
Planning Report

Sustainability Statement

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Executive Summary

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Overview

The proposed project consists of the refurbishment and change of use of 529 from D1 Former Language School / D2 Former Fitness Studio to C3 (Dwelling houses) and also includes amendments to the facade including refurbishment to the entrance and the rear. The total GIA of the proposed project amounts to approximately 322m² for the residential area and 122m² for the non-residential communal area. Associated refuse and bicycle stores are also included within the proposed development.

This Sustainability Statement will be provided as evidence to the London Borough of Camden to demonstrate the development's holistic approach to sustainable design and construction. It summarises the contribution that the design will make to create a more sustainable development, drawing on information provided by specialist consultants and design reports, and identifying key features intrinsic to achieving low carbon developments.

Key sustainability features within the development will include:

- The development will reduce total carbon emissions by 46.2% and 73.64% site wide over Building Regulations using SAP 2012 and draft SAP 10.0 carbon dioxide emission factors, respectively;
- The development will aim to achieve a BREEAM Domestic Refurbishment 2014 rating of "Excellent" and minimum credit requirements under Energy (60%), Materials (40%) and Water (60%).
- A water consumption target of 110 litres/person/day through the implementation of water efficiency measures;
- The inclusion of sustainable transport options such as secure cycle storage;
- A sustainable materials procurement policy and an efficient waste strategy on site;
- The implementation of health and wellbeing measures through design and operational procedures, including daylight, optimum indoor air quality and thermal comfort; and,
- Protect and enhance the ecological value of the site by introducing flower rich planting in communal areas.

Key Sustainability Measures

In summary, the key measures incorporated to meet planning requirements and to achieve a low carbon development address the following key areas of sustainable design and construction:

- Energy and CO₂
- Adaptation to climate change
- Flood risk mitigation and SuDS
- Waste
- Water efficiency
- Transport and connectivity
- Materials
- Health and wellbeing
- Land use and ecology

Introduction

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Sustainability Introduction

The design team has significant experience in delivering schemes that are considered highly sustainable, either through application of formal green building rating systems, such as BREEAM and Home Quality Mark, as well as applying benchmarks from standards such as Passivhaus Design and adopting precedents from industry exemplary sustainable developments.

The scheme will reflect the holistic nature of sustainable development in the London Borough of Camden. The development will provide much needed high-quality commercial space and will use local labour to boost employment. Health and wellbeing will be incorporated in the design by maximising daylighting, utilising healthy materials and contributing to the alleviation of fuel poverty in the region. The ecological value of the site will be maintained and protected.

Description of Development

The proposed development is to be located at 529 Finchley Road, London, NW3 7BG, in the London Borough of Camden. The site has an area of about 442m² and is currently occupied by existing buildings. The plot has an active street frontage with a ground floor dedicated to retail which will be retained. The property previously comprised two separate, adjacent units that were opened up to create one larger unit. Each side has an identical overall layout consisting of approximately 132m² each. The property was previously a language school predominantly comprised of a number of classrooms and offices. **Error! Reference source not found.** illustrates the existing north east elevation of the buildings.

The proposed project consists of the retention of the ground floor retail unit, amendments to the façade and change of use of from D1 Former Language School / D2 Former Fitness Studio to C3 (Dwelling houses) with a total GIA of approximately 442m². Associated refuse and bicycle stores, amenity spaces and landscaping are also included within the proposed development. Figure 2 and Figure 3 illustrate the proposed north elevation and the ground floor plan, respectively.

The aspiration for the scheme is to significantly improve the existing site and its immediate environment by providing an efficient and inclusive development, which meets the policy recommendations of the London Borough of Wandsworth.



Figure 1: Existing north east elevation of 529 Finchley Road.

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Figure 2: Proposed north elevation of 529 Finchley Road.

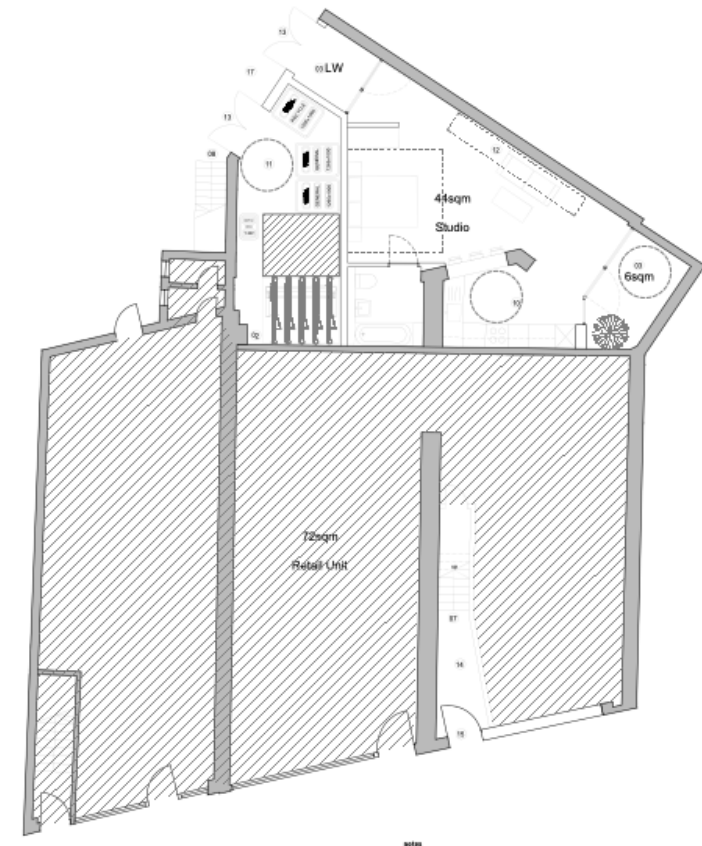


Figure 3: Proposed ground floor plan of 529 Finchley Road.

Policy Context

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National Context: The 2008 Climate Change Act

The UK Government is committed to reducing the UK's carbon emissions by 100% over 1990 levels through the Climate Change Act 2008. Achieving truly sustainable design and construction and forwarding the green agenda within the construction industry across the UK is inherent to meeting these emission targets. This development aims to do both of these.

To help monitor carbon reductions and to plot progress being made for future plans and investments in the UK's low-carbon economy, intermediary targets have been established to ensure that the UK remains on course for meeting the 100% reduction by 2050.

Concurrent with reducing CO₂ emissions by 100% by 2050 is the European Climate Change Policy targets. It sets the objective of ensuring 20% of energy consumption is generated from renewable sources by 2020 whilst also reducing Europe's carbon footprint by 20%. Ensuring a fabric first approach with consideration to renewable energy production fits both the climate change act and the European Commission's 2020 targets for reducing greenhouse gas (GHG) emissions.

National Context: National Planning Policy Framework 2019

The National Planning Policy Framework (NPPF) published in 2019 sets out the UK Government's planning policies for England. Planning law requires that applications for planning permission must be determined in accordance with the local development plan unless material considerations indicate otherwise. The National Planning Policy Framework must be taken into account in preparing the development plan and is a material consideration in planning decisions. Planning policies and decisions must also reflect relevant international obligations and statutory requirements.

The NPPF is supported by a series of Planning Practice Guidance (PPG) documents. The guidance in relation to air quality provides guiding principles on how planning can take account of the impact of new development on air quality. The following policies are relevant to the Sustainability Statement:

- Achieving sustainable development
- Promoting healthy and safe communities
- Promoting sustainable transport

- Achieving well-designed places
- Meeting the challenge of climate change, flooding and coastal change
- Conserving and enhancing the natural environment

Regional Context: The London Plan 2021

The London Plan (March 2021) is the overall strategic plan (Spatial development Strategy) for London and replaces the previous (2016) iteration. This document, therefore, plays a key role in the planning process in all the 32 London Boroughs and the City of London.

The London Plan aims to shape the planning process and sets out an integrated economic, environmental, transport and social framework for the 32 London Boroughs, the City of London and the Mayoral Development Corporations (MDCs) over the next 20–25 years (2019–2041), including the following key aspects of the Mayor of London's other strategies:

- Transport;
- Economic Development;
- Housing;
- Culture;
- Social issues (such as children and young people, health inequalities and food); and
- A range of environmental issues (such as climate change, air quality, noise and waste).

Within the London Plan there are a number of key targets for 'major developments', not applicable to this scheme:

- Policy SI 2: Development should be net zero-carbon and should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy; and,
- A minimum on-site reduction of at least 35% over Target Emission Rate identified in Building Regulations 2013 is required.

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Regional Context: The London Plan 2021 (continued)

The London Plan (2021) also sets out the following targets for major developments. This has been followed as guidance for 'best practice':

- Efficient use of natural resources (including water);
- Minimising pollution (including noise, air and urban runoff);
- Minimising the generation of waste and maximising reuse or recycling;
- Avoiding impacts from natural hazards (including flooding);
- Ensuring developments are comfortable and secure for users;
- Securing sustainable procurement of materials, using local supplies where feasible; and
- Promoting and protecting biodiversity and green infrastructure.

Of particular relevance to this report are the following policies required by the Plan:

- Policy D6 – Housing Quality and Standards
- Policy G4 – Open Space
- Policy G5 – Urban Greening
- Policy G6 – Biodiversity and Access to Nature
- Policy SI1 – Improving Air Quality
- Policy SI2 – Minimising Greenhouse Gas Emissions
- Policy SI3 – Energy Infrastructure
- Policy SI4 – Managing Heat Risk
- Policy SI5 – Water Infrastructure
- Policy SI12 – Flood Risk Management
- Policy SI13 – Sustainable Drainage
- Policy T1 – Strategic Approach to Transport
- Policy T3 – Transport Capacity, Connectivity and Safeguarding
- Policy T5 – Cycling
- Policy T6 – Car Parking

Local Context: Camden Local Plan 2017

The Camden Local Plan, published in July 2017, sets out the Council's planning policies. It responds to the Borough's unique characteristics and provides a comprehensive local policy framework to deliver Camden's future sustainable development. The Plan is supported by the supplementary planning documents 'Camden Planning Guidance' adopted in January 2021.

The Camden Local Plan states a key strategic objective as 'investing in our communities to ensure sustainable neighbourhoods'. This is complimented by further objectives embedded in the Local Plan that define the sustainability vision of the council.

Chapter 8 'Sustainability and climate change' within the Camden Local Plan lists key sustainability objectives for the Borough. The following strategic objectives are relevant to the proposed development and compliance with these will be demonstrated in this Sustainability Statement:

4.84 – Policy C5 Safety and Security– Developments should incorporate design principles that contribute to community safety and security.

4.96 – Policy C6 Access for all

The Council will:

- Expect all buildings and places to meet the highest practicable standards of accessible and inclusive design so they can be used safely, easily and with dignity by all;
- Encourage accessible public transport; and
- Encourage secure car parking for disabled people.

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Local Context: Camden Local Plan 2017 (continued)

6.2 – Policy A1 Managing the impact of development

The Council will seek to protect the quality of life of occupiers and neighbours and will:

- Seek to ensure that the amenity of communities, occupiers and neighbours is protected.
- Resist development that fails to adequately assess and address transport impacts affecting communities, occupiers, neighbours and the existing transport network.

6.59 – Policy A3 Biodiversity – Developments should not directly or indirectly result in the loss or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species. The demolition and construction phase of a development, including the movement of works vehicles, should be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species.

6.85 – Policy A4 Noise and Vibration – Developments should not generate unacceptable noise and vibration impacts.

7.1 – Policy D1 Design – The Council will require that development:

- Is sustainable in design and construction, incorporating best practice in resource management and climate change mitigation and adaptation;
- Is of sustainable and durable construction and adaptable to different activities and land uses;
- Is inclusive and accessible for all;
- Promotes health;
- Is secure and designed to minimise crime and antisocial behaviour;
- Responds to natural features and preserves gardens and other open space; and,
- Incorporates high quality landscape design and maximises opportunities for greening.

8.3 – Policy CC1 Climate Change mitigation – Developments should reduce carbon dioxide emissions in line with the steps in the energy hierarchy. Developments should support this by ensuring the availability of sustainable transport options, optimising resource efficiency and encouraging sensitive energy use. The Council will protect, and seek to secure additional, trees and vegetation.

8.18 – All developments should optimise resource efficiency through waste and energy reduction, minimising materials required, opting for materials with low embodied carbon content and enabling low energy and water demands.

8.33 – Policy CC2 Adapting to Climate Change – All developments should adopt appropriate climate change adaptation measures such as green infrastructure and SuDS where feasible.

8.53 – Policy CC3 Water and flooding – Developments should incorporate water efficiency measures, consider the impact of development in areas prone to flooding and avoid harm to the water environment. Refurbishments will be expected to meet BREEAM water efficiency credits.

8.55 – Developments must be designed to be water efficient. Residential developments will be expected to meet the requirement of 110 litres per person per day (including 5 litres for external water use).

8.75 – Policy CC4 Air Quality – Developments should mitigate the impact of construction and the completed development on air quality in the borough. Construction should adopt sustainable design and construction methods including measures that minimise negative impacts on air quality.

8.90 – Policy CC5 Waste – Developments should include facilities for the storage and collection of waste and recycling.

10.9 – Policy T1 Prioritising walking, cycling and public transport – The Council will promote sustainable transport by prioritising walking, cycling and public transport in the borough. In order to promote cycling in the borough and ensure a safe and accessible environment for cyclists, the Council will seek to ensure that development provides for accessible, secure cycle parking facilities exceeding minimum standards outlined within the London Plan.

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Local Context: Camden Local Plan 2017 (continued)

10.16 – Policy T2 Parking and car-free development – Non-residential developments should limit on-site parking to spaces essential for the operation of the development (e.g., designated for disabled people where necessary, and/or essential operational or servicing needs).

10.27 – Policy T4 Sustainable movement of goods and materials – Developments should consider utilising more sustainable means of freight transport and seek to minimise the movement of goods and materials by road. Alternative modes of transportation can include via canal, rail and bicycle where possible.

A number of Camden Planning Guidance (CPG) documents were adopted in January 2021 to support the policies in the Camden Local Plan and form supplementary planning documents (SPDs) for planning decisions. The full list of adopted documents relevant to sustainability include:

- Water and flooding CPG – March 2019 – Refurbishments and other non-domestic development will be expected to meet BREEAM water efficiency credits.

- Access for All CPG – March 2019 – All developments should be inclusively designed and useable by all to promote equality of opportunity.
- Air Quality – January 2021 – All developments should protect future occupants from exposure to poor air quality and should limit their impact on local air quality and be at least air quality neutral.
- Biodiversity CPG – March 2018 – Development proposals must demonstrate how biodiversity considerations have been incorporated into the development, how the five-point Mitigation Hierarchy has been addressed and what positive measures for enhancing biodiversity are planned.
- Energy efficiency and adaptation – January 2021 – Developments should achieve at least 20% reduction in CO2 from onsite renewables (after all other energy efficiency measures have been incorporated)
- Transport – January 2021 – Developments should demonstrate what measures will be required and implemented in order to mitigate the transport impact of the development.
- Trees CPG – March 2019 – All developments should assist in achieving the aim to preserve existing tree and canopy coverage where possible as well as increase and improve tree coverage in the design of new developments.

Energy and CO₂

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Energy Strategy

The energy strategy for the scheme is detailed in the Energy Assessment report issued by Eight Associates in November 2020. As shown in Table 1, the whole development will reduce carbon emissions by 10.8% and 40.7% from the fabric energy efficiency measures described in the 'Be Lean' section using SAP 2012 and draft SAP 10.0 carbon dioxide emission factors, respectively. Total carbon emissions will be reduced by 46.2% and 73.64% over Building Regulations using SAP 2012 and draft SAP 10.0 carbon dioxide emission factors, respectively, with the further inclusion of a proposed communal air source heat pump. Therefore, the scheme meets and exceeds the target of overall 35% carbon reduction over Part L building Regulations as set out in the London Plan Policy SI2. The scheme also meets and exceeds Policy CC1 requirements from the Camden Local Plan as it is more onerous than the Camden Local Plan.

The Energy Hierarchy

The proposed scheme has followed the energy hierarchy, illustrated in Figure 4 below.

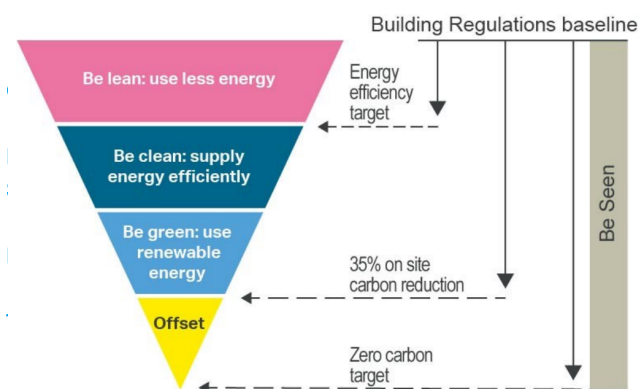


Figure 4: This methodology, widely used in accordance with the Sustainable Design and Construction Supplementary Planning Guidance (SPG) 2014, has been adopted for the scheme using a 'Lean', 'Clean', and Green' approach.

Table 1: GLA Energy Hierarchy for the whole development.

GLA's Energy Hierarchy: Regulated carbon emissions – Whole scheme Calculated using SAP 2012 carbon dioxide emission factors				
	Baseline:	Be lean:	Be clean:	Be green:
CO ₂ emissions (tCO ₂ /yr)	54.93	34.63	–	29.57
CO ₂ emissions saving (tCO ₂ /yr)	–	20.30	–	5.06
Saving from each stage (%)	–	10.7	–	9.2
Total CO ₂ emissions saving (tCO ₂ /yr)	25.36			
46.2% total carbon emissions savings over 2013 Building Regulations Part L achieved.				
GLA's Energy Hierarchy: Regulated carbon emissions – Whole scheme Calculated using draft SAP10.0 carbon dioxide emission factors				
	Baseline:	Be lean:	Be clean:	Be green:
CO ₂ emissions (tCO ₂ /yr)	50.21	29.80	–	13.27
CO ₂ emissions saving (tCO ₂ /yr)	–	20.41	–	16.52
Saving from each stage (%)	–	40.7	–	32.9
Total CO ₂ emissions saving (tCO ₂ /yr)	36.94			
76.34% total carbon emissions savings over 2013 Building Regulations Part L achieved.				

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GLA's Energy Hierarchy – Regulated Carbon Emissions

As demonstrated in Figure 5, the proposed will reduce carbon emissions by 40.7% from the fabric energy efficiency measures described in the 'Be Lean' section and will reduce total carbon emissions by 76.34% over Building Regulations, using draft SAP 10.0 carbon factors.

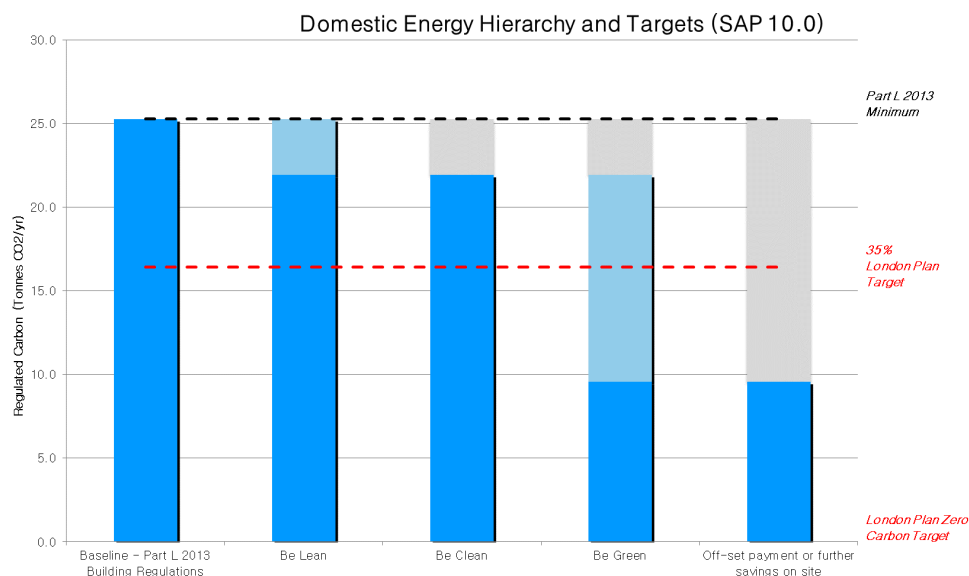


Figure 5: The performance of the scheme in relation to Building Regulations and the Energy Hierarchy. Carbon dioxide emission factors for draft **SAP 10.0** have been used for the calculations.

Energy Efficiency Strategies

Energy efficiency measures that will be applied to 529 Finchley Road include:

- High insulation standards to reduce transfer of heat through the building fabric.
- Use of a communal air source heat pump system with a COP of 2.87 to provide heating and hot water for the whole development.
- An immersion electric heater will provide the remaining 20% of the hot water demand.
- Envelope air tightness to reduce unnecessary air infiltration.
- Daylighting and well-planned floor layouts to reduce the need for artificial lighting; and
- High efficacy lighting of 75 lumens per watt for the residential and 110 lumens per watt for the non-residential part has been specified for the scheme.

Thermal Comfort and Overheating Risk

To minimise energy loss, the building fabric performance will be designed to achieve a balance between retaining heat during winter and allowing the building to dissipate heat during the summer months. Further measures to reduce overheating and the need for cooling include:

- Energy efficient lighting and appliances have been recommended to reduce internal heat gains.
- The building fabric will be insulated over and above the standards set out by Building Regulations and reduced solar gains from a glazing solar factor of 0.50 will help to keep heat out of the building.
- Internal shading devices to further limit solar gains in the south facing kitchen will be installed.
- Reduced air permeability rate and maximised insulation levels.
- Mechanical ventilation with heat recovery and summer bypass to provide fresh air and purging of heat.
- Passive ventilation measures will include openable windows.

Adaptation to Climate Change

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Climate Change Mitigation

The proposed development will utilise a communal air source heat pump and mechanical ventilation with heat recovery. Passive design measures, including openable windows and night-time cooling, will be integrated into the design of the development. Mechanical ventilation using fans will remove heat from the building during summer months.

Flood Risk and Sustainable Drainage

529 Finchley Road is located within Flood Zone 1 of the Environment Agency's Flood Map for Planning, as shown in Figure 6. This is defined as an area with little or no risk to flooding where the annual probability of river, tidal and coastal flooding (with defences where they exist) is $<0.1\%$ i.e., less than 1 in 1,000 years.

The drainage strategy for the new build has not yet been fully developed. It is likely that the development already incorporates sustainable drainage strategies, including attenuation measures to manage the risk of surface water runoff and therefore the refurbishment will be able to benefit from this in addition to any standalone measures.

The option of incorporating a green roof on the Ground Floor and Third Floor flat roofs could contribute to minimising the discharge of water from rainfall on site, seen as a more sustainable measure compared to conventional water attenuation systems.

Flood Map

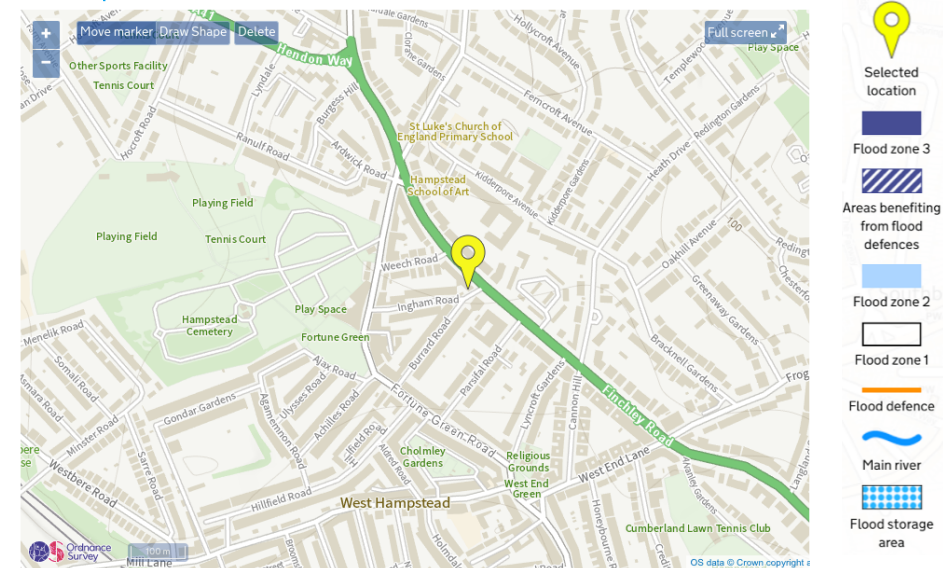


Figure 6: Flood map showing the approximate location of the development within Flood Zone 1.

Waste Sustainability Statement

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Construction Waste Management

Resource efficiency will be promoted through effective and appropriate management of demolition and construction site waste.

In line with the waste hierarchy and Policy CC5, during the construction phase, the approach will be the following:

- Use reclaimed materials;
- Use materials with higher levels of recycled content; and,
- Use new materials.

For any demolition, the following approach will be adopted in line with Policy CC5:

- Prioritise the on-site reuse of demolition materials;
- Adopt on site recycling and, where required, use off site recycling; and,
- The least preferred option – disposal to landfill.

A site waste management plan will be developed which adopts best practice benchmarks for resource efficiency, details procedures and commitments to minimise non-hazardous and hazardous waste at the design stage and monitors/measures waste production on site. The plan will apply to the location of the building.

The site waste management plan will also include procedures and commitments to sort and divert waste from landfill through the following:

- Re-use on site;
- Salvage/ reclaim for re-use off-site;
- Return to supplier via a 'take-back' scheme;
- Recovery and recycling using an approved waste management contractor; and
- Compost.

Operational Waste

The communal refuse store provides safe and convenient access to the residents and is located on the ground floor. It is sized to accommodate 3 x 1,100 L general refuse eurobins, 3 x 1,100 L recycle bins and 2 x 240L food bins. The store holds specifications are in accordance with Policy CC5.

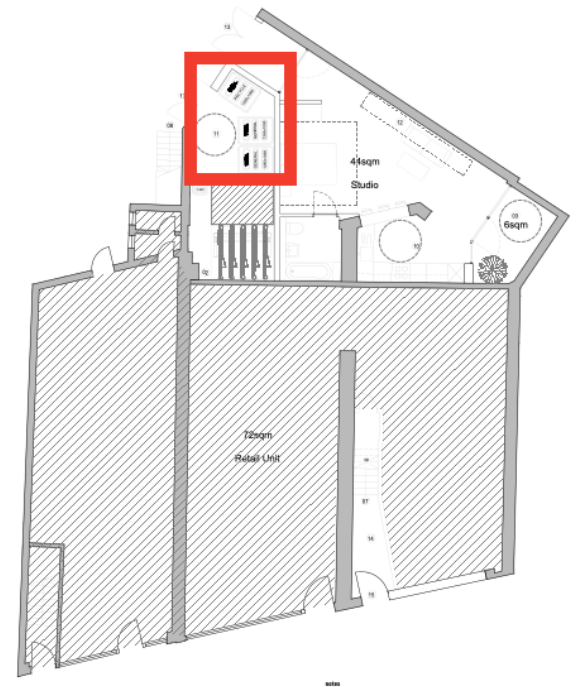


Figure 7: Proposes external waste storage area

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Construction Environmental Management

Environmental impacts of the construction works will be mitigated as far as possible. This will include the incorporation of the following:

- Contractor following environmental management system processes (under ISO14001), including the development of a construction environmental management plan (CEMP) specific to the sites;
- Training and site induction of all site operatives;
- Monitoring of energy, water and transport to and from site during construction;
- Management of waste on site;
- Following best practice pollution guidance from the Environment Agency;
- Ensuring all site timber is responsibly sourced in line with the UK Government's Timber Procurement Policy;
- Minimising vehicle emissions through the use of catalytic converters and the regular maintenance of vehicle engines;
- Damping down of brick walls etc. during any building demolition;
- Regularly inspecting and wet suppressing materials/soil stockpiles where necessary (including wind shielding or completely enclosing, storing away from site boundaries, and restricted height of stockpiles);
- Appropriate orientating of material stockpiles;
- Providing wheel washing and wet suppressing during the loading of wagons vehicles;
- Covering vehicles carrying dry soil and other wastes;
- Shielding of dust-generating construction activities;
- Providing suitable site hoarding;
- Restricting vehicle speeds on haul roads and other unsurfaced areas of the site; and,
- Inspecting unsurfaced haulage routes, and wet suppressing should this be necessary (in times of prolonged dry periods).

Considerate Constructors

The scheme will adopt the principles of the Considerate Constructors Scheme (CCS). The CCS scheme aims to recognise and encourage construction sites that are managed in an environmentally and socially considerate, responsible and accountable manner.

Construction Site utilities

The principal contractor will commit to monitoring of energy, water and materials and waste transport to and from site during construction. The following total consumption figures will be tracked and reported to the design team by the contractor at completion.

- Total Electricity consumption (kWh)
- Total electricity total carbon dioxide emissions (kgCO₂eq)
- Total gas total carbon dioxide emissions (kgCO₂eq)
- Total Gas consumption (m³)
- Total Water consumption (m³)
- Total distance travelled (km) for materials and waste transportation
- Total fuel consumption from material and waste transportation and/ or total carbon dioxide emissions (kgCO₂eq)

Water Efficiency

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Water Conservation

The development proposal recognises the need to create a scheme that is efficient and adaptable to future climatic scenarios.

The design team is committed to achieve a significant reduction in internal water use for the development over typical performance, equating to a water consumption target of 110 litres per person per day (including 5 litres for external water use) under the national technical standard as specified under Policy CC3. The design team is also committed to achieve a significant reduction in internal water through meeting the minimum credit requirements within BREEAM Domestic Refurbishment 2014.

Water consumption will be reduced through the use of water efficient components for all specified domestic water-consuming components (including low-flow showerheads and taps, dual flush toilets and low water consuming washing machines and dishwashers), water meters for each dwelling, water recycling systems where appropriate and flow control devices that regulate the supply of water to each facility according to demand.

A permanent automated water leak detection system that alerts the building occupants to a major water leak on the mains water supply within the building and between the building and the utilities water meter will be installed.

Transport and Connectivity

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Public Transport

The development has a PTAL rating of 4 which represents reasonably good connectivity as the network of public transport routes accessible from the site is good and easily accessible. There are four different bus stops located within 300m of the site serving 5 different bus routes. The closest bus stop, Burrard Road (Stop CA) is located in front of the development on the other side of the road and can be reached in 1 minute by foot. It is served by bus routes 13, 113 and N113. Finchley Road (Stop CN) located 270m walking distance from the site is served by bus routes 139 and 328. Finchley Road and Frognal Underground Station is within 2.2km south east from the site and is served by the Overground services to Notting Hill, Stratford as well as central London.

Cycling and Car Provision

Cycle parking will be provided in accordance with the London Plan, Policies DMH 4 and DMT 2. 14 secure and covered cycle spaces are proposed as indicated on the ground floor plan.

No dedicated parking will be provided for residents in line with the London Plan recommendations. The development is located in CA-P(A) Fortune Green car parking controlled area Monday to Friday 08:30 to 18:30. 'pay and display' parking spaces are available along Finchley Road, including in front of the proposed development.

Accessibility and Security

Creating a secure but fully accessible development is a key part of the proposed development, in line with Policy C5. To ensure this is achieved, the design team will adopt, where feasible, the key principles of "Secured by Design" within all elements of the scheme.

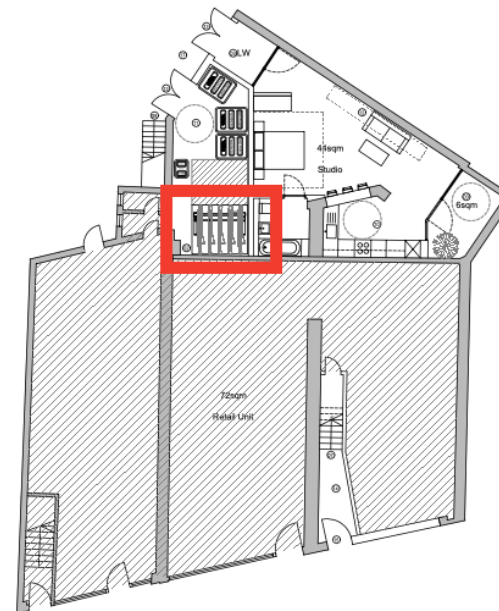


Figure 8: Ground Floor cycle storage

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Materials and Waste Introduction

Sustainable material sourcing and waste management will be considered throughout the life of the building to ensure the scheme's environmental footprint is minimised as far as possible. The scheme will also ensure low embodied carbon is employed throughout the procurement, transport and construction of building materials, together with end of life emissions.

Materials Selection and Sourcing

The design team has confirmed that efforts will be made to reuse materials where feasible and that where required, new materials will be responsibly sourced. New construction materials will be selected, where feasible, with a low environmental impact. In addition, the project will aim for new materials to come from a recycled or reused source, including a high-recycled content in steel. Minimum standards apply to new timber, which must be sourced in accordance with the UK Government's Timber Procurement Policy.

In addition, all timber will be FSC/ PEFC certified, all concrete will be BES 6001 certified, and any other material will be ISO 14001 certified for both key processes and supply chain/ extraction processes where feasible to do so. This is also reflected in the credits targeted in Mat 02 Responsible Sourcing of construction products under the BREEAM Domestic Refurbishment 2014 assessment of the scheme.

The Green Guide for Specification is a reference tool, providing guidance on the relative environmental impacts for a range of different building elemental specifications, based on Life Cycle Assessment and the Environmental Profile Methodology. The design team will reference the Green Guide to Specification to help specify materials with a low environmental impact, where feasible. The design will incorporate at least 5 build-up elements that will be A-C rated on the Green Guide.

Insulation specifications will eliminate hydrochlorofluorocarbons (HCFCs) and ozone depleting materials, wherever possible. All insulation specified will have a Global Warming Potential (GWP) of less than 5 and be responsibly sourced to have a low embodied impact.

Embodied Carbon Analysis

The development will utilise a number of opportunities to cut embodied carbon, as follows:

- A materials efficiency strategy will be followed throughout the design, procurement and construction stages of the development, to ensure the scheme produces less waste on site. For example, adjustment of some sizes will be made to minimise offcuts of materials, and some bespoke materials will be developed off-site;
- Materials will be procured from the local area where possible, to reduce carbon through transportation;
- Materials and products with a higher recycled content will be preferentially procured where feasible, as these have a low embodied carbon; and,
- Consideration has been made to use timber as a low embodied carbon alternative to steel and concrete where possible.

Health and Wellbeing Sustainability Statement 529 Finchley Road

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Occupant Wellbeing

The development has been designed to ensure the wellbeing of occupants in terms of levels of fresh air, thermal comfort and reduction of overheating, access to natural light, good lighting levels internally and externally, acoustic performance and access to safe drinking water.

The building services strategy has been carefully considered in order to balance the need for energy-smart, low carbon technologies with the need for adequate and controllable ventilation, heating and cooling.

Internal Air Quality

The design team will specify only low volatile organic compounds (VOC) finishing products, including sealants and paints. All composite wood products will contain no added urea formaldehyde.

External Air Quality

Construction Impacts

As the new build extension is considered minor and there is no increase in car parking, the expected increase in traffic resulting from the proposed development is not expected to exceed the threshold required by EPUK/IAQM guidance for developments within an AQM.

The principal contractor will follow Demolition and Construction Dust Management guidance in ensuring that activities have low impact on local air quality. This includes dust impact location, monitoring prior and during demolition, monthly reporting and mitigation procedures. Assuming good practice dust control measures are implemented, the residual significance of potential air quality impacts from dust generated by construction activities is predicted to be negligible.

Daylight

The design has been developed to allow the use of daylight within the dwelling to be maximised as far as practical.

Since the project doesn't include any major alternations of the fabric, the impact of the new development on the existing windows is considered acceptable in terms of daylight and sunlight access. The daylight and sunlight conditions within the proposed developments are deemed acceptable.

Acoustic Performance

The design team has considered the impact of external noise and it has been concluded there would be a negligible noise risk for the proposed site, largely because of the scale of the project and the lack of impact on noise from increased road traffic or any plant upgrades. Therefore, the current acoustic design is deemed suitable for the proposed residential use.

Inclusive Design

The guidance in the Approved Document M (March 2016) will be incorporated to achieve an inclusive built environment that enables users to maximise their individual abilities and enjoy a safe and independent participation. All units have been designed to demonstrate compliance to Part M4(1): Visitable dwellings.

Land Use and Ecology Sustainability Statement

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Protection of Biodiversity

The proposed development will promote the protection of the retained trees from damage during site demolition and the completion of the construction works.

The design team is committed to protecting biodiversity on site and will implement the following measures:

- Confirm that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process;
- Ensure that any affected trees and shrubs are cleared out of bird breeding season (March–August). Alternatively, a suitably qualified ecologist should check for the presence of active nests prior to the commencement of works;
- Implement working methods in line with best practice to manage dust and water runoff; and,
- During the construction phase a Biodiversity Champion will be appointed to monitor and limit environmentally detrimental activities. They will also train the workforce on the project to raise their awareness of environmental impacts during construction.

Ecological Enhancements

The design team is also committed to enhance biodiversity wherever possible on site in line with Policy A3. This includes implementation of planting on roof terraces and potential for implementation of a green roof.

The proposed development will aim to incur no negative change in ecological value and a suitably qualified ecologist will provide early design stage advice on:

- How to improve the ecological value of the site;
- Confirm that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process; and,
- Produce a landscape and habitat management plan to cover at least the first five years after project completion, if applicable.

Conclusions

Sustainability Statement

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Conclusions

This Sustainability Statement has responded to the London Borough of Camden local planning policy requirements.

In summary the scheme will adopt the following sustainable features:

- The whole development will reduce total carbon emissions by 46.2% and 76.34% over Building Regulations using SAP 2012 and draft SAP 10 carbon dioxide emission factors, respectively.
- Reduce energy consumption by targeting improved U-values and airtightness. Low energy lighting will be specified.
- Implement a site waste management plan and stringent resource efficiency benchmarks.
- Follow best practice policies in terms of air, water and ground pollution and appoint a contractor who will register for the Considerate Constructors Scheme.
- Achieve a water consumption target of 110 litres/person/day and a water consumption reduction in line with minimum requirements within BREEAM Domestic Refurbishment 2014 through the implementation of low water-consuming fittings.
- Utilise sustainable transport, including access to public transport and inclusion of cycle storage facilities.
- Minimise embodied carbon through efficient design, procurement of materials from a local source, or with a high-recycled content.
- Be of high build quality, surpassing the minimum Building Regulations.
- Ensure all materials are responsibly sourced and of low environmental impact where feasible.
- Consider health and wellbeing through design and operational procedures, including daylight, optimum indoor air quality and thermal comfort.
- Protect and enhance the ecological value of the site by introducing flower rich planting in communal areas.