

		Our ref: HGY/2022/2731 Contact: Samuel Uff Date: 17/03/2023
Town and Country Act 1990 (As amended)		
Location:	44-46 Hampstead Lane N6 4LL	
Proposal:	Demolition of existing dwellings and redevelopment to provide a care home (Use Class C2); associated basement; side / front lightwells with associated balustrades; subterranean and forecourt car parking; treatment room; detached substation; side access from Courtenay Avenue; removal 4 no. trees; amended boundary treatment; and associated works	

Carbon Management Response 17/03/2023

In preparing this consultation response, we have reviewed:

- Energy and Sustainability Statement prepared by PHP Engineering Services Solutions Ltd (dated 6 Sep 2022)
- Biodiversity Net Gain report prepared by eight versa (dated 14 Oct 2022)
- Relevant supporting documents.

1. Summary

The development achieves a reduction of 37% carbon dioxide emissions on site against Part L2021, which is acceptable in principle. However further information and clarifications need to be provided to overcome concerns over the overheating assessment and mitigation strategy, and overall sustainability strategy. Appropriate planning conditions will be recommended once this information has been provided.

2. Energy – Overall

Policy SP4 of the Local Plan Strategic Policies, requires all new development to be zero carbon (i.e. a 100% improvement beyond Part L (2021)). The London Plan (2021) further confirms this in Policy SI2.

The overall predicted reduction in CO₂ emissions for the development shows a site-wide improvement of approximately 37% in carbon emissions with SAP10.2 carbon factors, from the Baseline development model (which is Part L 2021 compliant). This represents an annual saving of approximately 13 tonnes of CO₂ from a baseline of 35.2 tCO₂/year.

Please note that in comparison to the original application under ref. HGY/2021/2703, that scheme achieved a 58% reduction in on-site regulated emissions, but this was compared to a Part L 2013 baseline with SAP10 carbon factors instead. Since the introduction of Part L in June 2022, the calculations are undertaken differently so the two results cannot easily be compared in their overall carbon reduction.

London Plan Policy SI2 requires major development proposals to calculate and minimise unregulated carbon emissions, not covered by Building Regulations. The calculated unregulated emissions are: 21.6 tCO₂.

<i>Non-residential (SAP10.2 emission factors)</i>			
	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2021 baseline	35.2		
Be Lean	29.5	5.7	16%
Be Clean	29.5	0.0	0%
Be Green	22.2	7.3	21%

Cumulative savings		13	37%
Carbon shortfall to offset (tCO ₂)	22.2		
Carbon offset contribution	£95 x 30 years x 22.2 tCO ₂ /year = £63,270		
10% management fee	£6,327		
Total	£69,597		

Action:

- The proposed percentage carbon reduction by renewable sources in the executive summary p.2 does not correspond with the percentage reported later in the report. Please amend.
- What is the calculated Energy Use Intensity? How does this perform against GLA benchmarks for a similar use, i.e. hotels at 55 kWh/m²/year? The applicant also needs to set out how this has been calculated.
- What is the calculated Primary Energy Factor?
- Please submit the updated GLA Carbon Emission Spreadsheet for Part L 2021 to demonstrate that the solar PV generation has been appropriately reflected in the above energy hierarchy.

Energy – Lean

The applicant has proposed a saving of 5.7 tCO₂ in carbon emissions (16%) through improved energy efficiency standards in key elements of the build, based on SAP10.2 carbon factors. This meets the minimum 15% reduction set in London Plan Policy SI2 for non-residential developments, so this is acceptable.

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

Floor u-value	0.11 W/m ² K
External wall u-value	0.16 W/m ² K
Roof u-value	0.13 W/m ² K
Window u-value	1.20 W/m ² K
G-value	0.40
Air permeability rate	3 m ³ /hm ² @ 50Pa
Ventilation Strategy	MVHR with individual units with >80% efficiency heat recovery and 0.5 W/l/s Specific Fan power
Space cooling	VRF system with SEER of 4.92
Thermal Bridging	Psi-values compliant with accredited details. Window lintels to be keystone Hi Therm lintels or equivalent with a psi-value of 0.05 W/mK
Low energy lighting	Average 110 lm/cW
Heating system (Be Lean scenario)	Heat pump wit SCoP of 2.64
Space heating requirement	4.22 kWh/m ² /year

Actions:

- Which spaces will be cooled? Please annotate this clearly on floorplans, or excerpts of the floorplans with annotations within the Energy report.
- Please identify on a plan where the MVHR units will be located within the studios. The units should be less than 2m away from external walls.
- How is lighting energy demand improved? Should consider daylight control and occupancy sensors for communal areas.
- What is the proportion of glazed area? Consider bringing this down to 10-20% (north), 10-15% (east + west), 20-25% south.
- Provide the average space heating requirement in kWh/m²/year. New buildings should meet the 15 kWh/m²/year target. The applicant also needs to set out how this has been calculated.

Overheating is dealt with in more detail below.

Energy – Clean

The applicant is not proposing any Be Clean measures. The site is not within reasonable distance of a proposed Decentralised Energy Network (DEN). A Combined Heat and Power (CHP) plant would not be appropriate for this site.

Energy – Green

As part of the Be Green carbon reductions, all new developments must achieve a minimum reduction of 20% from on-site renewable energy generation to comply with Policy SP4.

The application has reviewed the installation of various renewable energy technologies. The report concludes that air source heat pumps (ASHPs) and solar photovoltaic (PV) panels are the most viable options to deliver the Be Green requirement. A total of 7.3 tCO₂/year (21%) reduction of emissions are proposed under Be Green measures.

The total solar array peak output would be 24 kWp. The 60 panels of 400W would be installed horizontally or at a low angle of 10° or less on the flat roof areas.

The communal air-to-water ASHP systems (min. SCOP of 3.99) will provide space heating to the habitable rooms through wet underfloor heating, as well as hot water generation and space cooling (SEER 4.92).

Actions:

- What is the roof area that will be covered by solar PV?
- How will the solar energy be used on site (before surplus is exported onto the grid)?
- 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 the improve efficiency of the solar panels.
- How much of the heating/hot water demand will be met by the proposed types of heat pumps? If this cannot be met fully, how will this be supplemented?
- How will the ASHP units be mitigated in terms of visual and noise impact?

Energy – Be Seen

London Plan Policy SI2 requests all developments to 'be seen', to monitor, verify and report on energy performance. The GLA requires all major development proposals to report on their modelled and measured operational energy performance. This will improve transparency on energy usage on sites, reduce the performance gap between modelled and measured energy use, and provide the applicant, building managers and occupants clarity on the performance of the building, equipment, and renewable energy technologies.

- Please set out what the broad metering strategy will be for this development.
- What are the unregulated emissions and proposed demand-side response to reducing energy: smart grids, smart meters, battery storage?
- Demonstrate that the planning stage energy performance data has been submitted to the GLA webform for this development: (<https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance/be-seen-energy-monitoring-guidance/be-seen-planning-stage-webform>)

3. Carbon Offset Contribution

A carbon shortfall of 22.2 tCO₂/year remains. The remaining carbon emissions will need to be offset at £95/tCO₂ over 30 years.

4. Overheating

London Plan Policy SI4 requires developments to minimise adverse impacts on the urban heat island, reduce the potential for overheating and reduce reliance on air conditioning systems. Through careful design, layout, orientation, materials and incorporation of green infrastructure, designs must reduce overheating in line with the Cooling Hierarchy.

In accordance with the Energy Assessment Guidance, the applicant has undertaken a dynamic thermal modelling assessment in line with CIBSE TM59 with TM49 weather files and the cooling

hierarchy has been followed in the design. The report has modelled a sample of the worst case 4 top floor bedroom units/studios, and 1 dining lounge. No hallways have been modelled.

Results are listed in the table below.

	TM59 – criterion A (<3% hours of overheating)	TM59 – criterion B hours >26°C (pass <33 hours)	% of habitable rooms pass	% of spaces pass
DSY1 2020s	0/5	0/5	0	0
DSY2 2020s	Not modelled.			
DSY3 2020s	Not modelled.			
DSY1 2050s	Not modelled.			
DSY1 2080s	Not modelled.			
Total number of areas modelled		Top floor: 4x bedroom unit (F2-01 West facing, F2-14 South/West Facing unit, F2-15, F2-16, F2-18 – South facing) 1 space – dining lounge		

None of the small sample of rooms pass the overheating requirements for 2020s DSY1, unless active cooling via VRF is implemented. Currently, the following mitigation measures are proposed:

- Individual continuous mechanical ventilation units with heat recovery (for safety reasons)
- Glazing g-value of 0.40
- MVHR
- Active cooling

Actions:

- It is not clear which TM49 weather files have been used for this assessment. TM49 weather files for the London Weather Centre should be used which will more accurately represent the urban heat island effect as specified by the [overheating guidance](#).
- The applicant has not modelled DSY 2 or 3 for the development. Please also model these and ensure the design has incorporated as many mitigation measures to pass DSY 2 and 3 as feasible. Any remaining overheating should inform the future retrofit plan.
- Modelling the minimum representative number of spaces:
 - o Please include images indicating which sample rooms were modelled and a screenshot of the floorplans showing the modelled rooms in the context of the wider internal layout of and orientation of the building.
 - o In addition, the model should include other communal areas: in particular, the south-west facing treatment room and north-east facing café on the ground, lounge and the quiet room on south-west part of the first floor should be modelled.
 - o One or two worst-case hallways need to be included, with a realistic assumption of the heat gains from communal heating pipework.
 - o The report should annotate on plans which spaces are modelled for overheating risk.
- The report should outline what internal gains and occupancy patterns have been modelled for the communal areas for e.g.: dining lounges.
- The report should set out which spaces will need to be supplied by active cooling, and what the energy demand will be.
- Please model the proposed mitigation measures to reduce the overheating risk. The development will not be policy compliant until it can demonstrate that DSY1 is passed as a minimum, with a heatwave/retrofit plan (see next point below) in place based on more extreme weather files.
- Model DSY 2 and 3 for the 2020s weather period, in addition to the 2050s weather period for DSY1. These files should be modelled with appropriate retrofit mitigation measures as part of a future retrofit plan. These measures should be possible to incorporate within the current building design and layout.
- Identify on plan which communal spaces (indoor and outdoor) will be appropriate for residents to cool down if their units are overheating (in line with the GLA's guidance criteria on Cool Spaces).

- Confirm who will own the overheating risk when the building is occupied (not the residents).
- Confirm whether the MVHR will have a summer bypass.

5. Overall Sustainability

Policy DM21 of the Development Management Document requires developments to demonstrate sustainable design, layout and construction techniques. The energy and sustainability report fails to set out the proposed measures to improve the sustainability of the scheme, including transport, health and wellbeing, materials and waste, flood risk and drainage, biodiversity, climate resilience, energy and CO2 emissions and landscape design.

The report proposes to reduce the internal water consumption with water efficient fittings reducing the consumption to 105 litres/person/day with dual flush capacity, low tap and shower flow rates.

Actions:

- Set out what urban greening and biodiversity enhancement measures will be proposed (e.g., green infrastructure, bird boxes, bat boxes etc to connect to the green spaces around the site, living roofs, living walls, etc.). These need to be identified within the planning submission so that the detail can be conditioned.
- What electric vehicle charging points are proposed? This allows the futureproofing of the development by ensuring the required power has been installed.
- What long- and short-term cycle parking is proposed? Staff and visitors need to have short-stay cycle parking facilities.
- A target (%) for responsible sourced, low-impact materials used during construction.
- Justify the demolition of the existing buildings in terms of its impact on the whole life carbon of the development and the circular economy principles.
- Set out how any demolition materials can be reused.
- Set out how surface water runoff will be reduced, that it will be separated from wastewater and not discharged into the sewer.
- Climate change mitigation should also be considered for the external spaces (shading, etc) and the impact of the increase in severity and frequency of weather events on the building structures.

Non-Domestic BREEAM Requirement

Policy SP4 requires all new non-residential developments to achieve a BREEAM rating 'Very Good' (or equivalent), although developments should aim to achieve 'Excellent' where achievable.

Actions:

- Submit a non-domestic BREEAM Pre-Assessment report.
- A table should be submitted to demonstrate which credits will be met, how many are met out of the total available, under which category, which could be achieved, and which will not be met. This needs to include justification where targets are not met or 'potential' credits. This will enable better assessment of which credits should be targeted.

Urban Greening / Biodiversity

All development sites must incorporate urban greening within their fundamental design and submit an Urban Greening Factor Statement, in line with London Plan Policy G5. London Plan Policy G6 and Local Plan Policy DM21 require proposals to manage impacts on biodiversity and aim to secure a biodiversity net gain. Additional greening should be provided through high-quality, durable measures that contribute to London's biodiversity and mitigate the urban heat island impact. This should include tree planting, shrubs, hedges, living roofs, and urban food growing. Specifically, living roofs and walls are encouraged in the London Plan. Amongst other benefits, these will increase biodiversity and reduce surface water runoff.

The Biodiversity Net Gain calculation shows a net gain of 10.18%, which is above the 10% requirement as set out in the Environment Act 2021. This is supported in principle, but this should be evidenced with measurable and implemented biodiversity benefits.

Action:

- Provide the Urban Greening Factor Statement.

6. Whole Life Carbon

Policy SI2 requires developments referable to the Mayor of London to submit a Whole Life Carbon Assessment and demonstrate actions undertaken to reduce life-cycle emissions.

This application is not required to submit a full statement. No reference has been made to reducing whole-life carbon within the proposed development. The applicant is strongly encouraged to consider using low-carbon materials, sourced as locally as possible.

7. Circular Economy

Policy SI7 requires applications referable to the Mayor of London to submit a Circular Economy Statement demonstrating how it promotes a circular economy within the design and aim to be net zero waste. Haringey Policy SP6 requires developments to seek to minimise waste creation and increase recycling rates, address waste as a resource and requires major applications to submit Site Waste Management Plans.

This application is not required to submit a full statement. No reference has been made to consider and integrate circular economy principles within the proposed development. Furthermore, the current demolition has not been adequately justified under Policy SI7. The applicant should consider implementing circular economy principles, such as designing for disassembly and reuse.

8. Conclusion

Overall, it is considered that the application **cannot currently be supported**.

Planning Conditions

To be secured (with detailed wording TBC):

- Energy strategy
- Overheating
- BREEAM Certificate
- Living roofs
- Biodiversity

Planning Obligations Heads of Terms

- Be Seen commitment to uploading energy data.
- Energy Plan
- Sustainability Review
- Estimated carbon offset contribution (and associated obligations) of £69,597), inclusive of 10% management fee; full contribution to be calculated at £2,850 per tCO2 at the Energy Plan and Sustainability stages.

Carbon Management Response 29/03/2023

Further to the response from above, planning conditions were requested for this application. The outstanding requests for information have been included within the draft conditions below.

Planning Conditions

To be secured:

Energy Strategy

The development hereby approved shall be constructed in accordance with the Energy and Sustainability Statement prepared by PHP Engineering Services Solutions Ltd (dated 6 Sep 2022) delivering a minimum 37% improvement on carbon emissions over 2021 Building Regulations Part L, with SAP10.2 emission factors, high fabric efficiencies, air source heat pumps (ASHPs) and a minimum 24 kWp solar photovoltaic (PV) array.

(a) Prior to above ground construction, details of the Energy Strategy shall be re-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;
- Confirmation of the necessary fabric efficiencies to achieve a minimum 15% reduction with SAP10.2 carbon factors;
- Details to reduce thermal bridging;
- Calculated Primary Energy Factor, Energy Use Intensity and its performance against GLA benchmarks for a similar use.
- Annotated floorplans showing which spaces will be cooled.
- Location, specification and efficiency of the proposed ASHPs (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 the 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); and how the energy will be used on-site before exporting to the grid;
- Updated GLA Carbon Emission Spreadsheet for Part L 2021 to demonstrate that the solar PV generation has been appropriately reflected in the above energy hierarchy.
- Specification of any additional equipment installed to reduce carbon emissions;
- Details on how lighting energy demand has been improved.
- 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) The solar PV arrays and air source heat pump must be installed and brought into use prior to first occupation of the relevant block. Six months following the first occupation of that block, evidence that the solar PV arrays have been installed correctly and are operational shall be submitted to and approved by the Local Planning Authority, including photographs of the solar array, installer confirmation, an energy generation statement for the period that the solar PV array has been installed, and a Microgeneration Certification Scheme certificate.

(c) Within six months of first occupation, evidence shall be submitted to the Local Planning Authority that the development has been registered on the GLA's Be Seen energy monitoring platform.

(d) 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.

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.

Overheating

Prior to the above ground commencement of the development, an updated Overheating Report shall be submitted to and approved by the Local Planning Authority. The report will assess the overheating risk in line with CIBSE TM59 (using the London Weather Centre TM49 weather DSY1-3 files for the 2020s, and DSY1 for the 2050s and 2080s) and demonstrate how the overheating risks have been mitigated and removed through design solutions. These mitigation measures shall be operational prior to the first occupation of the development hereby approved and retained thereafter for the lifetime of the development.

This report shall include:

- Revised modelling of units modelled based on CIBSE TM59, using the CIBSE TM49 London Weather Centre files for the DSY1-3 (2020s) and DSY1 2050s and 2080s, high emissions, 50% percentile;
- Demonstrating the mandatory pass for DSY1 2020s can be achieved following the Cooling Hierarchy and in compliance with Building Regulations Part O, demonstrating that any risk of crime, noise and air quality issues are mitigated appropriately evidenced by the proposed location and specification of measures;
- Annotated floorplans showing which spaces/units have been modelled. The report should model all single-aspect dwellings, min. 75% of rooms facing south or south-west, min. 50% of top-floor rooms, rooms closest to any risk of crime / noise and / or air pollution source, with windows closed at all times.
- In addition, the report should model other communal areas: in particular, the south-west facing treatment room and north-east facing café on the ground, lounge and the quiet room on south-west part of the first floor.
- One or two worst-case hallways need to be included, with a realistic assumption of the heat gains from communal heating pipework.
- Modelling of proposed mitigation measures required to pass future weather files, clearly setting out which measures will be delivered before occupation and which measures will form part of the retrofit plan;
- Confirmation who will be responsible to mitigate the overheating risk once the development is occupied.
- Confirmation whether the MVHR will have a summer bypass.

(b) Prior to occupation of the development, details of internal blinds to all habitable rooms must be submitted for approval by the local planning authority. This should include the fixing mechanism, specification of the blinds, shading coefficient, etc. Occupiers must retain internal blinds for the lifetime of the development or replace the blinds with equivalent or better shading coefficient specifications.

(c) Prior to occupation, the development must be built in accordance with the approved overheating measures and retained thereafter for the lifetime of the development:

- Individual continuous mechanical ventilation units with heat recovery
- Glazing g-value of 0.40
- Active cooling
- Any further mitigation measures as approved by or superseded by the latest approved Overheating Strategy.

REASON: In the interest of reducing the impacts of climate change, to enable the Local Planning Authority to assess overheating risk and to ensure that any necessary mitigation measures are implemented prior to construction, and maintained, in accordance with London Plan (2021) Policy SI4 and Local Plan (2017) Policies SP4 and DM21.

Sustainability Strategy

Prior to above ground commencement of development, details of the sustainability strategy shall be submitted to and approved by the Local Planning Authority. This shall include specifications, plans and sections that demonstrate sustainable design, layout, construction techniques and proposed measures to improve the sustainability of the scheme including but not limited to sustainable transport, health and wellbeing, reduction of material use and waste, water consumption, and flood risk, drainage improvements, and biodiversity enhancement. The report shall include:

- Urban greening and biodiversity enhancement measures;
- Details on electric vehicles charging points, cycle parking facilities;
- A target percentage for responsibly sourced, low-impact materials used during construction;
- Justification for the demolition of the existing buildings in terms of its impact on the whole life carbon of the development and the circular economy principles;
- Details on how any demolition materials can be reused;
- Details on how surface water runoff will be reduced and overall sustainable drainage strategy;

- *Climate Change mitigation measures to be considered for the external spaces and the impact of the increase in severity and frequency of weather events on the building structures.*

Reason: To ensure the development provides the maximum provision towards increasing the level of sustainability in line with London Plan (2021) policies G6, SI7 and Haringey Local Plan Policy SP4, DM21, DM25, and DM29.

BREEAM Pre-Assessment

a) Prior to the commencement of development, a sustainability assessment should be submitted to the planning authority which achieves the highest possible standard have been achieved through measurable outputs to demonstrate how environmental sustainability has been integrated into the development. This may be achieved through a BREEAM Pre-Assessment with a minimum 'Very Good' rating but aiming for Excellent, or similar independently audited assessment where measurable outputs can be demonstrated. This should include a table to demonstrate which credits will be met, how many are met out of the total available, under which category, which could be achieved, and justification for which credits will not be met.

(b) Upon approval, the measures shall be implemented on site prior to occupation and maintained thereafter for the lifetime of the development. A post-construction certificate shall be submitted to the Council within six months of occupation of the development.

Reasons: In the interest of addressing climate change and securing sustainable development in accordance with London Plan (2021) Policies SI2, SI3 and SI4, and Local Plan (2017) Policies SP4 and DM21.

Living Roofs

(a) Prior to the above ground commencement of development, details of the living roof be submitted to and approved in writing by the Local Planning Authority. Living roof 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 roof will be located;*
- 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 roof, 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 25m³) to benefit native wildlife, suitable for the amount of direct sunshine/shading of the different living roof spaces. The living roof 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.*
- viii) A section showing the build-up of the blue roof and confirmation of the water attenuation properties, and feasibility of collecting the rainwater and using this on site;*

(b) Prior to the occupation of 90% of the development, evidence must be submitted to and approved by the Local Planning Authority that the living roof has 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 roof has not been delivered to the approved standards, the applicant shall rectify this to ensure it complies with the condition. The living roof 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, S11 and S12 and Local Plan (2017) Policies SP4, SP5, SP11 and SP13.

Biodiversity

(a) Prior to the commencement of development, details of ecological enhancement measures and ecological protection measures shall be submitted to and approved in writing by the Council. This shall detail the biodiversity net gain, plans showing the proposed location of ecological enhancement measures, a sensitive lighting scheme, justification for the location and type of enhancement measures by a qualified ecologist, and how the development will support and protect local wildlife and natural habitats.

(b) Prior to the occupation of development, photographic evidence and a post-development ecological field survey and impact assessment shall be submitted to and approved by the Local Planning Authority to demonstrate the delivery of the ecological enhancement and protection measures is in accordance with the approved measures and in accordance with CIEEM standards.

Development shall accord with the details as approved and retained for the lifetime of the development.

Reason: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and the mitigation and adaptation of climate change. In accordance with London Plan (2021) Policies G1, G5, G6, S11 and S12 and Local Plan (2017) Policies SP4, SP5, SP11 and SP13.