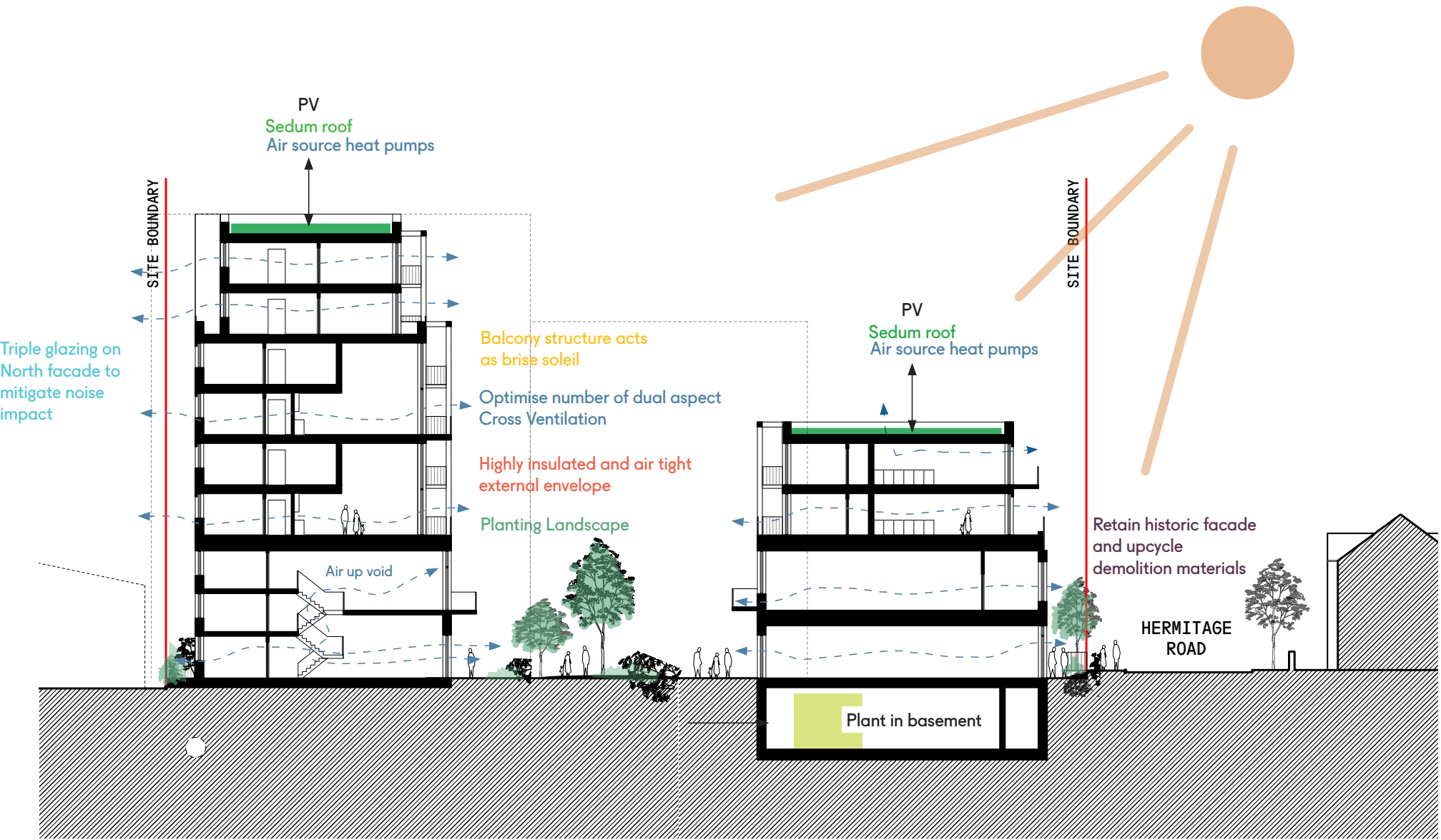


14.0 SUSTAINABILITY AND ENERGY

14.1 OVERVIEW

The design prioritises sustainability, maximising dual aspect units, high thermal performance, biosolar roofs, air-source heat pumps, vegetation, playgrounds, external shading, preservation of the existing historic facade and transforming demolition waste into bespoke terrazzo tiles and other construction materials, preserving the history on the site in new interpretations.



Bio-sedum roof to all roofs



External shading



CLT for residential floors



Terrazzo panels made from recycled aggregate

15.0 ECOLOGICAL ASSESSMENT

14.2 ENERGY

The proposed development has been designed in line with the London Plan Energy Hierarchy:

Be Lean – enhanced insulation, reduced air permeability standard

- Building Regulation requirements for u-values exceeded
- Building Regulation requirements for air permeability exceeded
- All plant within building to have efficient outputs to reduce energy wastage

Be Clean – supplying energy efficiently

- no District Energy Networks have been identified in the immediate vicinity of the site, so a provision for future connection to a DEN will be incorporated into the development

Be Green – renewable energy

- Air Source Heat Pumps (ASHPs) used to meet space heating requirements of the commercial spaces, as well as for both the space heating and hot water in the residential spaces.
 - PVs will be specified to offset the energy use from the communal (Landlord) spaces of the building.
- Energy modelling carried out by Consolux show that the proposed energy strategy will provide an efficient and low carbon development.

14.3 SUSTAINABILITY

A Sustainability Statement has been provided by Consolux to outline how sustainability and the principles of sustainable development have been incorporated into the development proposals.

A range of sustainable design and construction features are proposed including:

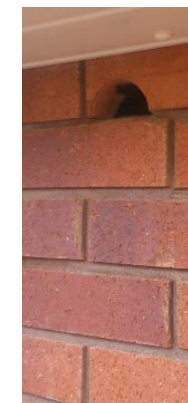
- Highly thermally efficient building fabric;
- Air Source Heat Pumps (ASHPs) to meet heating and cooling requirements of the residential and commercial spaces;
- An extent of PV at roof level;
- Highly efficient lighting;
- Water saving sanitary fittings and appliances to deliver a water efficient development;
- The use of materials with a low lifecycle environmental impact and embodied energy; and
- Efficient construction and operational waste management.

It is proposed to assess the scheme against BREEAM with a view to meeting at least “Very Good”. Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority.

Overall the Ecological Assessment reports that existing habitats within the site are considered to be of limited ecological value. The site will be enhanced by new tree and shrub planting incorporated into the landscape proposals with a high proportion of native species, and by introducing bird and bat boxes to the site. Bird and bat boxes will be located on the buildings integrated into the brickwork, at a minimum of 3m above the ground, creating discrete spaces for birds and bats to live. Bat boxes will be installed on the south and south-west facing aspects of Block B; Bird boxes will be located with a clear flight path to the entrance facing north on Block C. Please refer to the Ecological Report for further information.



Example of a Sparrow/Tit Box in brickwork



Swift Box



Bat box

16.0 DAYLIGHT AND SUNLIGHT

A Daylight and Sunlight Assessment has been prepared by Herrington Consulting to:

- Assess the baseline conditions of the site
- Analyse the potential impacts of the development on the daylight and sunlight currently received by the neighbour buildings
- Assess these impacts in line with any relevant planning policies and best practice guidance

In summary, the development proposals have been appraised in line with the guidelines set out in the BRE document. When assessed against the criteria for establishing whether the proposed development will have a significant impact, it has been possible to conclude that the development will not result in a notable reduction in the amount of either daylight or sunlight enjoyed by the neighbouring buildings.

In addition to the impact on its neighbours, the provision of natural daylight and sunlight to the habitable rooms within the proposed development itself has shown that main habitable rooms and the significant majority of bedrooms will exceed the minimum target values for natural daylight set out within the BRE Guidelines and the British Standards.

17.0 FIRE STRATEGY

A Fire Strategy Report has been developed by BB7, which outlines the Fire Strategy with respect to Fire Safety Principles, Active Fire Safety systems, Means of Escape, Passive Fire Protection Systems, Fire Service Access.

The design has been developed with input from the fire engineer to ensure the layout complies with the recommendations of BS991 and Approved Document B. The development will be sprinklered.

The report demonstrates that the development proposals and the required fire safety provisions meets the recommendations of BS 9991 and Approved Document B and satisfies Policies D12A, D12B and D5(B5) of the London Plan 2021.

18.0 ACOUSTIC STRATEGY

A Noise Impact Assessment has been prepared by Acoustic Consultant Ltd as part of this planning application. This report provides the results of a noise survey conducting on the site and an assessment of external sources of noise on the sensitive elements of the development.

The noise impact assessment has been undertaken in accordance with the guidance in the National Planning Policy Framework (NPPF), Noise Policy Statement for England (NPSE), National Planning Practice Guidance (NPPG), British Standard 8233:2014 (BS8233) and the local authority criteria.

The report outlines noise mitigation advice in the form of building façade constructions and ventilation provisions to the spaces of the scheme. With the proposed fabric construction and suitable ventilation provisions, the predicted internal noise levels due to external noise are within the British Standard 8233:2014 criteria.

The report also provides plant and construction limits that, if met, will satisfy the conditions of the relevant British Standards.

As such, Acoustic Consultant Ltd consider that noise and vibration is suitably controlled and below the Lowest Observed Adverse Effect Level of the National Planning Practice Guidance internally to the development.

19.0 MICROCLIMATE STUDY

Love Design Studio have prepared a quantitative assessment of the likely wind conditions around the Proposed Development, with and without the adjacent Omega B development. The report outlines the overall methodology and the use of the Lawson Comfort Criteria to assess the expected on-site wind conditions. The assessment is based upon analysis of meteorological conditions for London Heathrow. Prevailing winds are predominantly from the south-west throughout the year. Off-site (33no.) and on-site (14no.) receptors were placed around and within the site, respectively. These locations include spaces for sitting, standing, entrance doors, places for leisure walking, business walking and roads/car parks. Please refer to the Microclimate Assessment by Love Design Studio for more detail.

Off-site
Three of the off-site receptors were shown to experience a minor adverse impact compared to the baseline assessment, but wind speeds are still within the tolerable limits for the expected activities at two of the points, and the third (13) is eliminated by mitigation measures summarised below.

On-site
Four locations (40, 45, 46 and 47) were deemed to require some form of mitigation measure to improve the wind microclimate conditions. The two receptor points located within the designated play area on the sixth-floor roof of Block B experience a major adverse impact, so mitigation will be required.

Mitigation measures by way of local landscaping, raised parapets, planting and canopies have been introduced to Omega Works A design and are likely to significantly reduce the risk of adverse impact to local conditions.

Omega B Proposal
On-site receptors (10no.) were located to assess the impact of the Proposed Omega B Development. Mitigation measures, as above, will significantly reduce the risk of adverse impact to local conditions on the designated play space on the fourth-floor roof of the western block (56, 57).

With the current design there are no anticipated significant issues related to wind microclimate anticipated on site or off site as a result of the Proposed Development.

20.0 ARBORICULTURAL REPORT

The proposal will introduce new trees along the street, courtyard, play spaces, maximising biodiversity. Please refer to the Arboricultural Report prepared by Indigo Surveys for further detail.