

SUSTAINABILITY STATEMENT

30-36 Clarendon Road, London, N8 DL

Produced by XCO₂ for Paul Simon Magic Homes

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SUSTAINABILITY STATEMENT

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EXECUTIVE SUMMARY

The sustainability strategy for the development at 30-36 Clarendon Road has been developed with the design team to comply with the relevant environmental policies from the London Borough of Haringey Local Plan and the London Plan. Relevant energy policies have been addressed in the accompanying Energy Statement. The proposed development is targeting the achievement of BREEAM 'Very Good' and expected to reduce on-site regulated carbon emissions by 70.7% for the domestic part and 57.7% for the non-domestic part of the development, against a Part L 2013 compliance scheme with SAP10.2 carbon factors.

This report outlines the sustainability strategy for the proposed development at 30-36 Clarendon Road, in line with the requirements set out by the London Plan and the London Borough of Haringey.

This sustainability statement is divided into three parts:

- Planning Policies;
- Sustainability Measures; and
- Sustainability Standards.

The first part provides an overview of the site and planning policies applicable to this development in accordance with the London Plan and relevant London Borough of Haringey policies.

The second part then outlines the sustainability strategy that has been employed to address the relevant planning policies.

The third part of this report outlines how the proposed development aims to achieve a BREEAM New Construction 'Very Good' rating for the non-domestic areas.

The key sustainable design and construction measures incorporated in the proposals are summarised below:

- Effective re-use of previously developed land;
- The inclusion of low carbon and renewable technologies through the specification of passive design and energy efficiency measures, air source heat pumps and photovoltaics to achieve carbon reductions of 69.4% site-wide;
- Promoting sustainable forms of transport through the provision of cycle parking spaces;

- Bio-diverse roofs will also be introduced, and the seeking to achieve a net bio-diversity gain through incorporating ecological enhancements and an urban greening factor of 0.4 by utilising roofs for biodiversity gain and street tree planting;
- Provision of private and community open spaces, which will allow residents and building occupants to gather, socialise and connect to the natural environment, promote physical activity and wellbeing;
- Reducing surface water run-off from site through the incorporation of blue roofs' and underground attenuation tanks;
- Specification of high-performance fabric and glazing to minimise heat losses;
- Efficient design of the proposed massing, openings and internal layouts so that spaces benefit from sufficient daylight, whilst overheating and impacts to neighbouring buildings are minimised;
- Removing on-site NOx emissions and fossil-fuel combustion by specifying electrical heating from ASHP;
- Achieving an Air Quality Neutral classification;
- The specification of water efficient fittings to limit water consumption within dwellings to 105 litres/person/day, and targeting 3 credits (under BREEAM UK NC) for the non-domestic elements of the proposal;
- Effective pollution management and control; the development is not expected to have any significant adverse effects to air, noise, land, or watercourses.

SUSTAINABILITY STATEMENT

In summary, the proposed development at 30-36 Clarendon Road meets the targets set out by the London Borough of Haringey and the Greater London Authority (GLA). The commercial areas of the scheme could achieve a BREEAM score of 65.94%, exceeding the BREEAM 'Very Good' target of 70%.

The number of credits obtained in the BREEAM pre-assessment, and the sustainability measures incorporated reflect the client and design team's aspirations in integrating sustainability measures and demonstrates that the project is designed to exceed the planning policy sustainability requirements.

SITE

This chapter presents the description of the site and of the development proposal, this sustainability policy frameworks and the methodology employed for the sustainability statement.

The proposal is for the demolition of the existing building and construction of a part two, six, eight and eleven storey building, with basement, to provide 51 residential units and 560 sqm of commercial floorspace, with access, landscaping and car and cycle parking. The scheme incorporates public realm enhancements and a mix of private and communal

amenity space. It is located in 30-36 Clarendon Road, London N8 0DJ.

The approximate location and boundary of the application site is shown in Figure 1.

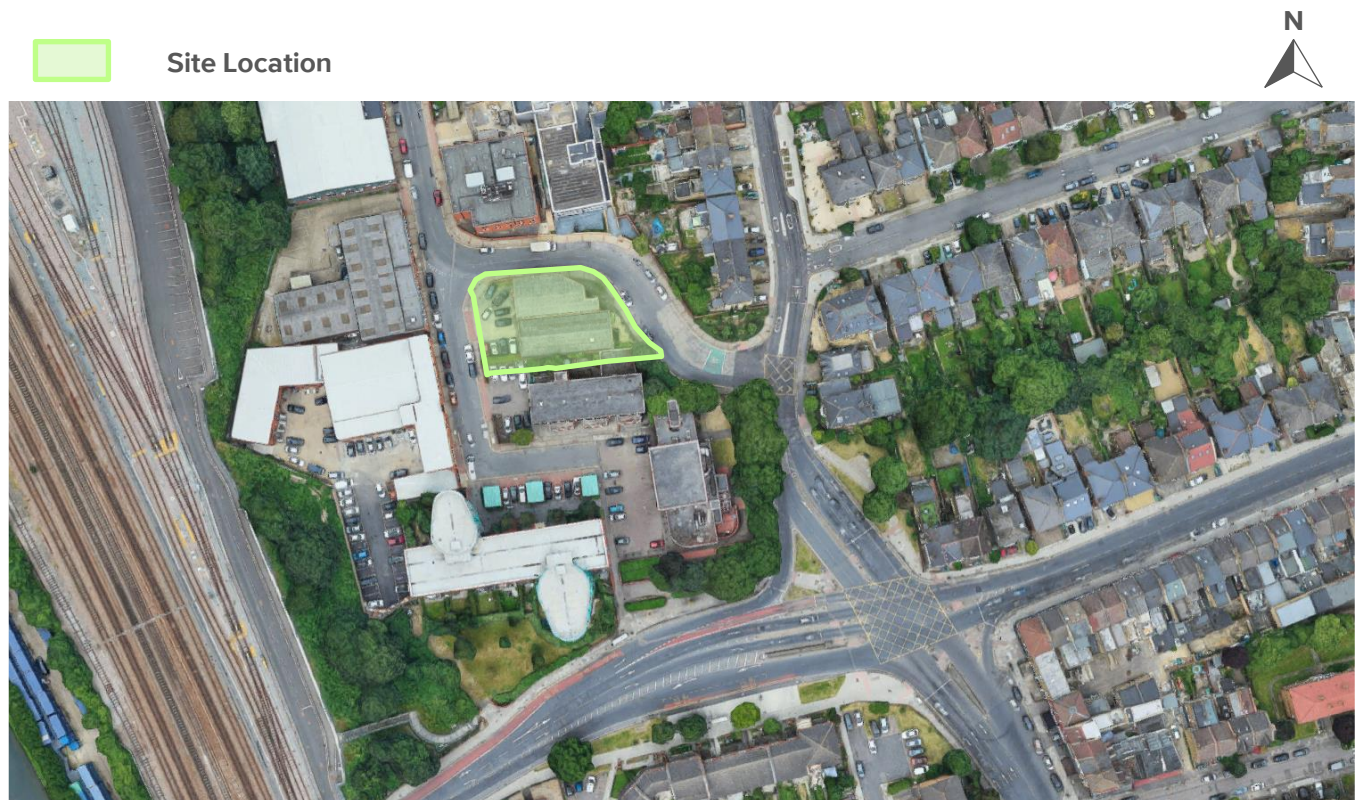


Figure 1: Approximate location of application site

PLANNING POLICY

The development at 30-36 Clarendon Road has been designed in line with the requirements set out by the London Borough of Haringey as well as the London Plan.

The relevant planning policy documents for sustainability are:

- The London Plan (2021);
- Housing Supplementary Planning Guidance (2016); and,
- Haringey Local Plan (2013).

THE LONDON PLAN (2021)

The London Plan (2021) published 2nd March 2021 sets out the Mayor's overarching strategic spatial development strategy for greater London and underpins the planning framework from 2019 up to 2041. This document replaced the London Plan 2016.

The new Plan has a strong sustainability focus with many new policies addressing the concern to deliver a sustainable and zero carbon London.

Policy GG6 Increasing Efficiency and Resilience is an overarching policy references London's target to become zero carbon by 2050 and the need to design buildings and infrastructure for a changing climate, addressing water, flood and urban heat island.

Sustainability is a trend through the whole Plan but is particularly addressed in chapter 9 Sustainable Infrastructure. The following sections outline the key principles of sustainable design and construction to be incorporated in major proposals.

Policy SI1 Improving air quality requires development proposals to be at least air quality neutral and submit an Air Quality Assessment.

“... ”

Development plans, through relevant strategic, site specific and area-based policies should seek opportunities to identify and deliver further improvements to air quality and should not reduce

air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.

“... ”

Any mitigation required to meet the Air Quality Neutral target should be done on site preferably.

Policy SI2 Minimising greenhouse gas emissions sets the requirements for all major developments to follow the energy hierarchy and achieve net-zero-carbon for both residential and non-residential schemes (via on-site carbon reductions and offset payments) and introduces new targets at Lean stage:

“... ”

This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:

1) be lean: use less energy and manage demand during operation

2) be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly

3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site

4) be seen: monitor, verify and report on energy performance.

“... ”

“... ”

A minimum on-site reduction of at least 35 per cent beyond Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:
1) through a cash in lieu contribution to the borough's carbon offset fund, or

*2) off-site provided that an alternative proposal is identified and delivery is certain.
..."*

This policy also sets the requirements to consider whole-life carbon emissions, including embodied carbon and unregulated emissions:

*"...
Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions.*

*Development proposals referable to the Mayor should calculate whole lifecycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.
..."*

The policy supporting text provides additional clarifications on the requirements for major developments:

- Developments including major refurbishments should also aim to meet the net-zero carbon target.
- All developments should maximise opportunities for on-site electricity and heat production from solar technologies (photovoltaic and thermal), use innovative building materials and smart technologies.
- Recommendation to use SAP10 carbon factors as per GLA Energy Guidance.
- Recommended carbon offset price of £95 per tonne CO₂.
- Requirement for major developments to monitor and report operational energy performance to the GLA.

Policy SI 3 Energy Infrastructure requires all major developments within Heat Network Priority Areas will need to utilise a communal low-temperature heating system. Where developments are utilising CHP this policy also requires them to demonstrate that 'the emissions relating to energy generation will be equivalent or lower than those of an ultra-low NO_x gas boiler'. Any combustion on site should meet the requirements of part B of Policy SI1.

Policy SI 4 Managing heat risk requires:

A Development proposals should minimise adverse impacts on the urban heat island through design, layout, orientation, materials and the incorporation of green infrastructure.

B Major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the following cooling hierarchy:

- 1) reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure*
- 2) minimise internal heat generation through energy efficient design*
- 3) manage the heat within the building through exposed internal thermal mass and high ceilings*
- 4) provide passive ventilation*
- 5) provide mechanical ventilation*
- 6) provide active cooling systems.*

Policy SI5 Water infrastructure sets the requirements to manage water resources efficiently:

*"...
Development proposals should:
1) through the use of Planning Conditions minimise the use of mains water in line with the Optional Requirement of the Building Regulations (residential development), achieving mains water consumption of 105 litres or less per head per day (excluding allowance of up to five litres for external water consumption)
2) achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent (commercial development)
3) incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise future-proofing.
..."*

Policy SI 7 Reducing waste and supporting the circular economy introduces the notion of circular economy whereby materials are retained in use at their highest value for as long as possible. For referable applications a Circular Economy Statement demonstrating how developments promote circular

economy and aim to be net zero-waste must be submitted.

Policy SI12 Flood risk management and **Policy SI 13 Sustainable drainage** sets the requirements for development proposals to ensure that flood risk is minimised, and that sustainable drainage is incorporated. This should be pursued by integrating different strategies including natural flood management. Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. For this green features should be employed, following the drainage hierarchy.

Policy D14 Noise requires that noise impacts are minimised and mitigated to avoid any adverse impacts on health and quality of life and to reflect the principles set in **Policy D13 Agent of Change** that *“places the responsibility for mitigating impacts from existing noise and other nuisance-generating activities or uses on the proposed new noise-sensitive development.”*

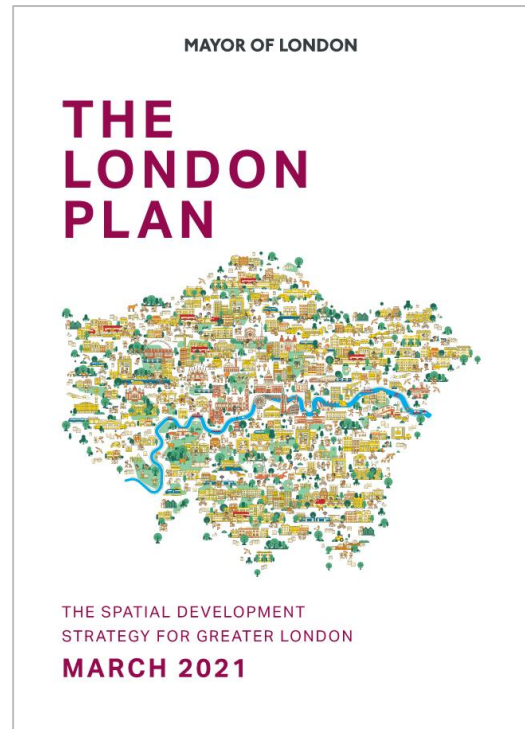
Policy G5 Urban greening requires major developments to contribute to greening of London assessed by an Urban Greening Factor (UGF).

Boroughs should develop their UGF but *“the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses).”*

Separate guidance on UGF is under consultation in Spring/Summer 2021.

Policy G6 Biodiversity and access to nature states:

“
...
Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.
...”

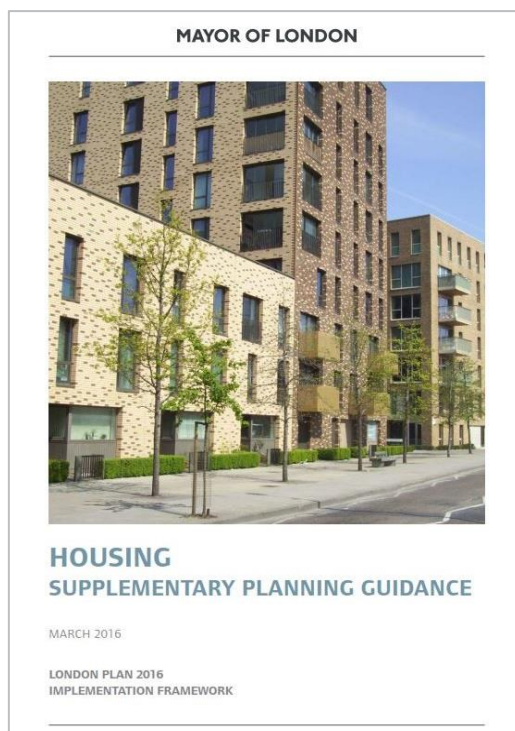


HOUSING SPG

This document provides guidance on the implementation of housing policies in the London Plan and it replaces the 2012 Housing SPG.

Part 2 covers housing quality and updates London housing standards to reflect the implementation of the government's new national technical standards through the Minor Alterations to the London Plan (2015-2016).

As design affects the quality of life, health & wellbeing, safety and security of users and neighbours, this guidance is integral to sustainable development and will be cross-referenced as relevant in the subsequent sections.



LONDON BOROUGH OF HARINGEY LOCAL PLAN (2013)

The Local Plan: Strategic Policies (referred to as the Local Plan throughout the document), sets out a vision and key policies for the future development of the borough up to 2026. It takes forward the priorities of Haringey's Sustainable Community Strategy and other plans and strategies, to identify a vision for Haringey as a place to live, work and visit, and contains key policies and an implementation framework to deliver the vision.

The Local Plan is in the process of being updated, due to be submitted for examination in 2022.

SP4: Working towards a Low Carbon Haringey

Over the lifetime of the Local Plan, reducing energy use in buildings and working towards a low carbon borough will be one of the key challenges facing Haringey.

The Council will promote the measures outlined below to reduce carbon emissions from new and existing buildings.

1. In line with London Plan policy, the Council will promote and require all new developments to take measures to reduce energy use and carbon emissions during design, construction and occupation, by incorporating the following measures:

- a. From 2011 onwards, all new residential development will achieve a minimum 25% reduction in total (regulated) CO₂ emissions in line with Code for Sustainable Homes Level 4 energy standards, and should aim to achieve Level 6. All new residential development shall be zero carbon from 2016 onwards; and
- b. From 2011 onwards all new non-residential development shall be built to at least BREEAM "very good" standard and should aim to achieve BREEAM "excellent" or the current nationally agreed standard. All new non-residential development shall be zero carbon from 2019.

2. The Council will promote low- and zero-carbon energy generation through the following measures:

- a. Requiring all developments to assess, identify and implement, where viable, site-

- wide and area-wide decentralised energy facilities including the potential to link into a wider network;
- b. Establishing local networks of decentralised heat and energy facilities by requiring developers to prioritise connection to existing or planned networks where feasible;
- c. Working with neighbouring boroughs and other partners to explore ways of implementing sub-regional decentralised energy networks including the potential in the Upper Lee Valley Opportunity Area; and
- d. All new developments are required, where viable, to achieve a reduction in predicted carbon dioxide emissions of 20% from on-site renewable energy regeneration, which can include connections to local sources of decentralised renewable energy.

SP5: Water Management and Flooding

The Council will require all development in Haringey to be water efficient during construction and operation and to reduce all forms of flood risk. All development shall:

- Improve the water environment, water quality and drainage systems;
- Minimise water use and illustrate how development would contribute to general and flash flooding;
- Take account of flood risk vulnerability classification as set out in paragraph 100 of the NPPF and will apply the NPPF Sequential Test and Exception Test;
- Implement measures to prevent (or mitigate as last resort) local surface water and downstream flooding;
- Implement Sustainable Drainage Systems from strategic to individual site level to improve water attenuation, quality and amenity;
- Restore and enhance the Blue Ribbon Network including Pymmes Brook, Moselle Brook, the River Lee and its tributaries, deculverting wherever feasible, to improve water quality and amenity of these waterways and to help reduce flood risk (in line with London River Action Plan); and
- Require higher resilience and levels of flood protection for critical infrastructure to ensure

the protection of essential services such as water and power.

In order to facilitate this, the Council:

- Has carried out a joint SFRA (Strategic Flood Risk Assessment) Stage 1 for the whole borough;
- Has carried out a Sequential Test for the Areas of Development (Growth Areas and Areas of Change);
- Is carrying out, in association with other north London boroughs in the Drain London sub-region, a Surface Water Management Plan to identify issues with drainage networks and the effects of new development.

SP6: Waste and Recycling

The Council supports the objectives of sustainable waste management set out by the Government in PPS10 Planning for Sustainable Waste Management and the Mayor's London Plan. To achieve these, the Council shall:

- Safeguard existing waste sites unless compensatory provision is made;
- Maximise self-sufficiency in waste management capacity;
- Seek to minimise waste creation, increase recycling rates in relation to commercial, industrial and municipal waste in order to achieve the Mayor's recycling targets;
- Address waste as a resource and look to disposal as the last option, in line with the Mayor's waste hierarchy;
- Require integrated, well-designed recycling facilities to be incorporated into all new developments;
- Monitor changes in the stock of waste management facilities, waste arisings, and the amount of waste recycled, recovered and going for disposal; and
- Continue working with its partners in the North London Waste Authority to adopt the North London Waste Plan (NLWP) which has identified locations suitable for waste management facilities to meet the London Plan apportionment of 1.9-2.1m tonnes and the Haringey apportionment of 237,000 182,000 tonnes.

Haringey will require Site Waste Management Plans for all major applications to identify volume and types of demolition and construction waste and to demonstrate how waste will be minimised and managed during construction and occupation. New waste management facilities will be required to take into account and minimise pollution and nuisance issues. This is addressed in more detail in the Development Management Policies document.

SP7: Transport Delivering Regeneration and Access

In line with London Plan policies, the Local Implementation Plan (LIP) and the Mayor's Transport Strategy, the Council will work with its partners to promote the following key infrastructure proposals to support Haringey's regeneration and local/strategic access to London, employment areas and local services;

- The Council, in cooperation with neighbouring boroughs, will seek to reduce the impact of larger lorries in local residential areas and town centres and investigate the feasibility of a freight distribution hub;
- Improvements to the Piccadilly, Victoria and Northern Lines including new trains, new signalling and new control centres;
- Improvements to overground routes along West Anglia, East Coast (Great Northern) and Barking - Gospel Oak line that service the centre and east of the borough;
- Access and interchange improvements to overground stations at Alexandra Palace, Finsbury Park, Harringay, Hornsey White Hart Lane, Northumberland Park, South Tottenham, and Bruce Grove;
- Improvements to interchanges at Tottenham Hale and Seven Sisters;
- Improvements to the Tottenham Gyratory; and
- Improvements to east - west bus routes as well as promoting new east - west routes.

SP13: Open Space and Biodiversity

New development shall protect and improve Haringey's parks and open spaces. All new development shall:

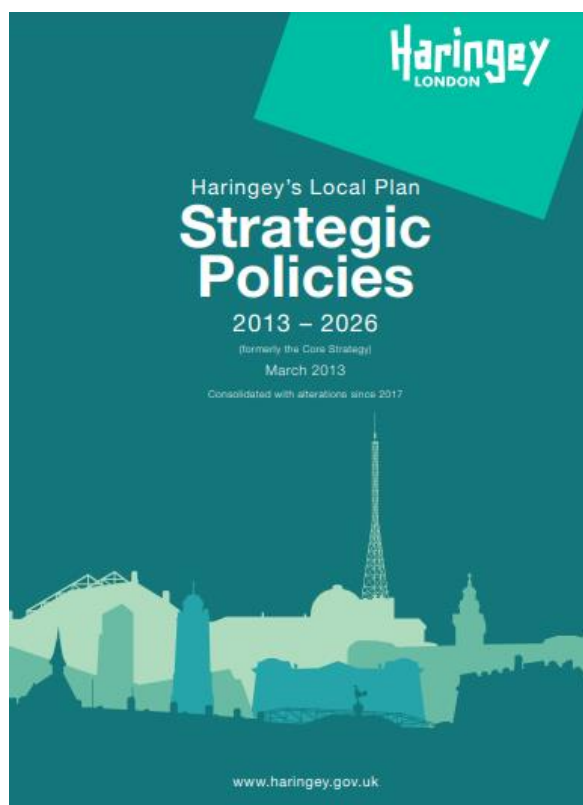
- Protect and enhance, and when and where possible, extend the existing boundaries of the borough's Green Belt, designated Metropolitan Open Land, designated Open

Spaces, Green Chains, allotments, river corridors and other open spaces from inappropriate development;

- Provide amenity space in accordance with the Council's Open Space and Recreational Standards Supplementary Planning Document (SPD);
- Manage the impact of such new developments in areas adjacent to designated open space;
- Secure improvements, enhancement and management in both quality and access to existing green spaces;
- Seek on-site or financial contributions towards open space from new developments as set out in the Open Space and Recreational Standards SPD;
- Seek to secure opportunities for additional publicly accessible open space especially in those identified areas of Open Space deficiency e.g. in the east of the borough where the quality and amount of provision is poorer as set out in the Council's Open Space and Recreational Standards SPD; and
- Conserve the historic significance of the borough's designated historic parks and gardens. All development shall protect and improve sites of biodiversity and nature conservation, including private gardens through its:
 - Contribution to wildlife and ecological habitats and, where possible, include green and brown roofs, rainwater harvesting, green walls, bird and bat nesting/roosting opportunities;
 - Protection, management and maintenance of existing trees and the planting of new trees where appropriate; and
 - Protection, enhancement and creation of Sites of Importance for Nature Conservation (SINCs) and Local Nature Reserves (LNRs). The Council will enhance and improve the borough's green infrastructure through:
 - Implementation of the Haringey Green Grid projects (such as Lordship Recreation Ground Improvements);
 - Working with adjoining boroughs and partners to safeguard the existing Green Infrastructure, to create new green infrastructure and link up sites; and
 - Working with Lee Valley Regional Park Authority to protect and enhance access to the park, its waterside open spaces and habitats, recreational and sporting facilities.

New development shall provide opportunities for Children's Play Space by:

- Protecting and enhancing existing play spaces;
- Making provision for children's informal or formal play space in addition to amenity space provision as set out above;
- Provide children's informal or formal play space to meet minimum of 3m² as set out in the Council's Open Space Standards SPD and an aspirational target of 10m² as set out in the Mayor's SPG Providing for Children's and Young People's Play and Informal recreation;
- Ensuring easy access to a range of quality and safe play opportunities for all children and within a practical journey from their home without the need to use public or private transport;
- Provide play spaces that are attractive, welcoming and engaging for all children and young people, children of both gender, disabled children and children from minority groups in the community; and
- Securing a financial contribution pursuant to a S106 Agreement towards the provision of Children's Play Space and ensuring its long-term maintenance is addressed through planning obligations.



LONDON BOROUGH OF HARINGEY NEW LOCAL PLAN FIRST STEPS ENGAGEMENT

The council has started work on a new Local Plan, which is intended to run from 2022 to 2037. Formal consultation on the New Local Plan: First Steps ran from 16 November 2020 until 1 February 2021.

Design

The New Local Plan will set out a clear design vision and expectations for development, playing a proactive role in helping to secure good growth through good design which reconciles the high levels of growth and densification necessary over the forthcoming plan period whilst addressing inequalities and preserving and enhancing the borough's local character, natural and historic environments.

Climate change and sustainability

The New Local Plan is an important tool for addressing the Climate Emergency by making sure to:

- A. Reduce climate change by developing planning policies that support a radical reduction in greenhouse gas emissions
- B. Adapt to climate change by understanding its long-term implications on the borough and developing policies that help ensure the future resilience of our communities and infrastructure.

This engagement is part of the Council's commitment to working collectively with the community and wider stakeholders in tackling this challenge. Addressing the Climate Emergency cuts across all aspects of the New Local Plan. This section focuses on reducing climate emissions in the context of the buildings and waste management, as well as how we can adapt to climate change. Other key sections with particular relevance to climate change include transport and open spaces.



PROPOSED SUSTAINABILITY MEASURES

This part of the report presents the key elements of the proposal that underpin environmental sustainability, demonstrates how the development complies with sustainable development policies and incorporates guidance on sustainable design and construction.

LAND AND SITE LAYOUT

Land use

The land for this proposal is efficiently used as the scheme will be constructed on previously developed land. The site currently comprises a 1970's two storey industrial unit (Jessica Buttons factory), which is in use as a temporary nursery. The site has nine parking spaces. The site is not in a conservation area and no buildings are listed.

The proposed scheme comprises the construction of a part two, six, eight and eleven storey building, with basement, to provide 51 residential units and 560 sqm of commercial floorspace, with access, landscaping and car and cycle parking.

Reuse of Existing Buildings

There isn't scope to reuse existing buildings on site. However, a pre-demolition audit must be carried out before any commencement on site so that the design team can quantify key demolition and refurbishment products, identify opportunities to maximise reuse and recycling and optimise the management of products and materials.

Further measures will be identified within the accompanying Circular Economy Statement prepared by XCO2.

Land Form and Site Layout

Consideration has been given to the layout and scale of both the surrounding buildings and the buildings to be demolished.

The scale of the development follows a principle of densification but, at the same time, has a sensitive approach to massing, taking into account the

neighbouring buildings with regard to height and overall volume.

The scheme comprises a missed use development over two, six, eight and eleven storey building, with basement, to provide 51 residential units and 560 sqm of commercial floorspace. The buildings with increased height in strategic locations act as local landmarks as well as improving wayfinding; the scheme's height drops down from west to east, to reflect the scale of properties on Hornsey Park Road, with the highest element in the north east.

Daylight & Sunlight Impacts

Consideration has been given to neighbouring amenity and open spaces; due to appropriate design of the building and overall site layout these will experience minimal overshadowing effects.

A daylight and sunlight assessment has been carried out to determine the potential impacts on the access to daylight and sunlight of neighbouring properties. Breaking down the building massing and opening up of courtyards in key locations has improved sunlight and daylight to amenity space.

The scheme has also been found to have no adverse effects on access to daylight and sunlight of neighbouring properties. Please refer to the Daylight and Sunlight Assessment, prepared by XCO2, submitted in support of this application.

Micro-climate

A microclimate is the distinctive climate of a small-scale area and the variables within it, such as temperature, rainfall, wind, or humidity may be subtly different to the conditions prevailing over the area as a whole. The main characteristics of microclimates within London are temperatures and wind.

SUSTAINABILITY STATEMENT

The proposed scheme is not of a scale that could potentially have any significant impact on wind conditions around the site or any adverse effects on pedestrian and residents' comfort.

Hilson Moran were previously appointed to provide a wind microclimate assessment for the proposed masterplan development. Levels of pedestrian comfort and distress were quantitatively assessed against the widely used Lawson Criteria (LDDC method), as set out in Building Aerodynamics by Tom Lawson, [Imperial College Press (2001)]. The assessment used Computational Fluid Dynamics (CFD) to simulate wind from 36 wind directions, and combined the results with meteorological data to assess the conditions against the quantitative thresholds. As a conservative measure, the simulations did not include the effect of the many proposed and existing trees and other soft landscaping.

The results showed that in most regions, the conditions continue to be milder than the required threshold.

Urban Greening

The proposed scheme will contribute to the increase of green spaces within the London Borough of Haringey. Strong ecological routes will be established between existing and new habitats through continuity of green spaces and tree planting. This design will also encourage an increase in physical activity and relaxation of occupants and contribute to an improvement in local air quality and reduction of the Urban Heat Island effect.

The development seeks to achieve an Urban Greening Factor of 0.4, in line with Policy G5 of the London Plan for residential-led sites. All residential units will have their own private amenity space and the three communal areas (incorporating play space and seating areas) are proposed at roof level and at the sixth and eighth floor as follows:

- Sixth floor – comprising 105 sqm of play space for 0-4 year olds and 45 sqm of communal amenity garden;
- Eighth floor – 39 sqm of play space for 5-11 year olds and 54 sqm of communal amenity garden; and
- Roof – 193 sqm of communal amenity area.

The proposed play space for 0-4 and 5-11 year olds meets the GLA play space requirements for the anticipated child yield for under 12's.

The principles of the landscape strategy for the wider site are retained and as part of the master plan approach, existing trees will be retained to the south and east of the site and additional trees introduced along the eastern edge of the site. The master plan will provide a net gain in usable public space and will improve the pedestrian experience along Clarendon Road with wider paths, street furniture and planting. Public art will be introduced within the widened public realm to the east of the building. Bio-diverse roofs will also be introduced, and the proposed scheme will achieve a net bio-diversity gain incorporating ecological enhancements and an urban greening factor of 0.4 by utilising roofs for biodiversity gain and street tree planting.

Impacts on Neighbours from Demolition and Construction

The use of the Considerate Constructors Scheme will be encouraged to ensure that contractors carry out their operations in a safe and considerate manner to avoid disturbances to neighbours.

Construction impacts such as dust generation and increased traffic movements will be minimised through adoption of best practice construction measures, formalised through the production of a Construction and Environmental Management Plan to be delivered by the main contractor where appropriate.

Land Contamination

In the event of any discovery of potentially contaminated soils or materials, this discovery will be quarantined and reported to the most senior member of site staff or the designated responsible person at the site for action. The location, type and quantity will be recorded and the Local Authority, a competent and appropriate third party Engineer/Environmental consultant will be notified immediately. An approval from the Local Authority will be sought prior to implementing any proposed mitigation action.

SUSTAINABILITY STATEMENT



Figure 2: External spaces on the sixth, eighth and roof terrace level, prepared by Stock Wool, September 2022.

HEALTH AND WELLBEING

Inclusive Design

The development aims to prioritise the future needs of occupants by ensuring that all dwellings and shared amenity spaces are designed to comply with Part M of the Building Regulations and includes full wheelchair accessible units.

Safety and Security

The overarching safety and security strategy is to create open and accessible landscape with active frontages addressing the public realm and key routes through the site.

A key part of the approach to security will be to engage and consult with the Designing Out Crime Officer (DOCO) early in the design process for their feedback to be incorporated into the evolving design of the buildings and public realm. Therefore at the next stage a DOCO will be consulted and recommendations incorporated. Additionally, a Secured by Design accreditation will be investigated.

Open Spaces/Amenity

Private amenity spaces and communal open spaces will be provided to allow residents and building occupants to gather, socialise and connect to the natural environment. This will also enhance the occupant's wellbeing as nature can significantly improve mood and happiness.

Play spaces will be provided to provide safe access to good quality, well designed and secure recreation spaces for children and young people, incorporating trees and greenery wherever possible.

All units have their own private amenity space, and three communal areas (incorporating play space and seating areas) are proposed at roof level and at the sixth and eighth floor as follows:

- Sixth floor – comprising 105 sqm of play space for 0-4 year olds and 45 sqm of communal amenity garden;
- Eight floor – 39 sqm of play space for 5-11 year olds and 54 sqm of communal amenity garden; and
- Roof – 193 sqm of communal amenity area.

The proposed play space for 0-4 and 5-11 year olds meets the GLA play space requirements for the anticipated child yield for under 12's. Older children will have access to a number of green spaces in the vicinity of the site, including Clarendon Square, Lordship Recreation Grounds, Ducketts Common and Alexandra Park.

Daylight/Sunlight

By providing appropriate amounts of glazing and including balconies to all flats the proposed development ensures that occupants can enjoy satisfactory levels of visual comfort and beneficial effects from daylight exposure, whilst also reducing energy consumption by minimising the use of artificial lighting as far as feasible.

Physical activity

The presence of amenity providers (shops, pharmacies, public park) within walking distance to the development will encourage residents to walk rather than use personal vehicles. The provision of cycle storage spaces will also encourage the use of alternative means of transportation for longer distances trips.

ENERGY & CARBON DIOXIDE EMISSIONS

The Energy Strategy for the development has been designed in line with the London Plan's Policy SI2 and London Borough of Haringey's Policy SP4, which states that every effort should be made to minimise carbon dioxide emissions in accordance with the following energy hierarchy:

1. Be lean: use less energy
2. Be clean: supply energy efficiently
3. Be green: use renewable energy
4. Be seen: monitoring

Be Lean

The buildings have been thoughtfully designed to reduce energy demand through an enhanced building fabric, minimising heat loss through air infiltration, reducing reliance on artificial lighting, utilising low energy lighting and ensuring adequate levels of ventilation are maintained whilst reducing heat loss through the specification of MVHR.

At the 'Be Lean' stage, the proposed development exceeds the GLA target of 10% regulated CO₂ emission reductions for the residential portion of the scheme, and a 15% reduction for the non-domestic portion of the scheme when applying both SAP10 and SAP 2012 carbon factors.

Be Clean

As discussed in detail in the Energy Statement, prepared by XCO₂, connection to a district heat network was not found to be feasible for this project.

A review of the map showed that there are no existing or proposed heat networks within the proximity to the site. Furthermore, according to Haringey's proposed district heating networks there is a proposed network for Wood Green. Wood Green is a proposed network that will be the first phase of the DEN, focusing on developments at Clarendon Square, the Chocolate Factory and other nearby sites potentially including a new Council office on Wood Green High Road. There is currently a 10-year window for the connection to become available. Due to this, a connection at this point was not found to be feasible and low carbon heating on site is proposed.

Be Green

A range of renewable technologies were considered for generating on-site renewable energy. Photovoltaic panels and air source heat pumps (ASHP) were considered suitable technologies for this development due to adequate flat roof space, easy installation process, and substantial CO₂ savings. The incorporation of these two technologies into this development would contribute a reduction of 47.7% resulting in a total offset of 69.4% of regulated CO₂ emissions over the baseline emissions.

Further details about the photovoltaic and ASHP strategy, alternative renewable technology options and site-wide CO₂ emission reductions can be found in the accompanying Energy Statement, prepared by XCO₂.

Be Seen

A monitoring strategy will be put in place to ensure that the actual energy performance of the development can be monitored and reported for the first five years post-occupation, in line with GLA guidance.

The relevant parties will also be made aware of their responsibilities at subsequent reporting stages.



WATER

Water Efficiency

The development at 30-36 Clarendon Road aims to reduce water consumption to less than 105 litres per person per day, in line with the recommended target set out in the Housing SPG, through the use of water efficient fittings, and these are listed below.

Table 1: Recommended specification for sanitary fittings

Fitting	Fitting specification
WC	6/3 litres dual flush
Kitchen sink tap	6 litres per min
Wash basin tap	4 litres per min
Shower	8 litres per min
Bath	180 litres
Washing machine	8.17 litres/kg
Dishwasher	1.25 litres/place setting



When the end tenants are known for the commercial units (currently designed as shell and core), they will be encouraged to make a commitment to specify and install water saving fixtures and fittings to achieve a 40% reduction over industry baseline or greater. This is equivalent to 3 credits in the BREEAM Wat01 category.



Water Efficient Landscaping

Potable water consumption reduction from irrigation can be further maximised through a combination of water reuse and use of both native and drought resistant plant species, which will thrive with little to no irrigation and rely only on natural rainfall.

MATERIALS AND WASTE

Responsible Sourcing

100% of the timber used during construction will be sourced from accredited Forest Stewardship Council (FSC) or Programme for the Endorsement of forestry Certification (PEFC) source.

The main contractor will be required to prioritise products holding responsible sourcing certification (EMS/ISO14001) for the key process as per minimum, to ensure economic, social, and environmentally responsible practices are implemented throughout construction products supply chain.

Healthy Materials

To minimise potential sources of indoor air pollution, low VOC paints, finishes and other products will be prioritised as far as practically possible. Best practice design detailing and careful construction techniques will also be employed to reduce the risk of thermal bridging and condensation issues, limiting the potential for mould growth.

Embodied Carbon

To further reduce carbon emissions over the lifecycle of the building, low embodied carbon materials will be used as far as practically possible, whilst also focusing on design practices to reduce waste production.

Circular Economy

Circular economy is based on three key principles: design out waste, keep products and materials in use, and regenerate natural systems. These principles will be applied during the design and construction of the proposed development by following the actions noted below:

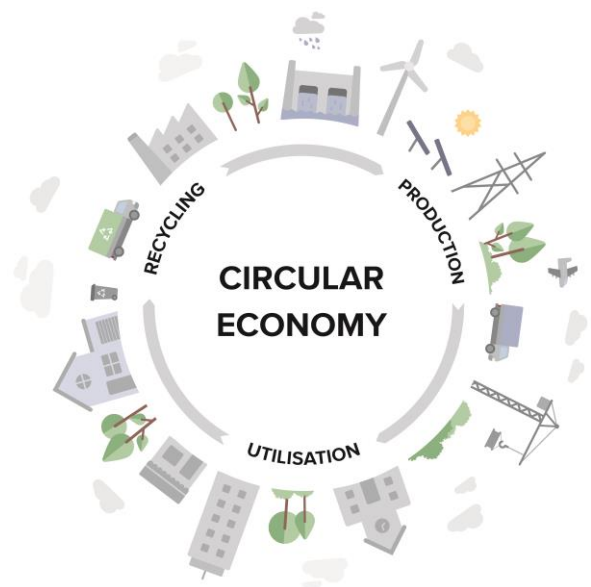
- Design out the need for building components and materials;
- Use of reclaimed materials and remanufactured components over new;
- Product selection considering its entire lifecycle, such as products which can be remanufactured or reused; products with high recycled content; products designed for disassembly; and recyclable or compostable materials.

Construction Waste

A site waste management plan will be prepared for the development, and will include a pre-demolition audit to identify any key materials suited for recovery and reuse. The SWMP will outline the methodologies for estimating waste quantities and streams generated during the demolition, excavation, and construction stages of the site works, and set out recommended measures required to be adopted by the Main Contractor to minimise these as far as practically possible.

Operational Waste

An operational waste management strategy will be produced and implemented for the proposed development. This will demonstrate how the development has taken into account sustainable methods for waste and recycling management during its operation in order to meet requirements from the London Plan and London Borough of Haringey policies



NATURE CONSERVATION & BIODIVERSITY

The ecology on site will be improved via the introduction of landscaped areas within the proposed private and communal gardens and planting on land that is currently covered with hard surfacing or existing buildings. The intended planting strategy for these areas is simple low level flora, with hedge planting and small ornamental trees. Native plant species will be introduced to these areas where possible. This will help to attract invertebrates, birds, and other fauna to the area.

There are existing mature trees along Hornsey Park Road, along the eastern boundary of the site.

All units have their own private amenity space, and three communal areas (incorporating play space and seating areas) are proposed at roof level and at the sixth and eighth floor as follows:

- Sixth floor – comprising 105 sqm of play space for 0-4 year olds and 45 sqm of communal amenity garden;
- Eighth floor – 39 sqm of play space for 5-11 year olds and 54 sqm of communal amenity garden; and
- Roof – 193 sqm of communal amenity area.

The proposed play space for 0-4 and 5-11 year olds meets the GLA play space requirements for the anticipated child yield for under 12's. Older children will have access to a number of green spaces in the vicinity of the site, including Clarendon Square, Lordship Recreation Grounds, Ducketts Common and Alexandra Park.

for biodiversity gain and street tree planting.

An ecological impact assessment for the proposed development at 9-30 Clarendon Road has been undertaken and their recommendations listed below will be implemented to ensure the protection of ecological features and enhancement of biodiversity on the development site.

- Undertake an Arboricultural Impact Assessment to assess the value of existing trees;
- Retention of trees, where possible;

- Ensure the aims and objectives of Biodiversity, Green Infrastructure and Trees, Woodland and landscapes policies are promoted through positive management;
- Create native habitats to link nearby designated sites, including New River to the west;
- Planting of ornamental shrubs with a known value for wildlife within the external soft landscape with particular emphasis on native species or plants suitable for pollinators;
- Installation of wildlife shelters for birds to include flagship species such as swifts, house sparrow and song thrush;
- Installation of roosting boxes for bats;
- Create biodiverse roofs;
- Installation of wildlife shelters for invertebrates;
- Create deadwood for saproxylic invertebrates including stag beetle and log piles for amphibians and reptiles;
- Omit the use of pesticides and herbicides within the proposed external landscape, and;
- Ensure sensitive lighting is implemented to minimise disturbance to bats and to protect the nearby Green Chain and New River designated sites.

A copy of the Ecological Impact Assessment can be found accompanying this statement with the planning application.



CLIMATE CHANGE ADAPTATION

Overheating

The potential risk of overheating will be mitigated by incorporating both passive and active design measures.

The space heating and hot water to both the domestic and non-domestic elements of the development will be provided by a communal system comprised of ASHP and high efficiency gas boilers. All heat sources and pipe work will be sufficiently insulated to avoid excess heat loss into internal space.

Efficient lighting will be used to further minimise internal heat gains and reduce energy expenditure.

Appropriately sized windows will reduce solar heat gains. Internal blinds will be included in the domestic and non-domestic spaces to reduce the solar gains into occupied rooms where required. Glazing with low transmittance will be used throughout the development to reduce solar gains and reduce the risk of overheating.

During peak summer periods the thermal mass of the buildings will absorb and store excess heat. The buildings will release heat in the cooler evenings to allow for cooler internal spaces, dampening the peak diurnal weather conditions.

The dwellings have allowed for passive ventilation as the secondary strategy for providing fresh air and dissipating heat.

Surface Water and Flooding

The site is located in Flood Zone 1, therefore is at low risk from fluvial or tidal flooding. The Flood Risk Assessment also considers the risk of flooding from other sources including groundwater, surface water and reservoirs.

Sustainable urban drainage systems (SUDS), comprising **blue roofs and below ground attenuation tanks** will be incorporated on site and the buildings' fabric and structure will be designed to minimise risk of infiltration and damage via flooding where possible.

The discharge rate from the development will be restricted and achieves an 84.2% reduction on existing peak flows for the 100-year storm event. In addition to the SuDS measures incorporated, the required

attenuation storage volume will be provided through the attenuation tanks located beneath the basement.

Further details on the incorporation of SUDS for this scheme can be found in the Flood Risk and Drainage Assessment prepared by Graphic Structures submitted in support of the planning application.



AIR, NOISE AND LIGHT

Air Quality

Air pollution risks from construction and demolition activities on site will be minimal in line with the SPG 'The control of dust and emissions from construction and demolition' under the following categories:

- demolition;
- earthworks;
- construction;
- trackout; and,
- non-road mobile machinery (NRMM).

An air quality assessment has been carried out, by The PES to determine the impacts from dust and stationary plant emissions during the construction period and the potential impact from traffic flows on the local road network on both on-site and off-site receptors, during and after construction. Where necessary, mitigation measures are recommended to reduce any air quality impact.

During the operational phase of the development, combustion of fossil fuels will be removed via an electricity-led servicing strategy (for further details please refer to the accompanying Energy Statement). In addition to the provision of electricity-led servicing strategy, the development will also contribute to the improvement of local walking and cycling infrastructure and local public transport.

In addition the development will also contribute to the improvement of local walking and cycling infrastructure and local public transport.

Overall, the development will meet 'air quality neutral' benchmarks set out in the London Plan. For further details please refer to the Air Quality Assessment submitted in support of the application.

Noise

The development will incorporate design and building fabric measures to mitigate potential noise levels from the proposed development, and ensure the impact of any external sources on internal ambient noise levels are within acceptable limits.

Please refer to the Acoustic Assessment Report produced by RBA Acoustics submitted in support of this application for a detailed analysis.

LIGHT POLLUTION

The lighting design of the proposed development will follow the recommendations of the Institution of Lighting Engineers' Guidance Notes for the Reduction of Obtrusive Light (2005), to minimise light pollution.

Further mitigation measures will be implemented to ensure disturbance to wildlife is minimal, in line with recommendations from the ecologist in their impact assessment.

Water Pollution

Water pollution to surrounding watercourses has been minimised by the incorporation of below ground attenuation tanks. In addition, contractors will adopt best practice policies to mitigate water pollution from construction activities on site.

The development will discharge domestic sewage via a connection to the public foul sewer or combined sewer network where it is reasonable to do so.



TRANSPORT

Alternative means of transportation

In order to underpin the reduction of emissions from transport, the development has been designed to encourage cycling; cycle parking will be provided to all occupants in dedicated basement and ground floor stores, to meet London Plan standards. The proposed development will be car free, with the exception of two disabled parking spaces provided on site at the south west of the building. Servicing of the building will be from the west of the building.

Public Transport Accessibility

9-30 Clarendon Road achieves a public transport access level (PTAL) rating of 5, indicating a good connectivity.

The master plan will provide a net gain in usable public space and will improve the pedestrian experience along Clarendon Road with wider paths, street furniture and planting.

Proximity to Amenities

The site has a number of nearby local amenities ranging from The Mall Wood Green shopping centre, which is 850m away. In addition there are a number of additional amenities located within 1km of the site such as: Post Office, Tesco Express, B&Q, cash points and Ducketts Common to name a few.



SUSTAINABILITY STANDARDS

Within the London Borough of Haringey, the BREEAM standard of 'Very Good' is required for all non-residential developments. The following Pre-Assessment demonstrates compliance with the Local Authority's policies in relation to BREEAM assessments.

BREEAM UK NEW CONSTRUCTION V6

BREEAM UK New Construction V6 is a performance based environmental assessment method and certification scheme for new buildings. The primary aim of BREEAM New Construction is to mitigate the impacts of new developments on the environment over the entire life-cycle of the building in a comprehensive and cost-effective manner. This is achieved through the integration of the BREEAM scheme at key stages of the design and procurement process.

A BREEAM UK New Construction V6 Shell and Core Pre-Assessment was carried out for the hotel portion of the development and has been assessed under the 'Non-Residential Institution – Community Centre' building type and subtype.

The pre-assessment tool uses established benchmarks to evaluate a building's specification, design, construction and operation, over a broad range of categories and criteria:

- Management processes
- Health and wellbeing
- Energy use
- Transport
- Water use
- Materials
- Waste
- Land use and ecology
- Pollution
- Innovation

The outcome of the pre-assessment is expressed as a single certified BREEAM rating, ranging from Pass (30%) to Outstanding (85%).

Table 2: BREEAM Certification Thresholds

BREEAM 2018 Rating	Percentage of Credits Required
Outstanding	85%
Excellent	70%
Very Good	55%
Good	45%
Pass	30%

The following table summarises the number of credits targeted to achieve the rating of 'Very Good'; a detailed analysis of credits targeted can be found in Appendix A – BREEAM Pre-assessment.

BREEAM PRE-ASSESSMENT RESULTS

A BREEAM pre-assessment has been undertaken at pre-application stage which has shown that a score of 65.94% is feasible.

The results for the pre-assessment are summarised in the table below, and include a breakdown of the currently targeted score for each issue and category.

Table 3: BREEAM Pre-Assessment Breakdown

BREEAM Category	Total Credits Available	Score Assessment		
		Targeted	Weighting (%)	Score (%)
Management	18	10	0.61	6.11
Health & Wellbeing	10	8	0.80	6.40
Energy	19	12	0.74	8.84
Transport	12	6	0.96	5.75
Water	8	6	0.88	5.25
Materials	14	9	1.25	11.25
Waste	10	6	0.70	4.20
Land Use & Ecology	13	9	1.15	10.38
Pollution	12	9	0.75	6.75
Innovation	10	1	1.00	1.00
BREEAM Very Good		Total Points Scored: 65.94%		

CONCLUSION

This report has demonstrated how the proposed development at 9-30 Clarendon Road, located in the London Borough of Haringey, has met the sustainability requirements set out in the London Plan and local planning policies. In addition, the development is targeting a BREEAM UK New Construction V6 rating of 'Very Good' for new build units and is expected to reduce on-site regulated carbon emissions by 70.7% for the domestic part and 57.7% for the non-domestic part of the development, against a Part L 2013 compliance scheme with SAP10.2 carbon factors.

In summary, the proposed development at 9-30 Clarendon Road meets the targets set out by the London Plan and London Borough of Haringey. Key features include:

- Effective re-use of previously developed land;
- The inclusion of low carbon and renewable technologies through the specification of passive design and energy efficiency measures, air source heat pumps and photovoltaics to achieve carbon reductions of 69.4% site-wide;
- Promoting sustainable forms of transport through the provision of cycle parking spaces;
- Bio-diverse roofs will also be introduced, and the seeking to achieve a net bio-diversity gain through incorporating ecological enhancements and an urban greening factor of 0.4 by utilising roofs for biodiversity gain and street tree planting;
- Provision of private and community open spaces, which will allow residents and building occupants to gather, socialise and connect to the natural environment, promote physical activity and wellbeing;
- Reducing surface water run-off from site through the incorporation of permeable paving and underground attenuation tanks;
- Specification of high-performance fabric and glazing to minimise heat losses;
- Efficient design of the proposed massing, openings and internal layouts so that spaces benefit from sufficient daylight, whilst overheating and impacts to neighbouring buildings are minimised;
- Removing on-site NOx emissions and fossil-fuel combustion by specifying electrical heating from ASHP;
- Achieving an Air Quality Neutral classification;
- The specification of water efficient fittings to limit water consumption within dwellings to 105 litres/person/day, and targeting 3 credits (under BREEAM UK NC) for the non-domestic elements of the proposal;
- Effective pollution management and control; the development is not expected to have any significant adverse effects to air, noise, land, or watercourses.

APPENDIX A – BREEAM PRE-ASSESSMENT

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