



**SUSTAINABILITY STATEMENT | April 2021**

**115 – 117 Daws Lane London NW7 4SJ**

Erection of two storey detached houses providing two single family dwellings including rooms in roof space and basement, following demolition of existing two semi-detached dwellings. Alterations to front hardstanding to provide soft landscaping, 2 car parking garages at the rear, associated with refuse storage.



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## 1. INTRODUCTION

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- 1.1 This Sustainability Statement is prepared in support of a detailed planning application for redevelopment of 115 – 117 Daws Lane London NW7 4SJ 'The Site' – a corner plot at the junction of Daws Lane and Hammers Lane and opposite Mill Hill Park.
- 1.2 The This Statement describes how the applicable sustainability policies and standards can be met by the proposed development. The purpose of the report is to identify and highlight the key sustainable practices to be incorporated into the design and construction of the development. The following areas have been considered:
- Materials
  - Pollution
  - Waste management
  - Water efficiency
  - CO2 emissions
  - Health and well being

## Sustainable Development Background

- 1.3 The past two decades have seen a growing realisation that the current model of development is unsustainable. From the loss of biodiversity due to the felling of rainforests or over-fishing, to the negative effect our consumption patterns are having on the environment and the climate; our way of life is placing an increasing burden on the planet.
- 1.4 The UK Government has outlined a shared set of guiding principles for sustainable development in the UK Framework for Sustainable Development, “One future - different paths”. This outlined five principles of sustainable development:
- Living within environmental limits
  - Ensuring a strong, healthy and just society
  - Achieving a sustainable economy
  - Promoting good governance
  - Using sound science responsibly

## Sustainability in Housing

- 1.5 The goal of sustainable development is to seek to simultaneously progress economic, social and environmental goals and policies in ways that develop and maintain a good quality of life for us all and enable future generations to do the same.
- 1.6 Housing in the United Kingdom accounts for 26% of CO2 emissions, of which 78% will still be in use by 2050. A higher proportion of energy is used within housing in comparison to transport and industry thus highlighting the importance of improving sustainability

within this sector. This improvement will not be subject solely to new dwellings but to improving existing housing stock also. Housing has many implications to sustainability and can make a significant contribution because:

- it consumes large amounts of resource in its construction, maintenance and use.
- it is a fixed asset with a long life; and
- it is central to quality of life and has implications beyond housing affecting transport, health, employment and community.

1.7 The principles of sustainability can be incorporated into housing developments, for both new builds and refurbishments, to contribute to general sustainability objectives but also to drive improvements in innovations, quality and durability, cost effectiveness and the wellbeing of the occupant to deliver sustainability on the wider scale. Sustainability objectives need to be incorporated from an early design stage through construction to the long-term use and eventual decommissioning of the building.



## 2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

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- 2.1 The site consists of two semi-detached houses in a large, double storey building with side and rear extensions.
- 2.2 The site benefits from a wide, corner plot, with a unique view to Mill Hill Park.
- 2.3 The total plot area is 491m<sup>2</sup>.
- 2.4 The site is not within conservation area and the existing dwelling is not a listed building.
- 2.5 The application site currently features two semi-detached dwellings, requiring major building work. The alternative is to suggest two brand new detached houses. Therefore, the proposal would involve the demolition of the existing houses and the erection of two detached dwellings.
- 2.6 The design style combines contemporary and up to date architecture, whilst respecting the surrounding by massing, heights, building lines etc.
- 2.7 The application should be read in conjunction with the approved planning application of number 113 Daws Lane Ref: 18/5349/FUL:  
*Erection of a pair of two storey semi-detached dwelling houses providing 2 single family dwellings including rooms in roof space following demolition of existing bungalow. Alterations to front hardstanding to provide 2 car parking spaces. Addition of associated refuse and cycle store.*
- 2.8 The approved planning permission of no.113 is shown on the Application's proposed drawings to illustrate the relation with the adjacent development. The proposed front and rear building alignments, as well as the roof ridge line are kept in line with the neighbouring approved design.

## 3. PLANNING POLICY CONTEXT

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- 3.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that the determination of a planning application to be undertaken in accordance with the Development Plan, unless material considerations indicate otherwise. The adopted Development Plan framework for the site comprises of the London Plan (published July 2011), and the London Borough of Barnet Local Plan. National planning guidance, amongst other matters, is also a relevant material consideration.
- 3.2 This section considers the relevant planning policies at national, regional and local levels, in that respective order.

### **The National Planning Policy Framework (NPPF)**

- 3.3 The 27 March 2012 the Government adopted a National Planning Policy Framework (“the Framework”), sweeping away 1,300 pages of Planning Policy Statements and Planning Policy Guidance Notes.
- 3.4 Framework sets out the Government’s requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. Whilst not prescriptive, the Framework is however material to the consideration of all planning proposals. The Framework document is material in setting the framework for policy making and development control and seeks to put into place a positive approach to development as set out in the ‘Planning for Growth’ Ministerial Statement. Advice is provided on a wide range of material considerations, with a presumption in favour of sustainable development being the cornerstone of that advice.

- 3.5 Section 7 of the Framework addresses design, and paragraph 56 states that the Government attaches great importance to the design of the built environment. Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people.
- 3.6 Meeting the challenge of climate change is addressed in Section 10 of the Framework. Paragraph 93 notes that planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change and supporting the delivery of renewable and low carbon energy and associated infrastructure. This is central to the economic, social, and environmental dimensions of sustainable development.
- 3.7 Paragraph 95 states that to support the move to a low carbon future, local planning authorities should: plan for new development in locations and ways which reduce greenhouse gas emissions; actively support energy efficiency improvements to existing buildings; and when setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards. Paragraph 96 states in determining applications, local planning authorities should expect new development to: comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.
- 3.8 Section 11 of the Framework addresses conserving and enhancing the natural environment. Paragraph 109 states that the planning system should contribute to and enhance the natural and local environment by: minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; and preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability. Paragraph 118 notes that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by encouraging opportunities to incorporate biodiversity in and around developments.



- 3.9 Noise is addressed within paragraph 123 which notes that planning policies and decisions should aim to: avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development; and mitigate and reduce to a minimum other adverse impact on health and quality of life arising from noise for new development, including through the use of conditions. Furthermore, paragraph 125 notes that by encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity.

### The London Plan 2016

- 3.10 On 10 March 2015, the Mayor adopted the Further Alterations to the London Plan (FALP). From this date, the FALP are operative as formal alterations to the London Plan (the Mayor's spatial development strategy) and form part of the development plan for Greater London. The London Plan has been updated to incorporate the Further Alterations. It also incorporates the Revised Early Minor Alterations to the London Plan (REMA), which were published in October 2013.
- 3.11 The London Plan is the overall strategic plan for London. The Plan contains the Mayor's objectives for the city and replaces the previous versions. It sets out an integrated economic, environmental, transport and social framework for the development of the capital to 2036. Each of the London Boroughs' local plans needs to be in general conformity with the London Plan. Policies in the London Plan guide decisions on planning applications by Councils and the Mayor of London. The most relevant policies to this report are within Chapters 5 and 7.
- 3.12 Policy 5.2 'Minimising Carbon Dioxide Emissions' addresses carbon dioxide emission reductions and energy assessment requirements. The policy states that development proposals should make the fullest contribution to minimising carbon dioxide emission in accordance with the following hierarchy:
- Be lean: use less energy.

- Be clean: supply energy efficiently.
- Be green: use renewable energy.

3.13 The policy goes onto state that the Mayor will work with boroughs and developers to ensure that major developments meet the following targets for carbon dioxide emissions reduction in buildings. These targets are expressed as minimum improvements over the Target Emission Rate (TER) outlined in the national Building Regulations leading to zero carbon residential buildings from 2016. The policy encourages development proposals to be accompanied by an energy assessment to demonstrate how the targets for carbon dioxide emissions reduction outlined above are to be met within the framework of the energy hierarchy. These energy assessments should include the following details:

- calculation of the energy demand and carbon dioxide emissions covered by the Building Regulations and, separately, the energy demand and carbon dioxide emissions from any other part of the development, including plant or equipment, that are not covered by the Building Regulations at each stage of the energy hierarchy.
- proposals to reduce carbon dioxide emissions through the energy efficient design of the site, buildings, and services.
- proposals to further reduce carbon dioxide emissions through the use of decentralised energy where feasible, such as district heating and cooling and combined heat and power (CHP);
- proposals to further reduce carbon dioxide emissions through the use of onsite renewable energy technologies.

3.14 The policy goes on to state that the carbon dioxide reduction targets should be met on- site. Where it is clearly demonstrated that the specific target cannot be fully achieved on-site, any shortfall may be provided off-site or through a cash-in-lieu contribution to the relevant borough to be ring fenced to secure delivery of carbon dioxide savings elsewhere.

3.15 The Sustainable Design and Construction Supplementary Planning Guidance was published in April 2014 and sets out that the Mayor will apply a 35 per cent carbon reduction target beyond Part L 2013 of the Building Regulations. This is similar to the 40 per cent target beyond Part L of the Building Regulations, as set out in London Plan Policy 5.2.



- 3.16 Policy 5.3 'Sustainable Design and Construction' is the main policy within the London Plan which addresses sustainable design and construction. The policy states that the highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime.
- 3.17 In regard to planning decisions the policy states that development proposals should demonstrate that sustainable design standards are integral to the proposal, including its construction and operation, and ensure that they are considered at the beginning of the design process. Major development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance and this should be clearly demonstrated within a design and access statement. The standards set out include measures to achieve other policies in this Plan and the following sustainable design principles:
- minimising carbon dioxide emissions across the site, including the building and services (such as heating and cooling systems)
  - avoiding internal overheating and contributing to the urban heat island effect
  - efficient use of natural resources (including water), including making the most of natural systems both within and around buildings.
  - minimising pollution (including noise, air and urban run-off)
  - 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, including avoiding the creation of adverse local climatic conditions.
  - securing sustainable procurement of materials, using local supplies where feasible, and
  - promoting and protecting biodiversity and green infrastructure.

3.18 The London Plan contains a number of other policies relevant to this report, which are not outlined further, but include:

- Policy 5.5 'Decentralised Energy Networks'
- Policy 5.6 'Decentralised Energy in Development Proposals'
- Policy 5.7 'Renewable Energy'
- Policy 5.8 'Innovative Energy Technologies'
- Policy 5.9 'Overheating and Cooling'
- Policy 5.10 'Urban Greening'
- Policy 5.11 'Green Roofs and Development Site Environs'
- Policy 5.12 'Flood Risk Management'
- Policy 5.13 'Sustainable Drainage'
- Policy 5.14 'Water Use and Supplies'

### **Sustainable Design and Construction Supplementary Planning Guidance (April 2014)**

3.19 The Mayor's Supplementary Planning Guidance (SPG) on Sustainable Design and Construction was published in May 2006, and later updated in April 2014, to provide additional information to support the implementation of the London Plan. Policy 5.3 of the current London Plan continues to refer to this SPG.

3.20 The SPG is based on three broad sustainable design and construction categories (Resource Management; Adapting to Climate Change and Greening the City; and Pollution Management - Land, Air, Noise, Light and Water) and contains both Mayor's Priority and Mayor's best practice standards for the proposed development within each section. As encouraged in paragraph 1.4.11 of the SPG, this



Sustainability Statement is structured around the sections of the SPG and notes how the proposed development addresses the Mayor's Priority and best practice standards.

### **The London Borough of Barnet Local Plan (Core Strategy) (September 2012)**

3.21 The Local Plan replaced the Unitary Development Plan (UDP) and the Core Strategy document was adopted by the Council of the London Borough of Barnet on 11 September 2012. The Core Strategy contains the 'vision' for the Local Plan and the most fundamental, cross-cutting objectives and policies that the local authority and its partners will seek to deliver.

3.22 Policy CS 13 'Ensuring the Efficient Use of Natural Resources' is particularly relevant to this Sustainability Statement and states:

"We will seek to minimise Barnet's contribution to climate change and ensure that through the efficient use of natural resources the borough develops in a way which respects environmental limits and improves quality of life.

- We will promote the highest environmental standards for development and through our SPDs on Sustainable Design and Construction and Green Infrastructure we will continue working to deliver exemplary levels of sustainability throughout Barnet in order to mitigate and adapt to the effects of a changing climate.
- We will expect all development to be energy-efficient and seek to minimise any wasted heat or power.
- In line with London Plan Policy 5.2 – Minimising Carbon Dioxide Emissions we will expect major development in accordance with the Mayor's energy hierarchy to reduce carbon dioxide emissions beyond the 2010 Building Regulations.
- We will maximise opportunities for implementing new districtwide networks supplied by decentralised energy (including renewable generation) in partnership with key stakeholders in areas of major mixed use growth including town centres. Where feasible we will expect all development to contribute to new and existing frameworks



- We will support solutions that minimise or avoid harm to a heritage asset's significance while delivering improved energy performance or generation.
- We will make Barnet a water efficient borough and minimise the potential for fluvial and surface flooding by ensuring development does not cause harm to the water environment, water quality and drainage systems. Development should utilise Sustainable Urban Drainage Systems (SUDS) in order to reduce surface water run-off and ensure such run-off is managed as close to its source as possible subject to local geology and ground water levels.
- We will improve air and noise quality by requiring Air Quality Assessments and Noise Impact Assessments from development in line with Barnet's SPD on Sustainable Design and Construction."

### **The London Borough of Barnet Local Plan (Development Management Policies) (September 2012)**

3.23 The Local Plan Development Management Policies (DMP) Development Plan Document (DPD) was also adopted by the Council of the London Borough of Barnet on 11 September 2012. The DMP DPD sets out the borough-wide planning policies that implement the Core Strategy and will be used for day-to-day decision making by the Planning Service and for planning committee determinations. The DMP DPD sets out the policy basis for delivering the long-term spatial vision and strategic place shaping objectives in Barnet which are set out in the Core Strategy.

3.24 Policy DM02 'Development Standards' addresses the various development standards required by development and states:  
 "Where appropriate, development will be expected to demonstrate compliance with the following national and London-wide standards supported by the guidance set out in the council's suite of Supplementary Planning Documents:

1. By Design, the CABI urban design principles



2. Lifetime homes, the 16 design criteria required by the London Plan policy 3
3. Code for Sustainable Homes, the national standard for sustainable homes
4. BREEAM, the environmental assessment method for non-residential
5. development
6. Wheelchair accessibility, the London Plan policy 3.8
7. Minimum floor space, the London Plan policy 3.5
8. Outdoor amenity space, the Sustainable Design and Construction SPD
9. Secured by Design, the national Police initiative.
10. Play space, the London Plan policy 3.6"

3.25 Policy DM04 'Environmental Considerations' addresses a number of environmental considerations relevant to this Statement and states:

- All major development will be required to demonstrate through an Energy Statement compliance with the Mayor's targets for reductions in carbon dioxide emissions within the framework of the Mayor's energy hierarchy.
- Where Decentralised Energy (DE) is feasible or planned, major development will either provide:
  - I. suitable connection
  - ii. the ability to connect in future.
  - iii. a feasibility study
  - iv. a financial contribution to a proposed feasibility study.
- Where there is a localised source of air pollution, buildings should be designed and sited to reduce exposure to air pollutants.

I. Development proposals will ensure that development is not contributing to poor air quality and provide air quality assessments where appropriate.

- Proposals to locate development that is likely to generate unacceptable noise levels close to noise sensitive uses will not normally be permitted. Proposals to locate noise sensitive development in areas with existing high levels of noise will not normally be permitted. Mitigation of noise impacts through design, layout, and insulation will be expected where appropriate.
- Proposals on land which may be contaminated should be accompanied by an investigation to establish the level of contamination in the soil and/or groundwater/surface waters and identify appropriate mitigation. Development which could adversely affect the quality of groundwater will not be permitted.
- Proposals for Notifiable Installations or developments near to existing Notifiable Installations will only be permitted provided that:
  - I. There is no unacceptable risk to an individual's health and safety; and
  - ii. There will be no significant threat to environmental quality.
- Development should demonstrate compliance with the London Plan water hierarchy for run off especially in areas identified as prone to flooding from surface water run-off. All new development in areas at risk from fluvial flooding must demonstrate application of the sequential approach set out in the NPPF (paragraphs 100 to 104) and provide information on the known flood risk potential of the application site.
- Development proposals will wherever possible be expected to naturalise a water course, ensure an adequate buffer zone is created and enable public accessibility. Where appropriate, contributions towards river restoration and de-culverting will be expected.”



## Sustainable Design and Construction SPD (April 2013)

- 3.26 The London Borough of Barnet's Sustainable Design and Construction (SDC) Supplementary Planning Document (SPD) was adopted on 18 April 2013. The SPD sets out Barnet's technical requirements for environmental design and construction management, including requirements on air, noise, water, energy, water, waste and habitat quality. The SPD expands on the policy approach set out in the Core Strategy, DMP DPD and the London Plan.
- 3.27 As noted in section 1.3.2 of the SPD, where requirements are identified they will be set out in terms of Householder, Minor, Major and Large scale. These are defined in the table below and apply to all types of development:

| Scale               | Description  |
|---------------------|--|
| Householder         | Extensions to houses (including roof extensions).  |
| Minor               | Residential development of 1 to 9 units in scale including conversions.  |
| Major               | Non-residential development of up to 999 sqm.  |
| Large scale / major | Residential development over 10 units. Non-residential development over 1,000 m <sup>2</sup> .                                   |
|                     | Residential development over 200 units or a site of 4 hectares or more. Non-residential development over 10,000 m <sup>2</sup> . |

- 3.28 The proposed development falls under the category of a Minor Residential Development for the purposes of the SPD.

3.29 Section 2 of the SPD provides sustainable design and construction requirements and guidance for proposed development, with variations dependent on the scale of development. The issues addressed include:

- 2.1 Minimum Residential Space Standards.
- 2.2 Internal Layout and Design.
- 2.3 Outdoor Amenity Space.
- 2.4 Daylight, Privacy (Minimum Distance), Outlook and Light Pollution.
- 2.5 Microclimate – Wind and Thermal Conditions.
- 2.6 Lifetime Homes.
- 2.7 Wheelchair Housing.
- 2.8 Energy Use in Buildings.
- 2.9 Decentralised Energy.
- 2.10 Retrofitting of Existing Buildings.
- 2.11 Water Efficiency.
- 2.12 Waste Strategy.
- 2.13 Air Quality.
- 2.14 Noise Quality.
- 2.15 Flood Risk, Sustainable Urban Drainage Systems and Water Quality.
- 2.16 Biodiversity and Habitat Quality.
- 2.17 Archaeological Investigation.
- 2.18 Pollution Prevention, Contaminated Land Remediation and Construction Management.
- 2.19 Code for Sustainable Homes.
- 2.20 BREEAM and EcoHomes; and
- 2.21 Considerate Constructors Scheme





- 4.1 The developers' sustainability objective is to reduce inequalities in the health of the population by improving air quality and preventing noise and light pollution. London Plan Policy 5.21 'Contaminated Land' and London Borough of Barnet Policy CS13 are most relevant to this section.
- 4.2 There are many forms of environmental pollution arising from building operation, including noise, odours, light, and vibration. A significant proportion of pollution is airborne and is the direct result of: fumes, combustion of materials, chemicals used in industrial processes, or polluted air from ventilation systems and air conditioning plants. Some pollutants can also escape to soil and groundwater courses. Internal noise and disturbance to neighbours are also important considerations; and light spill from external lighting can sometimes be an annoyance and aggravation to neighbours.
- 4.3 The Framework requires sustainable development proposals to take measures to protect the natural environment on site and adjacent to it. Measures concerning waste and biodiversity are detailed in other sections of this report. Instead, this section concentrates on those measures to be included in the construction phase to mitigate.
- 4.4 Through Policy CS13 'Ensuring the efficient use of natural resources', the London Borough of Barnet will seek to ensure that all development (including extensions, refurbishments and conversions) is designed to reduce levels of pollution; air, water, noise and light.

- 4.5 The location of the site and its proposed residential use means there will be no air or water quality risks arising from the scheme post construction. Therefore, measures will be targeted to reduce water and air pollution during the demolition and construction phases.
- 4.6 The measures above will be implemented through induction and toolkit talks with all site operatives and the posting of literature and signs in the site compound.



## 5. WASTE MANAGEMENT

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- 5.1 The developers' sustainability objective is to reduce the waste generation and disposal through the facilitation of recycling and to use sustainable methods of construction. London Plan Policies 5.18 and 5 and London Borough of Barnet Policy CS14.
- 5.2 All building activity is environmentally damaging. The key to sustainable design and construction is to minimise the impact the building has on the environment. Good construction site practices are essential to minimise potential impacts during this phase, such as noise and dust nuisances. Effective site waste management must also be implemented.
- 5.3 Policy CS14 'Dealing with our waste' of the London Borough of Barnet Core Strategy, will encourage sustainable waste management by promoting waste prevention, re-use, recycling, composting and resource efficiency over landfill. All new developments are required to provide waste and recycling facilities which fit current and future collection practices and targets.
- 5.4 The North London Waste Authority (NLWA) and the seven boroughs that are members of it have produced a Joint Waste Strategy which plans for managing the waste collected by the boroughs until 2020. This will be used to facilitate the provision of new waste management facilities and services, to increase recycling and recovery and divert more waste away from going to landfill
- 5.5 In 2012 the Government repealed the Site Waste Management Plan Regulations, therefore there exists no legal obligation to operate such a plan at 115 – 117 Dawns Lane. However, to promote the efficient management of waste the developer intends to operate such a Plan at the application site. Listed below are some of the procedures that can be expected for 115 – 117 Dawns Lane:

- Design to minimise wastage during the construction phase There should be careful sub and topsoil storage and accommodation within the predetermined landform.
- Maximise the value of recycled aggregates through the separation of physical and chemical contaminants and through the careful matching of the materials generated with appropriate site use.
- Regular inductions and toolkit talk to all contractors and sub-contractors should be conducted as standard. Careful site management of stockpiling and storage, segregation of waste groups and the prevention of cross contamination are should be implemented.
- Agreements should be in place with suppliers to reduce the amount of packaging on goods delivered to site. Take back agreements and “just in time delivery” should be put in place with key suppliers.
- All waste contractors will be required to segregate demolition waste off site and provide records of such. Landfill will be the last option when no economic solution can be found.

## 6. HEALTH AND WELLBEING

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- 6.1 The developers' sustainability objective is to create and sustain vibrant communities, addressing a deficiency in the provision of services to the local community and recognising the needs of everyone.
- 6.2 In achieving ever stricter levels of sustainability, it is important that we do not lose sight of the fact that we are building homes that people can live in and not just occupy. This is an integral part of sustainability. While it is quite difficult to measure health and wellbeing, the following are a sample of the measures that will be included in the detailed design to address this issue.
- Each house will have sufficient living/dining space in compliance or exceeding London and Barnet space standards.
  - Each of the principal living rooms will have sufficient glazing to allow natural light to penetrate into the rooms, reducing the need for artificial lighting. Numerous studies have also shown this to be beneficial to the general health and happiness of occupants.
  - Both houses will benefit from private amenity space for recreation in the form of private gardens. Each house will also have space on site for recycling facilities.
  - The proposed scheme includes areas of sufficient size for cycle storage facilities.
  - The development will include open landscaped amenity spaces at Ground Floor level at the rear.
  - The site layout will be designed to ease travel for cyclists and pedestrians.



## 7. WATER EFFICIENCY

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- 7.1 The developers' sustainability objective is to conserve water by promoting water efficiency and incorporating water saving measures and equipment. The London Borough of Barnet Core Strategy Policies CS13 and DM04 are most relevant to this section.
- 7.2 The average person uses 150 litres of water a day which is an increase of 50% from 25 years ago and it is expected that an extra 800 million litres of water will be used a day by 2020. Using water in homes contributes to around 35 million tonnes of greenhouse gases a year with the average family using 500 litres of water a day, which is equal to 1.5 tonnes of greenhouse gases a year.
- 7.3 Although England and Wales are considered to have a wet climate, high population density means that some parts of the country have less water available per person than Mediterranean countries. Climate change will only add to these pressures. To ensure a sustainable water supply for the future, it is therefore vital that water is used more efficiently and methods of harnessing and reusing water are developed and implemented. London Plan Policy 5.15 'Water Use and Supplies' states that:
- "Development should minimise the use of mains water by: Incorporating water saving measures and equipment".
- 7.4 London Borough of Barnet's Core Strategy Policy CS13 'Ensuring the efficient use of natural resources' and DM04 'Environmental Considerations for development', state that the Council will require that all residential developments should be designed to achieve average water consumption targets of 105 litres per head per day.

- 7.5 Approved Document G of the Building Regulations requires each new home to achieve a water consumption rate of no more than 125 litres per person per day. This level of efficiency was re-affirmed in the Technical Housing Standards Review in 2013 with an optional lower standard equivalent to 110 litres per person per day included in the Government's new National Standards subject to need and viability.
- 7.6 The developer seeks to avoid the use of complicated and expensive recycling technologies and instead plans to incorporate low flow sanitary ware and eco-sanitary products into the design of each property to achieve a low water consumption rate of 105 litres per head per day. This strategy will permanently reduce water consumption instead of compensating for a high usage through grey water recycling or rainwater harvesting.

## 8. ENERGY STRATEGY

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- 8.1 The developers' sustainability objective is to address the causes of climate change by reducing emissions of greenhouse gases, in particular carbon dioxide (CO<sub>2</sub>). To reduce the local and global impact of pollution on the environment, by improving the energy efficiency of properties and generating energy from low or zero carbon technologies.
- 8.2 It is the developer's intention to adopt a strategy which incorporates energy efficiency measures into the construction of this development and includes the provision of renewable energy generation technologies to the property. This strategy will be specifically targeted to achieve a 6% reduction over Part L 2010 of the Building Regulations. The sections that follow expand on the strategy, but specific design measures may be subject to change without compromising the carbon reduction target. London Plan Policies 5.2A; 5.2B; 5.2C; 5.3C and London Borough of Barnet Sustainable Design SPD are relevant to this section.
- 8.3 The energy that we use as part of our day-to-day functions and activities (including heat, electricity, light and kinetic energy) is generated primarily from two main sources:
- non-renewable sources (i.e. fossil fuels such as oil, gas and coal); and
  - renewable sources (e.g. wind, solar, hydro, biofuel and ground).
- 8.4 Energy use within dwellings is split into the following categories: space; heating; water heating; cooking; and lighting & appliances. The majority of energy used is for space heating, keeping homes warm, which contributes towards 66% the total



energy use. Water heating and lighting as well as appliances account for a further 17% and 15%, respectively, with cooking accounting for an additional 3%.

8.5 Carbon dioxide is the most important greenhouse gas within housing as it is most closely related in energy use in home as most homes have central heating usually fuelled by natural gas, and most households have fridges, freezers and washing machines. Many households also own dishwashers, tumble dryers, PCs and games consoles. These greenhouse gases contribute to climate change and other environmental effects that are considered to occur with increasing global temperature.

8.6 Many developments within Greater London are now required to address the London Plan, which sets planning policy standards for energy efficiency and the use of renewable technologies through the Energy Hierarchy:

- Be Lean - reduce energy loads to a minimum through energy efficient heating and lighting systems, and efficient appliances.
- Be Clean - Cut transmission losses through local generation of energy (decentralised energy generation), use combined heat and power and community heating; and
- Be Green - Meet the remaining demand with clean fuels, such as renewable Technologies.

### **Fabric Efficient Measures**

8.7 Home buyers demand energy efficient homes with low operating costs and familiar user-friendly technologies. As such the construction specification will be tailored to these demands and incorporate many of the lean and clean measures of the Energy Hierarchy. Listed below are some of the measures that will be incorporated into the detailed design of the scheme:

- The construction specification of every unit will include high levels of insulation in the ground floor, external walls and roof construction.
- The detailed building design incorporate the thermal bridging guidance produced by the Government, thereby reducing a significant source of heat loss.
- An efficient gas condensing boiler will be installed in each property. The heating designs of each dwelling type will include dual zone controls and delayed start thermostats.
- Energy efficient lamps will be installed in every light fitting.
- Each property will be naturally ventilated using efficient decentralised and continuous system 1 or 3 extract fans.
- Each entrance will be illuminated with an energy efficient external light or provision will be made for a purchaser to install such a fixture.
- The white goods installed in each property or offered to purchasers will be energy efficient with an A+/A rating.

- 9.1 The developers' sustainability objective is to reduce the global, social and environmental impact of the consumption of resources by using sustainability produced and local products.
- 9.2 The embodied energy of a building material can be taken as the total primary energy consumed (the amount of carbon released over its life cycle). Building materials have a vast environmental impact in terms of energy and resources in their production, use and disposal. Therefore, if environmentally responsive building materials are chosen, a significant amount of CO<sub>2</sub> can be saved during construction as well as during operation.
- 9.3 Consideration should also be given to materials' performance under potentially changing climatic conditions over the lifetime of the buildings by ensuring that the final selection facilitates the proposed development's ability to maintain comfortable temperatures. For example, the use of a high thermal mass in the design of the buildings will help keep buildings cool during warm periods, and vice versa.
- 9.4 The design team for 115 – 117 Dawns Lane aim to meet the principles for sustainable material use set out within the London Borough of Barnet Core Strategy wherever possible for the new building materials being brought forward. As appropriate, the materials specification and products used for the proposed development will have the following characteristics considered as part of the design process:
- Durable
  - High recycled content
  - Accredited to a recognised environmental standard.
  - Low embodied energy that requires little processing



## 10. SURFACE WATER RUN-OFF

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- 10.1 The developers' sustainability objective is to conserve water by promoting water recycling and Sustainable Drainage Systems (SuDS). The London Policy 5.15 and London Borough of Barnet Core Strategy Policies CS13 and DM04 are relevant to this section.
- 10.2 As climate change seems likely to mean less water on average, it is also likely to mean more extreme weather events; therefore, the issue of 'surface water' flooding is becoming more and more important. Many existing urban drainage systems can cause problems of flooding, pollution or damage to the environment and are not proving to be sustainable. Use of Sustainable Urban Drainage Systems (SuDS) is a cost-effective solution to harnessing and reusing water with a low environmental impact which can easily be incorporated into developments; they drain away surface water run-off through collection, storage and cleaning before allowing it to be released slowing back into the environment.
- 10.3 The London Plan Policy 5.15 and the London Borough of Barnet Core Strategy Policies CS13 and DM04, instruct that every development should be designed to take account of the impacts of climate change including: water conservation, need for summer cooling and increase flood risk from fluvial and surface water flooding. In addition, the policy encourages efficient water use and for water conservation measures to be included in development proposals.
- 10.4 As part of the design process careful consideration has been given to minimising water course pollution by reducing the potential for silt, heavy metals, chemicals or oil pollution to enter natural watercourse via surface water run-off from buildings and hard surfaces, and development will not result in any increase to impermeable areas onsite.



- 11.1 The developers' sustainability objective is to conserve and enhance the biodiversity of the region by conserving and enhancing areas valued for their diversity of wildlife, habitats, and landscape value. London Plan Policies 5.11 and 7.19, and London Borough of Barnet Policies CS7 and DM16.
- 11.2 Biodiversity is the variability among living organisms within an ecosystem; a highly diverse ecosystem is an indicator of a healthy and thriving natural environment. Since we rely so heavily upon the natural environment it is in our best interest, and in the interest of future generations, to protect and enhance the biodiversity that surrounds us. The UK has seen a dramatic loss in biodiversity and ecosystem integrity especially through the latter half of the twentieth century, therefore, the protection and enhancement of biodiversity is a key component throughout the development process.
- 11.3 There are several methods of incorporating biodiversity enhancing techniques into new developments which can be tailored to certain protected species that are likely to be present. The London Plan sets out that development proposals should wherever possible, make a positive contribution to the protection, promotion and management of biodiversity and prioritise assisting in achieving targets in the Mayor's Biodiversity Strategy.
- 11.4 London Plan Policy 5.11 'Green Roofs and Development Site Environs' states that Major Development proposals should be designed to include site planting. Whilst London Plan Policy 7.21 'Trees and Woodlands' states that existing trees should be retained where possible and any loss as the result of development should be replaced following the principle of "right place, right tree". It is the developer's intention to follow these principles, even though the proposed development falls within the Minor Development category.

- 11.5 London Borough of Barnet Core Strategy Policy DM16 'Biodiversity', states that the Council will: ensure new development provides beneficial features for biodiversity as part of good design, through the inclusion of sustainable drainage, tree planting, soft landscaping, green roofs and green spaces; and ensure that new development does not result in a net loss of biodiversity.



- 12.1 This Sustainability Statement demonstrates that the proposed redevelopment of 115 – 117 Dawns Lane, in the London Borough of Barnet, has targeted very high standards of design and build quality. The sustainable design and construction strategy focuses on the implementation of sustainable systems for energy, water, management, waste, pollution, and the use and choice of materials. Much attention has been given to reducing the environmental impact throughout the whole lifetime of the buildings and not just during occupation. The key endeavours are as follows:
- Eco sanitary ware and flow restriction devices will be installed in every property. Water consumption levels compliant with Part G will be achieved.
  - A site waste management plan will operate at the development.
  - Each dwelling will be designed and constructed to a specification which emphasises the thermal efficiency of the building envelope and the efficiency of the installed building services.
- 12.2 In conclusion the strategy addresses energy efficiency, water efficiency, pollution and waste management. When assessed against the definition included in the Framework the proposals can be described as sustainable.