

SUSTAINABILITY STATEMENT

Job No. 4158

SITE NAME 52 Holmes Road

London, NW5 3AB

DATE : 01/09/2016



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CAMDEN DEVELOPMENT POLICIES SECTION 3 DESIGN

1. The layout of uses

The light industrial unit is located at street level with a basement and mezzanine area. This has large windows onto street level, with light & cross ventilation provided to basement by light wells located to the front and rear. The residential units are accessed from street level and are located from 1st to 5th floors, all with dual aspect running front to back and generous windows to provide daylight and cross ventilation.

2. Floorplates size/depth

Ground floor

- Area = 148m²
- Depth = 23.457m

Lower ground floor

- Area = 178m²
- Depth = 23.456m

Residential floors

- Area = 163m²
- Depth = 23.456m

3. Floor to ceiling heights

- Light Industrial – Ground floor - Floor to ceiling height is 3975mm
 - Basement floor to ceiling height is 2925mm
- Residential – 1st Floor to 5th Floor – Floor to ceiling height is 2550mm

Windows, Solar gain and artificial lighting

4. Location, size and depth of windows

Windows are generally located on the front and rear elevations of the building facing south (front to Holmes Road) and north (rear to Regis Road). This is due to the site constraints of student housing to the west facing into our site and to avoid fettering development of the adjacent site to the east. The Light Industrial unit also contains light wells located at the front and rear of the building to ensure natural light penetrates to the basement area as well as promote cross ventilation. The access core and bathrooms are located centrally allowing the habitable rooms to have windows and balconies front and back optimising natural light.

5. Limiting excessive solar gain

The top floor has brise soleil to act as shading device to the south facing living area. Solar shading has been provided in the form of brise soleil above the 4th floor balcony and living room behind. Below this the balconies shade the floor below, including the ground floor industrial unit frontage. The limited east and west facing windows to residential units are shaded by louvres. There is no shading to north-facing windows.

6. Reducing the need for artificial lighting

Floor to ceiling windows are used throughout the residential flats & industrial unit. Light wells in the Basement have been chosen to optimise natural daylight, helping to minimise the need for artificial lighting.

7. Shading methods, both on or around the building

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8. Optimising natural ventilation

All Residential units are dual aspect therefore they achieve 100% ability Cross ventilation. The light industrial unit has windows at ground level and light wells at basement level in the front and back which allow cross ventilation on both floors.

9. Design for and inclusion of renewable energy technology

- The sites south-facing orientation creates good opportunity to provide integrated roof top photovoltaics.
- PV Panels are located on the roof, following optimisation of the fabric efficiency of the rest of the building – this will consist of 9.9kWp of panels – please refer to the Energy Report by RSK for further details.
- All flats will be designed to meet a 35% CO₂ reduction over 2013 Part L Building regulations, which is equivalent to Code 4 of the now-obsolete Code for Sustainable Homes.

10. Impact on existing renewable and low carbon technologies in the area

- None of the existing renewable technologies, i.e PV panels on nearby buildings, located with the vicinity of the building will be impacted by this development.

11. Sustainable urban drainage, including provision of a green or brown roof

- Several areas of green roof will be provided.
- A sustainable urban drainage scheme has been designed for this development for more details please refer to the RSK report.

12. Adequate storage space for recyclable material, composting where possible

- Separate residential and commercial refuse/ recycling stores are located close to the entrances and are accessed directly from the street in slated enclosures.
- Bin storage as follows:

Residential - Camden Requirement:

2-bed flat 170L x8 = 1360L

3-bed flat 240L x1 = 240L

= 1600L Total

Total proposed = 1100L for refuse and 1100L for recycling = 2200L total capacity – this allows for higher future proportion of recycling.

Commercial BS5906:2005: For B1 (we have assumed for light industrial rather than B2):

2.6L/sqm x 377sqm = 980L

Storage for 1 x 1100L bin provided

13. Bicycle storage

Residential bicycle storage space has been provided on site in the form of Josta stands, situated close to entrance. The secure enclosure accommodates 20 bicycles, including 2 spaces for visitors. 2 bike spaces are provided inside the office, with a further 2 outside on a Sheffield stand for visitors.

14. Measures to adapt to climate change

Balconies providing shading to avoid solar glare and overheating. Areas of green roof help to minimise the heat island effect and also provide a reduction in overheating potential on the top floor in conjunction with the roof-shading provided by the PV panels. There are no issues with flooding as the building is not within a flood plain.

15. Impact on microclimate

A substantial space is provided for the Green roof which is located in three levels. The biodiverse roof adds biodiversity as well as contributing to the microclimate. Planters on the ground floor also contribute to the microclimate.

CAMDEN DEVELOPMENT POLICIES SECTION 3 FABRIC / SERVICES

16. Level of insulation

The building fabric u values that are proposed for the development (see Table 1 of the Revised Energy Statement) are comparable to the standards set out in para 3.22 of Camden's Planning Guidance Sustainability CGP3 (July 2015). The proposed u values for external walls and doors match Camden's standards exactly. And whilst the proposed roof u value (0.15) is slightly worse than Camden's standard (0.13), proposed u values for floor (0.1) and glazing (1.0) are significantly better than Camden's standards for these elements (being 0.2 and 1.5 respectively).

17. Choice of materials, including – responsible sourcing, Re-use& recycled content.

Low embodied energy materials will be specified wherever possible in the construction.

The structure will be a concrete frame specified with a high recycled content. Other materials chosen have will high durability and minimum maintenance requirements such as brickwork. This will ensure minimum requirement for new materials to be required to maintain the building throughout its life.

18. Air tightness

This building is proposed to be naturally ventilated. Facade air tightness levels of around 3.0 and below typically require mechanical ventilation to ensure appropriate levels of air movement when windows are closed to avoid risks associated with poor internal air quality. SAP modelling reports good levels of occupant comfort (e.g. only slight overheating risks) with natural ventilation and therefore we propose an air tightness level of 5.0.

19. Efficient heating, cooling and lighting systems

The space and water heating system proposed for the apartments has an efficiency of 89.1% (SEDBUL 2009), with further efficiency achieved through the specification of Zenex Gas Savers. These units can achieve annual savings of 37% of energy required to deliver hot water, according to manufacturer documents. An air source heat pump (electrically powered) with a COP of 3.0 is proposed for the commercial space. 100% energy efficient lighting with appropriate zoning and controls is proposed throughout the development. Mechanical / active ventilation or cooling are not proposed however. An EPC rating of 'B' is anticipated for the apartments demonstrating their high standards of efficiency.

Heat gains from residential heating are accounted for within the SAP models and will provide additional heat during the heating season whilst not contributing excessively in the summer months. SAP reports only a 'slight' risk of overheating in the summer months for these units.

20. Effective building management system

A Building Management System (BMS) is unlikely to be merited for a development of this relatively limited scale. It is however anticipated that appropriate displays (electricity and water) and controls (lighting and space heating) will be provided for both the residential and commercial elements to enable the efficient operation of the building by its residents / users.

21. The source of energy used

For the modelled 2nd floor unit 'B', SAP predicts total annual mains gas heating demand of 4,814 kWh, with a split of 61% / 39% for space and water heating respectively. Annual electricity demand for lighting of 379 kWh is predicted, plus a further 75 kWh from boiler and flue pumps and fans. Solar PV is predicted to generate 743 kWh of zero carbon electricity each year for this unit.

The SBEM report included in the Revised Energy Statement shows that, excluding energy use from equipment, the commercial space energy demand comprises largely lighting (62%), space heating (25%), auxiliary (9%) and hot water (4%).

Electricity is now available from 100% renewable sources from various suppliers. Renewable gas is also available. 100% Renewable electricity is also produced from the PV array on the roof.

22. Metering

It is anticipated that all apartments will benefit from water, gas and electricity meters, including solar PV export meter. Water, electricity and solar PV export meters are anticipated for the commercial space.

23. Counteracting the heat expelled from plant equipment

There are no significant centralised plant areas in this building that would cause overheating to other areas or contribute to the heat island effect.

24. Enhancement of / provision for biodiversity

The design includes biodiverse green roof areas which replicates the natural habitat to maximise the array of species which may inhabit the roof. Please refer to the ecology statement from GML for more details.

25. Efficient water use

All dwellings will benefit from the specification of water efficient fixtures and fittings to ensure that a maximum of 105 litres of potable water is consumed per person per day in line with the optional requirement of Building Regulations Part G. Such features are likely to include dual flush WCs, aerated taps and flow controlled showers. This proposed level of water efficiency meets the requirements of London Plan Policy 5.15 and Standard 37 of the GLA's Housing SPG (March 2016).

26. Re-use of water

It is not anticipated to re-use rain or greywater on a site at this scale. At this scale it is most cost – effective to employ water use reduction methods as outlined above. There is little room on site for location of water storage tanks in addition to those proposed as parts of the SuDs strategy.

27. Educational elements, for example visible meters

An energy monitor will be installed into each flat allowing residents to beware of the amount of energy consumption and expenditure they are incurring. This will be wall mounted in a prominent location, eg. Adjacent to light and temperature controls in the main living space.

28. On-going management and review

An experienced building management company will be appointed to undertake all maintenance and servicing requirements to the common and external areas of the building. Minimal maintenance is expected to the building fabric due to the hardwearing finishes specified. Annual maintenance will be required to ensure PV panels are clean and working, maintain the green roof and washing windows.