CD6-001_RevA_ASHP MVHR and PV panels locations
- CD6-002 MVHR and ASHP layouts
- CD6-Vaillant Unistore Hot Water Cylinder
- CD7-001_RevA_Living roof location and details
- CD7-Bauder system technical information

Response:

Sustainability

The submitted plans shows the proposed location and position of ASHP external units at the far end of the external terrace minimising the noise and visual impact which is 4.3 meters away from the exterior wall of the living space. The two exterior units are separated at 500mm following the manufacturer's recommendations for clearance distances.

The ASHP specifications are submitted (CoP= 7.7; SCoP=3.39; SPF=4.2). A 500 liters DHW cylinder is proposed which is proposed to be placed at the ground floor utility room with the MVHR unit. The ASHP pipework and MVHR ducting plans are submitted.

No further actions required.

Living Roofs

The proposed living roof plans shows contours of varying depth with 120-150mm substrate, 500mm sand pile, and 3 log piles. UK native British Provenance Seed Mix is proposed with 49 species which constitutes 2 sedum, 8 grasses/sedge, and 31 species (with eight annuals). The mix percentage is 65% perennial wildflowers, 20% annuals & 15% grasses. The sowing rate is proposed to be 100g/m² which is supported.

The living roof plan proposes 10 plugs per sqm with a total of 140 plugs which does not satisfy the minimum requirement. It is recommended to have a minimum of 20 per sqm with 25cm³ root ball.

Action:

- the density of plug plants planted should be minimum 20/m² with root ball of plugs 25cm³. Kindly re-confirm these details.

Conclusion

The information submitted is sufficient, so we **recommend** discharging Condition 6.

Further information is required so we therefore **do not recommend** discharging Condition 7. The applicant should provide a response to the points raised above and issue updated information where required.

Carbon Management Response 26/06/2023

Documents submitted:

- CD007_RevB Living Roof Location and details dated 26th June 2023.

Response:

The density of plug plants has been amended to 20 plugs per sqm with minimum root ball size of 25 cm³ which is supported.

Conclusion

The information submitted is sufficient, so we **recommend** discharging Condition 7.