



32 Lawn Road, Camden

Planning Application by Fairview Estates (Housing) Ltd

Sustainability Statement

October 2014












Plan | Control | Recover

Fairview Estates (Housing) Ltd

32 Lawn Road, Camden

Sustainability Statement

29th October 2014

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32 Lawn Road, Camden

Sustainability Statement

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Disclaimer

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Executive Summary

The Sustainability Statement considers issues regarding sustainability relating to the 32 Lawn Road development in Camden, London. This report sets out the commitments of the applicant to the development and the targets to be applied comprehensively to all units.

Throughout this sustainability strategy both the opportunities and constraints of the site have been recognised. Key aspects are drawn out that seek to maximise sustainable opportunities wherever possible.

The statement also shows how the development complies with national, regional and local planning policies and guidance regarding sustainability.

To assess the proposed sustainability measures, a Code for Sustainable Homes pre-assessment has been carried out and the results are summarised in the following table.

Category	Potential Credits	Credits Achieved	Percentage of Achieved Credits
Energy	31	20	64.5%
Water	6	5	83%
Materials	24	15	62.5%
Surface & Water Run-Off	4	2	50%
Waste	8	7	87.5%
Pollution	4	4	100%
Health and Well Being	12	9	75%
Management	9	6	66%
Ecology	9	6	60%
TOTAL	107	74	

The table shows that the minimum standards for Energy, Water and Materials stated in Camden Policy DP22 have been achieved and exceeded.

The pre-assessment demonstrates that the development will achieve 70.14% points, bettering the score required for Code Level 4.

1. Introduction

1.1 Background

This sustainability statement has been prepared by Silver on behalf of Fairview Estates (Housing) Ltd ('Fairview'). It accompanies an application for full planning permission for a residential development at 32 Lawn Road, Camden, NW3.

To support the planning application, different aspects of sustainable design were investigated and the results presented in this document. This report provides an assessment of the sustainability credentials for the proposed development. The assessment is carried out using the Code for Sustainable Homes methodology.

The information provided in this report should be treated as indicative at this stage of the development process and should be used to inform the planning application for the proposed development with respect to relevant national, regional and local planning policy.

1.2 Description of the Development

The proposed development comprises a building of 5-7 storey containing 73 apartments of mixed size set within landscaped grounds. This includes a central landscaped courtyard fronting Upper Park Road and gardens along the Lawn Road frontage. New trees will line the perimeter of the site.

The site is located within the Belsize Park/Gospel Oak area of NW3, between Lawn Road to the west and Upper Park Road to the east, south of the junction with Fleet Road.

The site covers approximately 0.25ha and currently contains two existing buildings. These comprise a former car park building, now utilised as seven (part vacant) commercial units with under croft car parking, and a former launderette, most recently used as a community centre.

Until earlier this year, the London Borough of Camden was the freehold owner of the site. In 2012, the Council decided to sell the site as part of its Community Investment Programme, intended to raise investment in Camden's schools, homes and community facilities through the sale of underutilised Council assets. In March 2014, the Council agreed the sale of the site to Fairview for redevelopment for housing.

The development that is subject to the planning application has been subject to considerable pre-application discussion with Council officers, local representatives and the community.

The total GIA of the building will be 6095m^2.

Residents' access to the building will be via four entrances and circulation cores, three on Lawn Road and one on Upper Park Road. There will be other secondary entrances to individual apartments around the building.

2. Planning Requirements

2.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and was published on 27th March 2012.

The NPPF is designed to consolidate all policy statements, circulars and guidance documents into a single, simpler framework, making the planning system more user-friendly and transparent. The frameworks primary objective is sustainable development, therefore focussing on the 3 pillars of sustainability. The framework is split into three sections; planning for prosperity (Economic), planning for people (Social) and planning for places (Environmental), each of which outline guidance to tackle issues such as housing, transport infrastructure, business and economic development, climate change, etc.

In regard to climate change, the NPPF supports reduction in greenhouse gas emissions and the delivery of renewable and low carbon energy. Climate change is covered in section 10 'Meeting the challenge of climate change, flooding and coastal change. In summary the key objectives of the framework for developments require that they should:

- Be sustainable, durable and adaptable (including taking account of natural hazards such as flooding) and make efficient and prudent use of resources;
- Optimise the potential of the site to accommodate development, create and sustain an appropriate mix of uses (including the incorporation of green and other public spaces as part of developments) and support local facilities and transport networks;
- Respond to their local context and create or reinforce local distinctiveness.
- Create safe and accessible environments where crime and disorder or fear of crime does not undermine quality of life or community cohesion;
- Address the needs of all in society and are accessible, usable and easy to understand by them; and
- Be visually attractive as a result of good architecture and appropriate landscaping.

2.2 The London Plan

As a major development in London, the Lawn Road development will be governed by the London Plan. The London Plan contains six key objectives that underlie all the policies within it. These include:

- To accommodate the cities growth within its boundaries, without encroaching on open spaces;
- To make London a better city for people to live in;
- To make it a more prosperous city with strong and diverse economic growth;
- To uphold social inclusion and tackle deprivation and discrimination;
- To improve access to this city; and
- To make it a more attractive, well designed and a green place.

The London Plan requires all developments to actively tackle climate change through their design as an integral part of sustainable development. Chapter 5 (London's Response to Climate Change) contains the following relevant crosscutting policies supporting London as an exemplar city in adapting to climate change.

1. Policy 5.2 - Minimising carbon dioxide emissions
2. Policy 5.3 – Sustainable design and construction
3. Policy 5.5 - Decentralised energy networks
4. Policy 5.6 - Decentralised energy in development proposals
5. Policy 5.7 - Renewable energy
6. Policy 5.8 - Innovative energy technologies
7. Policy 5.9 - Overheating and cooling
8. Policy 5.10 - Urban greening
9. Policy 5.11 – Green roofs and development site environs
10. Policy 5.12 – Flood risk management
11. Policy 5.13 – Sustainable drainage
12. Policy 5.15 – Water use and supplies

These cross-cutting policies of the London Plan aim to ensure sustainable development, which minimises impact on and is adaptive to climate change.

The following outlines key policies set out in the London Plan which must be addressed by new developments and which are relevant to this development:

Policy 5.2 requires that all residential buildings are to achieve a 35% improvement on 2013 Building Regulations between 2013 and 2016.

Policy 5.2 of the London Plan requires carbon dioxide emissions to be minimised 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

Policy 5.3 of the London plan requires the sustainable design and construction of all new developments.

Policy 5.3 requires that the top standards of sustainable design and construction should be implemented to improve the environmental effects of new developments. Major developments should meet the basic standards outlined in the London Plan Supplementary Planning Guidance. The following sustainable design principles are included in the standards:

- Minimisation of CO_2 emissions;
- Stopping the internal overheating of buildings and the contribution to the urban heat island effect;
- Efficient use of natural resources;
- Minimisation of all pollution:

- Minimise the creation of waste and augment reuse and recycling;
- Avoid the impacts from natural hazards;
- Ensuring developments are comfortable and secure for users;
- Securing sustainable attainment of materials, using local suppliers where feasible;
- The promotion and protection of biodiversity and green infrastructure.

Policy 5.5 states that the Mayor expects 25% of the heat and power used in London to be generated through the use of localised decentralised energy systems by 2025. The Mayor will prioritise the development of decentralised heating and cooling networks at the development and area wide levels; including larger scale heat transmission networks.

Policy 5.6 requires that all new developments should look in to the feasibility of CHP systems and the possibility of extending past the boundaries of the development to local sites.

Policy 5.7 affirms that major developments should provide a certain level of reduced CO_2 emissions through the use of on-site renewable energy generation such as photovoltaic panels.

Policy 5.8 incites the use of innovative technologies in order to reduce the use of fossil fuels and further emissions.

Policy 5.9 aims to reduce the reliance of buildings on air conditioning systems, reduce the urban heat island effect and potential overheating.

Policy 5.10 supports urban greening and green infrastructure as methods of mitigating and adaptation to the effects of climate change.

Policy 5.11 requires the use of green roofs, walls and site planning where feasible.

Policy 5.12 implements that new developments must comply with the regulations on flood risk assessment and management. The development must also pass the exceptions test addressing flood resilient design and emergency planning requirements.

Policy 5.13 requires that unless impractical or impossible, developments should use sustainable urban drainage systems (SUDS). They should also aim to achieve green field run-off rates and ensure run-off is managed as close to source as possible.

Policy 5.15 requires that the building should not use more than 105 litres of water per day per person. This is to be through the minimisation of mains water usage in construction and incorporating water saving methods in to the development.

2.3 Local Policy - Camden Local Plan

The site falls within the London Borough of Camden therefore the development should also comply with the local planning policies. These are set out in the Camden Core Strategy 2010 and Development plan Policies 2010.

Camden's Core Strategy is also implemented in it Local Development Framework (LDF) and is designed to guide development in the borough. It comprises of a vision for the future development of the borough, together with a strategy, objectives and policies to deliver that vision. The Local

plan is in compliance with the London Plan therefore, conformity with the energy and sustainability policies of the London Plan will ensure compliance with Camden's local policy requirements.

Camden's Core Strategy, Section 3 – A sustainable and attractive Camden, focuses on delivering the key elements of their strategy relating to the following:

- making Camden more sustainable and tackling climate change, in particular improving the environmental performance of buildings, providing decentralised energy and heating networks ,and reducing and managing our water use;
- promoting a more attractive local environment through securing high quality places, conserving our heritage, providing parks and open spaces, and encouraging biodiversity;
- improving health and well-being;
- making Camden a safer place while retaining its vibrancy; and
- dealing with waste and increasing recycling.

Camden strongly support the use of decentralised heating systems served by Combined Heat and Power CHP engines and the use of renewable technologies to reduce CO_2 emissions.

2.3.1 Camden's Sustainable communities' strategy

Camden's Sustainable communities' strategy requires that the development allows for current council objectives including:

- Contributes to the effective economy meeting the needs of the entire community;
- Allows for a balanced and mixed society with the offering of a mixture of dwelling sizes and types;
- Takes advantage of Camden's public transport and adds to the ease of moving around the area;
- Insures that a mix of land uses are provided, to ensure that the needs of all sections of community are met in a sustainable way;
- Contributes to the aesthetic appeal of the streets and surrounding area, making sure that the town centre is a popular place to visit;
- Substantially improves the natural and built environment by considering high quality inclusive design and sustainable technologies in the development.

The regional waste strategy aims to develop the sustainability of waste management in the greater London region. The aims are to reduce waste generation, lessen the environmental impacts of waste production, improve resource efficiency, stimulate investment and maximise the economic opportunities associated with waste specific targets.

These aims are to be met by:

- Reducing waste production;
- Recycling and composting waste;
- Maintaining sufficient land fill capacities for the disposal of final residues after treatment and recovery;
- Recovering energy values from non-recycled products;
- Maximising the reuse of waste products.

2.3.2 Camden Planning Guidance 3 - Sustainability

The Camden Planning Guidance is a Supplementary Planning Document (SPD) which is an additional material consideration in planning decisions. The guidance supports the policies of Camden's Local Development Framework and provides guidance on potential implementation of the Core Strategy and the Development Policies.

Camden Planning Guidance 3 (CPG3) – Sustainability, provides detailed information on measures that can be implemented to reduce Camden's carbon emissions mainly through installing decentralised energy networks alongside smaller scale measures, such as improving the insulation and energy performance of existing buildings. It also summarises the Council's requirements and guidelines which support the relevant LDF policies:

- CS13 - Tackling climate change through promoting higher environmental standards
- DP22 - Promoting sustainable design and construction
- DP23 – Water

CPG3 provides guidance in the following areas:

- Energy statements, energy hierarchy, energy efficiency, decentralised energy, combined heat & power, renewable energy;
- Water efficiency;
- Sustainable use of materials;
- Sustainability assessment tools - Code for Sustainable Homes, and BREEAM and EcoHomes;
- Green roofs, brown roofs and green walls;
- Flooding;
- Climate change adaptation;
- Biodiversity; and
- Urban food growing

2.4 Code for Sustainable Homes

To strengthen the sustainability requirements of new dwellings, the Government launched the Code for Sustainable Homes (CfSH or 'the Code') in 2006. The Code is an environmental assessment method for rating and certifying the performance of new homes in England, Wales and Northern Ireland. It is a national standard for use in the design and construction of new homes with a view to encouraging continuous improvement in sustainable home building.

New dwellings are awarded a rating from 1-6, based on their overall performance in a range of environmental categories.

In March 2014, in response to the Housing Standard Review (HSR) the Government confirmed that is intended to 'wind down' the Code for Sustainable Homes with many of its requirements being consolidated into a national framework centred on Building Regulations, in particular energy and water standards, with the remaining requirements abandoned to simplify the current system

Policy DP22 encourages all new development to achieve the following standards:

Time Period	Minimum rating	Minimum standard for categories (% of un-weighted credits)
2010 - 2012	Level 3	Energy 50%
2013 - 2015	Level 4	Water 50%
2016+	Level 6 ‘zero carbon’	Materials 50%

3. Sustainability Assessment Method and Objectives

All the dwellings of the proposed development are required to achieve Code for Sustainable Homes Level 4. The Code for Sustainable Homes methodology assessment will be used to assess the sustainability credentials for the proposed development.

The main sustainability aspects from the Code for Sustainable Homes are as follow:

- Energy
- Water
- Materials
- Surface water run-off
- Waste
- Pollution
- Health and wellbeing
- Management
- Ecology

The main objective for the sustainability strategy is to achieve Code Level 4 and fulfil other sustainability policy requirements.

Code Level	% Points Required
1	36
2	48
3	57
4	68
5	84
6	90

At least 68 Code points will need to be achieved through sustainable design to achieve Code Level 4. The Code points will need to be achieved by accomplishing mandatory standards (credits) and tradable credits.

The mandatory standards for the following categories need to be achieved for Code Level 4:

- Dwelling CO_2 emission rate;
- Indoor Water Use;
- Environmental impact of materials;
- Management of surface water run-off from developments; and
- Storage of non-recyclable waste and recyclable household waste.

Further credits are available on a tradable basis from other categories so that the developer may choose how to add performance credits to achieve the rating for which they are aiming.

A Code pre-assessment has been carried out to show how many credits and points can be achieved for each category and for the proposed development. A copy of the Code pre-assessment is provided in Appendix A.

The key aspects of sustainability included in the Code are addressed under in the following section of this document.

4. Proposed Sustainability Strategies

The proposed sustainability solutions have been arranged and presented in nine sustainability categories in accordance with the Code and are presented in the following sections.

4.1 Energy

Dwelling Emissions Rate - ENE 1

An energy statement for this development has been produced which describes the design and technology options appraised, and proposes the preferred energy strategy option in line with the London Plan, Camden Council policies and the requirements of Code for Sustainable Homes.

All the policy requirements described in CPG 3 Section 2 (Energy Hierarchy), Section 3 (Energy Efficiency), Section 5 (Decentralised Energy with CHP) and Section 6 (Renewable Energy) were taken into careful consideration and a selection of best practice solutions were chosen that best satisfy the requirements and are technically and financially viable for this project.

The proposed energy solution for the development follows and responds to the Be Lean, Be Clean, Be Green principles and includes various energy efficiency measures as well as low-carbon and renewable energy technologies.

The development will significantly reduce CO_2 emissions by incorporating a range of passive design and energy efficiency measures throughout the site, including improved building fabric standards beyond the requirements of building regulations, an efficient ventilation strategy and low energy lighting. The energy assessment demonstrates that by implementing these passive design and energy efficient measures, the development comes very close to meeting Part L compliance without contribution from low carbon and renewable energy technologies.

Once energy demand has been reduced, the strategy proposes implementation of gas-fired CHP and efficient gas-fired boilers connected to a communal heating system, which will supply hot water and space heating for the entire development. It is anticipated that the use of CHP and a communal heating network will reduce CO_2 emissions by approximately 29.5%.

PV systems will be provided to supply renewable energy for the development. The assessment shows that the PV systems will result in approximately 18.9% CO_2 reduction for the site

The energy statement demonstrates that the proposed strategy can achieve regulated CO_2 savings of circa 31 tCO_2 which is equivalent to 42.8% reduction when compared to the original baseline. This means that the development will achieve 4 credits in this category.

The energy statement also shows that the overall CO_2 emissions from both regulated and unregulated energy can be reduced by 34 tCO_2 per annum which is equivalent to circa 21.3%.

Fabric Efficiency Rates - ENE 2

Preliminary SAP calculations give an average dwelling fabric energy efficiency (DFEE) of 32.33 kWh/ (m^2.year). This low value demonstrates the efficient performance of the building fabric. Details of the fabric efficiency are presented in the energy statement. 8 out of available 9 credits have been assumed in this category based on the preliminary DFEE standard.

Energy Display Devices - ENE 3

This credit is not sought at this stage as the impact of energy display devices on energy consumption in dwellings is limited.

Drying Space - ENE 4

All units will be supplied with bath tidy dryers, with sufficient lengths to achieve compliance. This will encourage homeowners to dry their clothes naturally instead of using a tumble drier, which are typically some of the least energy efficient white goods. This will provide valuable savings in CO_2 and energy use for the homeowner. One credit will be achieved.

Energy Labelled White Goods - ENE 5

Information on energy efficient white goods and the EU Energy Labelling Scheme will be provided within a Home User Guide to encourage the homeowner to utilise efficient white goods and explain how to get optimal use out of them. This will enable the homeowner to reduce both their CO_2 emissions and their energy bills. This will allow one credit to be achieved.

External Lighting - ENE 6

All internal and external communal area lighting, including lighting to the bin stores and cycle stores will be low energy and controlled by PIR or daylight cut-off devices.

Any security lighting will be designed such that the fittings are rated 150W maximum and be controlled by PIR sensors with daylight cut-off devices.

These measures are intended to reduce the use of external lighting when not required and to ensure that a low energy strategy is installed. This will ensure that the available two credits are achieved.

Zero or Low carbon technologies - ENE 7

Two credits can be achieved where the reduction in CO_2 emissions is at least 15% by use of low carbon and renewable energy technologies.

The energy strategy described in the energy statement proposes the use of CHP and PV technologies. These technologies are considered low carbon and renewable and both will contribute towards achievement of the 15% CO_2 reduction target.

It is anticipated that the use of the CHP engine connected to the communal heating network will reduce CO_2 emissions by approximately 29.5%. In addition, the energy assessment shows that the PV systems will result in approximately 18.9% CO_2 reduction in addition to the CO_2 reductions associated with the utilisation of the CHP engine. This means that the 15% CO_2 reduction target will be exceeded by a long margin.

Cycle Storage - ENE 8

The proposed design will provide 88 internal cycle spaces plus 2 courtyard spaces. The development will provide 1 cycle space for 1 and 2 bed units, and 2 spaces for 3 bed units plus 2 courtyard spaces for visitors. Storage areas are located in a secure indoor space on the ground floor. These facilities will help to encourage residents to reduce their transport CO_2 emissions, particularly for short journeys, and will also promote a healthy lifestyle. This provision will also help

reduce local air pollution by reducing local traffic. Based on the proposed cycle storage design, one credit can be awarded.

Home Office - ENE 9

Each dwelling will have a room with a window that achieves an ADF (average daylight factor) of at least 1.5%, that is equipped with basic facilities required for setting up a 'home office'. The space dedicated for use as a home office will also have adequate ventilation.

The purpose of providing a home office is to help reduce the amount of emissions produced when commuting to work reducing congestion and stress on transport networks.

4.2 Water

Indoor Water Use - WAT 1

Water efficient devices will be fully evaluated and installed wherever possible. There is a mandatory requirement under Building Regulations Part G to achieve potable water consumption of no greater than 125 litres per person per day; alongside more stringent requirements under the Code to achieve 105 litres per person per day for Level 4 compliance. The development will target an internal water usage of 90 litres per person per day, awarding 4 credits. Features such as flow restrictors to taps and showers, and dual flush toilets will reduce water consumption and place less of a burden on fresh water infrastructure and reduce water bills for homeowners.

As it is intended to achieve high water reduction standards with efficient design and devices, grey water harvesting will not be proposed as it will add significant risks and costs to the design. It is also believed that grey water systems increase embodied and operational carbon compared to using mains water.

External Use – Rain Water Harvesting - WAT 2

Water butts will be provided to communal amenities spaces in line with the Code requirements. Each water butt will be on a suitable stand, connected to a rainwater downpipe and have a draw off tap to enable residents to use the water conveniently and effectively.

The building will be equipped with rain water butts in order to collect water for external irrigation purposes. This shall allow one credit to be achieved.

4.3 Materials

Environmental Impact of Materials - MAT 1

The energy that has been used during manufacture, processing and the transportation of the materials to site, contributes to embodied carbon demission. These emissions shall be minimised by selection of materials for walls, floors and windows that are characterised by reduced environmental impact. The BRE's 'green guide to specification' will be used to assess the environmental rating of the materials.

To achieve 9 credits in this category three of the following five key elements of the building envelope will need to achieve a rating A+ to D: roof, external walls, internal walls (including separating walls), upper and ground floors (including separating floors), windows.

Responsible Sourcing of Materials – Basic Building Elements - MAT 2

It is expected that 80% of the assessed materials in the following basic building elements should be responsibly sourced: frame, ground floor, upper floors, roof, external walls, internal walls, foundation/sub-structure (excluding sub-base materials) and staircases. Additionally, 100% of any timber in these elements will need to be legally sourced. 4 credits can we awarded in this category.

Responsible Sourcing of Materials – Finishing Elements - MAT 3

It is expected that 80% of the assessed materials in the following finishing building elements should be responsibly sourced: staircases, windows, external and internal doors, skirting, panelling, furniture, fascias and any other significant use. Additionally, 100% of any timber in these elements will need to be legally sourced. 2 credits are aimed for in this category.

4.4 Surface water run-off

Management of Surface Water Run Off From Developments - SUR 1

Guidance contained with the SUDs Manual (CIRIA C697) has been used to determine which SUDs features are most applicable to this development given its topography, ground conditions, scale and density.

In particular, the SUDs feasibility study has demonstrated the following:

- Due the extensive use of solar PV, living roofs are not appropriate on this development.
- Due to the density of the new development and site topography, basins and ponds are not suitable.
- Filter strips and swales as well as infiltration devices are not appropriate on this site due to the underlying London Clay formation.
- Permeable surfaces and filter drains are also not appropriate on this site due to the underlying London Clay formation.
- Given the inability of tanked systems to offer a benefit on this scheme, the principal means of surface water attenuation will come in the form of below ground cellular systems and over-sized pipes, with the outfall rate limited to no greater than 50% of the existing (pre-developed) rate.

Therefore, a flow control device will be incorporated ahead of the final outfall to the existing adopted sewer system to ensure that the discharge rate does not exceed 50% of the rate which exists from the development presently (in a 1 in 1 year return period storm event).

The onsite surface water drainage system will be designed to withstand runoff generated from all storm events up to and including a peak 1 in 100 year return period storm, plus an allowance for the potential effects of climate change (+30%).

Furthermore, rainwater from roof areas will be collected for reuse, for irrigation purposes, with any surplus overflowing into the main onsite surface water drainage system. The design of the drainage system will assume that any rainwater harvesting vessels are ‘full’ at the time of a heavy rainfall event.

The proposed measure will meet the mandatory requirement in this category but no further credits will be achieved.

Flood Risk – Sur 2

By reference to the Environment Agency Flood Map, the site is known to exist within a Low Risk Flood Zone (Zone 1), 0.1% probability of flooding in any year. Therefore, one credit can be achieved.

Notwithstanding the above, Map 2 contained within Section DP23 of The Camden Development Policy, identifies that the southern-most part of the development site is at risk of surface water (pluvial) flooding during periods of extreme rainfall. Therefore, the proposed surface water drainage strategy for the new development will ensure that any surface water generated in this area is collected, attenuated and released gradually into the adopted sewer system, thus preventing any flood risk to future occupiers.

4.5 Waste

Storage of Non-recyclable waste and Recyclable Household Waste - WAS 1

Full recycling both internally and externally is to be provided to all dwellings. The storage of non-recyclable waste and recyclable house hold waste is a mandatory element that applies to all CfSH levels. The minimum volume recommended by the British standard 5906, which is based on a minimum collection frequency of once a week, is 100 litres per single bedroom dwelling and 70 litres extra per extra bedroom. The London Borough of Camden collects non-recyclable and recyclable waste on a weekly basis.

In addition, all homes will be provided with a 30 litre internal bin to allow the storage of recyclable materials. This will be installed inside a kitchen cupboard. Residents will be able to conveniently store recyclable materials as they are generated, before transferring them to the external collection facilities. This will allow 4 credits to be obtained.

Construction Site Waste Management - WAS 2

A Construction Waste Management Plan will be put in place to target at least 85% by weight or by volume of non-hazardous construction waste generated by the project to be diverted from landfill. Specific details of the SWMP will be finalised during detailed design. This will achieve 3 credits.

Composting - WAS 3

Compost collection will not be provided for this development due to limited communal storage space for the provision of compositing facilities.

4.6 Pollution

Global Warming Potential of Insulants - POL 1

In order to further reduce the effect on climate change that the materials used for insulation have, all materials will be selected with a global warming potential of 5 or less to achieve 1 credit. This will include insulation to the walls, roofs and pipework.

NOx Emissions - POL 2

The dwellings will be supplied with heat from a communal plant room, located in the ground floor of the building. It is envisaged that the plant room will contain a 20kWe CHP unit and 3 gas boilers. The selected gas boilers will have low NOx emissions below 40mg/kWh.

The proposed CHP unit is expected to supply at least 70% of the annual heat load and will have emissions less than 90mg/kWh.

In April 2014, the GLA published specific NOx requirements related to the CHP engines which are provided in the Sustainable Design and Construction SPG. The NOx emissions levels related to the proposed CHP engine meet the most stringent NOx standards required by the SPG.

The impact of the proposed heating system on local air quality has been assessed and the results are provided in the Air Quality report and indicate that the impact of the proposed energy system on the local air quality is negligible. Further details about the heating system and the proposed CHP engine are provided in the energy statement.

Maximum credits can be awarded for this criterion.

4.7 Health and wellbeing

Daylighting - HEA 1

Daylighting levels within a home are the product of the ratio of window size to floor, ceiling and wall areas. Many of the dwellings in the proposed development benefit from large windows to the lounge/kitchen and dining areas, which result in good levels of daylighting, improving health and wellbeing within the units as well as having the added benefit of reducing the CO_2 emissions and energy bills for the dwellings. As a minimum, one credit has been achieved for each unit.

Sound Insulation - HEA 2

Sound insulation is designed to reduce the amount of noise created by day to day occurrences in a dwelling and therefore improving health and wellbeing. To ensure levels of noise are reduced the sound insulation levels implemented in the development are require to achieve 5dB for airborne and 5dB for impact sound attenuation. This will allow 3 credits to be achieved in this category.

Private Space - HEA 3

The design of the building ensures that all the dwellings will be provided with a private/semi-private space of adequate size, compliant with the Code requirements. The communal space is designed in a way that makes it clear that the space is to be used by occupants of the proposed development. This will award 1 credit.

Life Time Homes - HEA 4

Fairview have proposed that all dwellings will be designed and built to achieve full compliance with all 16 of the Lifetime Homes criteria, which provides a future proof and adaptable development, and allows the dwellings to be suitable for a wider audience of age and disability.

Compliance with these standards will result in the full 4 credits being awarded in this section.

4.8 Management

Home User Guide - MAN 1

A Home User Guide will be produced in order to provide guidance which enables the occupant to understand and operate their home efficiently and make the best use of local facilities available to them. The guide will include information on the operation and environmental performance of the dwellings, energy saving measures and renewables. It will also cover water saving, recycling and

waste tips, information on sustainable DIY and links to further information. In addition, the guide will also cover details of local amenities, A&E facilities and minor injury clinics. All credits will be achieved this category.

Considerate Construction Scheme - MAN 2

The Considerate Constructors Scheme is the national initiative set up by the construction industry to improve its image. The scheme consists of the following sections:

- Enhancing the appearance
- Respecting the community
- Protecting the environment
- Securing everyone's safety
- Caring for the workforce

The site is to be registered under the Considerate Constructors Scheme prior to the commencement of construction. The developer is committed to promoting the idea of environmentally and socially considerate and accountable management of construction. As part of this commitment the site will target Best Practice level, sufficient to achieve two credits.

Construction Site Impact - MAN 3

Construction has the potential for major pollution, mostly through pollution to air (through dust emission) and to water via water courses and ground water. To monitor the impacts and mitigate the construction site impacts, the following are to be adopted on site:

- Monitor report and set targets for CO_2 production or energy use arising from site activities.
- Monitor, report and set targets for water consumption from site activities
- Adopt best practice policies in respect of air (dust) pollution arising from site activities
- Adopt best practice policies in respect of water (ground and surface) pollution occurring on site.

This will award 2 credits for this section.

Security - MAN 4

An Architectural Liaison Officer has been consulted on the design stage drawings and their recommendations have been incorporated into the design where feasible. However, as full compliance with Section 2 – Physical Security from "Secured by Design- New Homes" requirements are not being sought at this stage, the credits in this category have not been awarded.

4.9 Ecology

Ecological Value of Site - ECO 1

The site consists of two buildings and associated hardstanding, as well as areas of amenity planting, amenity grassland and trees. The provided ecology report states that the majority of the habitats present are of negligible ecological significance. Therefore, it is considered that the site has a low ecological value. Further information is provided in the ecology report.

Ecological Enhancement - ECO 2

The ecology report provides recommendations regarding enhancements of the site ecology. However, at present this credit will not be targeted.

Protection of Ecological Features - ECO 3

It is considered that the site has a low ecological value based on the conclusions provided in the ecology report. Therefore, it is assumed that this credit will be achieved by default.

Change ecological Value of Site - ECO 4

The developer will ensure that the ecological value of the site will demonstrate a neutral enhancement. Therefore 2 credits have been assumed.

Building Footprint - ECO 5

To optimise the land and material use across the site, the design of the building was optimised to achieve the most efficient footprint of the building. The development will exceed the retired 4:1 net floor area/net ground floor area ration, therefore two credits can be achieved in this category.

5. Conclusion and Summary

The proposed sustainability approach and measures described in this document aim to meet the targets and standards set by the relevant planning and policy documents and sustainability tools for new development required by the London Borough of Camden. This strategy follows the structure of the Code for Sustainable Homes assessment, leading to a robust sustainability strategy. The proposed development will achieve Code for Sustainable Homes Level 4.

Key sustainability measures for the proposed Lawn Road development include:

- The required reduction in carbon dioxide emissions from regulated energy use that will exceed the requirements of Code Level 4 through a combination of energy efficiency measures, an on-site district heating system with CHP and PV panels on the roof.
- A good level of energy efficiency measures have been proposed for the development that come very close to meeting Building Regulations Part L1A 2013 without the need for bolt on renewables.
- With the combination of a communal heating scheme with CHP and PV, the total reduction in carbon dioxide emissions of circa 42.8% is achieved and exceeds the London Plan target of 35%
- The district heating system will be serving heat to all the apartments from a single energy centre, allowing the site's infrastructure to be future-proofed for connection to a district wide network if or when it is delivered in the future.
- The proposed CHP and the boilers will be specified with very low NOx emissions.
- Car free scheme, with the exception of on-street disabled parking spaces.
- A flow control device will be incorporated ahead of the final outfall to the existing adopted sewer system to ensure that the discharge rate does not exceed 50% of the rate which exists from the development presently.
- Private and semi-private amenity space for all dwellings.
- Water butts will be provided for rain water harvesting for external irrigation purposes
- Low environmental impact materials will be used.
- All new units will be designed to Lifetime Homes standards.
- 88 internal plus 2 courtyard cycle spaces will be provided within the development for use by residents. The development will provide 1 cycle space for 1 and 2 bed units, and 2 spaces for 3 bed units, plus 2 courtyard spaces for visitors.
- Internal water consumption of <90 litres/person/day will be targeted through water efficient sanitary fittings and appliances.
- A constriction waste management plan will be put in place to ensure more waste is diverted from landfill.
- All dwellings will be designed to achieve a 5dB improvement over Building Regulations Part E to improve sound attenuation.
- A Home User Guide will be provided to all dwellings.

- A commitment to achieve Best Practice under the Considerate Constructors Scheme.
- Many of the dwellings benefit from large windows to the lounge/kitchen and dining areas, which result in good levels of daylighting, improving health and wellbeing within the units as well as having the added benefit of reducing the CO_2 emissions and energy bills for the dwellings.
- The site has a low ecological value. The proposed design will ensure that the ecological value of the site will demonstrate a neutral enhancement.

A Code for Sustainable Homes pre-assessment has been carried out and the results are summarised in the following table.

Category	Potential Credits	Credits Achieved	Percentage of Achieved Credits
Energy	31	20	64.5%
Water	6	5	83%
Materials	24	15	62.5%
Surface & Water Run-Off	4	2	50%
Waste	8	7	87.5%
Pollution	4	4	100%
Health and Well Being	12	9	75%
Management	9	6	66%
Ecology	9	6	60%
TOTAL	107	74	

The table shows that the minimum standards for Energy, Water and Materials stated in Camden Policy DP22 have been achieved and exceeded.

The pre-assessment demonstrates that the development will achieve 70.14% points, bettering the score required for Code Level 4.

Appendix A - Code for Sustainable Homes Pre-Assessment

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Results

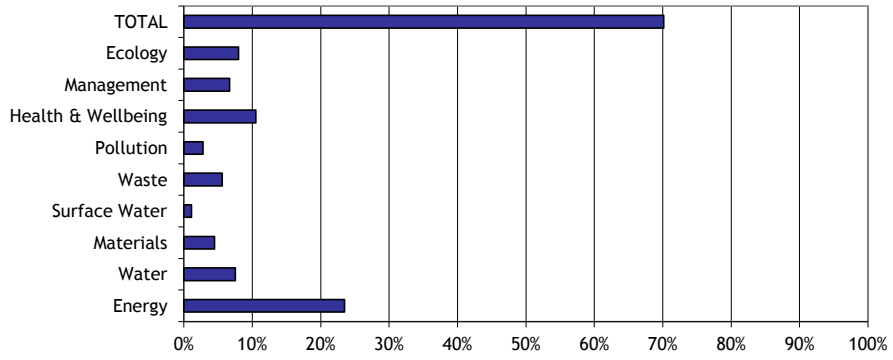
Development Name:	32 Lawn Road, Camden, London
Dwelling Description:	Block of Flats
Name of Company:	Silver
Code Assessor's Name:	Mark Asimakis-Asimidis SEMS-MAA01
Company Address:	80 Cannon Street, London EC4N 6HL
Notes/Comments:	

PREDICTED RATING - CODE LEVEL: 4

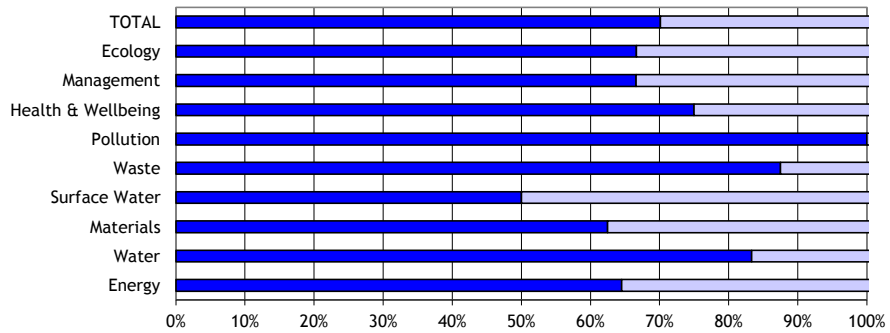
Mandatory Requirements: **All Levels**

% Points:	**70.14%**	**- Code Level: 4**
Breakdown:	**Energy**	**- Code Level: 4**
	Water	**- Code Level: 4**

Graph 1: Predicted contribution of individual sections to the total score and percentage of total achievable score



Graph 2: Predicted percentage of credits achievable: Total and by Category



NOTE: The rating obtained by using this Pre Assessment Estimator is for guidance only. Predicted ratings may differ from those obtained through a formal assessment, which must be carried out by a licensed Code assessor.

CATEGORY 1 ENERGY	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 64.51		Credits	Level		
Contribution to Overall % Score: 23.48 points		20.0 of 31 Credits	Level 4		
Ene 1 Dwelling Emission Rate	Credits are awarded based on the percentage improvement of the Dwelling Emission Rate (DER) over the Target Emission Rate (TER) as calculated using SAP 2012. Minimum standards for each Code level apply. The Code energy calculator can be used to calculate a predicted score. Enter the predicted score What is the predicted number of credits? 4.0 OR Are zero net CO_2 emissions achieved? ☐	4.0 of 10 Credits	Level 4		
Ene 2 Fabric Energy Efficiency	Credits are awarded based on the Fabric Energy Efficiency (kWh/m^2/yr) of the dwelling. Minimum standards apply at Code levels 5 and 6. The Code energy calculator can be used to calculate a predicted score. Enter the predicted score Apartments, Mid-terrace ◉ OR End terrace, Semi and Detached ○ OR Staggered Mid terrace ○ What is the predicted number of credits? 8.0	8.0 of 9 Credits	Level 6		
Ene 3 Energy Display Devices	Credits are awarded where a correctly specified Energy Display Device is installed monitoring electricity and/or primary heating fuel consumption. Select whether the EDD monitors electricity and/or fuel None Specified ◉ Primary Heating only ○ OR Electricity only ○ OR Electricity and primary heating fuel ○	0 of 2 Credits	-		

Issue		Credits	Level	Assumptions Made	Evidence Required
Ene 4 Drying Space	One credit is awarded for the provision of either internal or external secure drying space with posts and footings or fixings capable of holding 4m+ of drying line for 1-2 bed dwellings and 6m+ for dwellings with 3 bedrooms or greater. Will drying space meeting the criteria be provided? Yes ◉ OR No ○	1 of 1 Credits	-		
Ene 5 Energy Labelled White Goods	Credits are awarded where each dwelling is provided with either information about the EU Energy Labelling Scheme, White Goods with ratings ranging from A+ to B or a combination of the previous according to the technical guide. Select the appropriate option below EU Energy labelling information **only** ☑ A+ rated appliances ☐ A rated washing machine and dishwasher ☐ B rated tumble dryer or washer dryer ☐ EU Energy labelling information provided ☐	1 of 2 Credits	-		
Ene 6 External Lighting	Credits are awarded based on the provision of space lighting* with energy efficient light bulbs/lamps and security lighting fittings with appropriate control systems. Space Lighting None provided ○ OR Non Code compliant lighting ○ OR Code compliant lighting ◉ Security Lighting None provided ○ OR Non Code compliant lighting ○ OR Code compliant lighting and controls ◉ Dual lamp luminaires Compliant with both above criteria ☐ * Statutory safety lighting is not covered by this requirement	2 of 2 Credits	-		

Issue		Credits	Level	Assumptions Made	Evidence Required
Ene 7 Low or Zero Carbon Technologies	Credits are awarded where there is a 10% or 15% reduction in CO_2 emissions resulting from the use of low or zero carbon technologies. Select % contribution made by low or zero carbon technologies Less than 10% of demand ○ OR 10% of demand or greater ○ OR 15% of demand or greater ◉	**2 of 2 Credits**	-		
Ene 8 Cycle Storage	Credits are awarded where adequate, safe, secure and weather proof cycle storage is provided according to the Code requirements. Fill in the development details below Number of bedrooms: 140 Number of cycles stored per dwelling* 1.3 * if you have storage for 1 cycle per two dwellings insert 0.5 in number of cycles stored per dwelling	**1 of 2 Credits**	-		
Ene 9 Home Office	A credit is awarded for the provision of a home office. The location, space and services provided must meet the Code requirements. Will there be provision for a Home Office? Yes ◉ OR No ○	**1 of 1 Credits**	-		

CATEGORY 2 WATER	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 83.33		Credits	Level		
Contribution to Overall Score: 7.50 points		5 of 6 Credits	Level 4		
Wat 1 Indoor Water Use	Credits are awarded based on the predicted average household water consumption, calculated using the Code Water Calculator Tool. Minimum standards for each code level apply. Select the predicted water use / Mandatory Requirement greater than 120 litres/ person/ day ○ OR ≤ less than 120 litres/ person/ day ○ OR ≤ less than 110 litres/ person/ day ○ OR ≤ less than 105 litres/ person/ day ○ OR ≤ less than 90 litres/ person/ day ◉ OR ≤ less than 80 litres/ person/ day ○	4 of 5 Credits	Level 3 AND Level 4		
Wat 2 External Water Use	A credit is awarded where a compliant system is specified for collecting rainwater for external irrigation purposes. Where no outdoor space is provided the credit can be achieved by default. Select the scenario that applies No internal or communal outdoor space ○ OR Outdoor space with collection system ◉ OR Outdoor space without collection system ○	1 of 1 Credits	-		

CATEGORY 3 MATERIALS	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 62.50		Credits	Level		
Contribution to Overall Score: 4.50 points		15 of 24 Credits	All Levels		
Mat 1 Environm-ental Impact of Materials	Mandatory Requirement: At least three of the five key building elements must achieve a Green Guide 2008 Rating of A+ to D. Tradable Credits: Points are awarded on a scale based on the Green Guide Rating of the specifications. The Code Materials Calculator can be used to predict a potential score. Mandatory Requirement Will the mandatory requirement be met? ☑ Enter the predicted score What is the predicted number of credits? 9	9 of 15 Credits	All Levels		
Mat 2 Responsible Sourcing of Materials - Basic Building Elements	Credits are awarded where materials used in the basic building elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Enter the predicted Score What is the predicted number of credits? 4	4 of 6 Credits	-		
Mat 3 Responsible Sourcing of Materials - Finishing Elements	Credits are awarded where materials used in the finishing elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Enter the predicted Score What is the predicted number of credits? 2	2 of 3 Credits	-		

CATEGORY 4 SURFACE WATER RUN-OFF	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 50.00%		Credits	Level		
Contribution to Overall Score: 1.10 points		2 of 4 Credits	All Levels		
Sur 1 Management of Surface Water Run-off from developments	Mandatory Requirement: Peak rate of run-off into watercourses is no greater for the developed site than it was for the pre-development site and that the additional predicted volume of rainwater discharge caused by the new development is entirely reduced as far as possible in accordance with the assessment criteria. Desiging the drainage system to be able to cope with local drainage system failure. Tradable Credits: Where SUDS are used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters. Mandatory Requirement Will the mandatory requirement be met? ☑ Select the appropriate option No SUDS ☐ No runoff into watercourses for the first 5 mm of rainfall ☐ Runoff from hard surfaces will receive an appropriate level of treatment ☐	0 of 2 Credits	All Levels		
Sur 2 Flood Risk	Credits are awarded where developments are located in areas of low flood risk or where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria in the technical guide. Select the annual probability of flooding (from PPG*) Zone 1 - Low ◉ OR Zone 2 - Medium ○ OR Zone 3 - High ○ Select the apropriate option(s) Low risk of flooding from FRA** ☑ All measures of protection are demonstrated in FRA ☐ Ground floor level and access routes are 600 mm above design flood level ☐ * Planning Practice Guidance - Planning and Flood Risk ** FRA - Flood Risk Assessment	2 of 2 Credits	-		

CATEGORY 5 WASTE	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted:	87.00%	Credits	Level		
Contribution to Overall Score:	5.60 points	7 of 8 Credits	All Levels		

Was 1 Storage of non-recyclable waste and recyclable household waste	Mandatory Requirement: The space provided for waste storage should be sized to hold the larger of either all external containers provided by the Local Authority or the min capacity calculated from BS 5906. Tradable Credits are awarded for adequate internal and/ or external recycling facilities. **Mandatory Requirement** Will the minimum space be provided and be accessible to disabled people? ☑ **Internal Recyclable household waste storage** Where there is no external recyclable waste storage and no Local Authority collection scheme Internal storage (capacity 60 litres) ☐	0 of 2 Credits			
	Local Authority collection Scheme Post Collection sorting Internal storage (capacity 30 litres) ☐ Pre-collection sorting Internal storage (3 separate bins, capacity 30 litres) ☑	4 of 4 Credits	All Levels		
	External Storage, no Local Authority collection scheme 3 separate internal storage bins (capacity 30 litres) ☐ **AND** Houses External Storage(capacity 180 litres) ☐ Flats Private recycling operator ☐ 3 or greater types of waste collected ☐	0 of 4 Credits			

Issue		Credits	Level	Assumptions Made	Evidence Required
Was 2 Construction Site Waste Management	A credit is awarded where a compliant SWMP is provided with targets and procedures to minimise construction waste. Credits are available where the SWMP include procedures and commitments for diverting either 50% or 85% of waste generated from landfill. SWMP details Does the SWMP include: + No SWMP ○ + SWMP with targets and procedures to minimise waste? ○ + SWMP with procedures to divert 50% of waste ○ + SWMP with procedures to divert 85% of waste ◉	**3 of 3 Credits**			
Was 3 Composting	A credit is awarded where individual home composting facilities are provided, or where a community/ communal composting service, either run by the Local Authority or overseen by a management plan is in operation. Select the facilities available No composting facilities ◉ Individual composting facilities ○ OR Communal/ community composting*? ○ Local Authority ☐ OR Private with management plan ☐ * including if an automated waste collection system is in place	**0 of 1 Credit**	-		

CATEGORY 6 POLLUTION	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 100.00%		Credits	Level		
Contribution to Overall Score: 2.80 points		4 of 4 Credits	All Levels		
Pol 1 Global Warming Potential (GWP) of Insulants	A credit is awarded where <u>all</u> insulating materials only use substances (in manufacture AND installation) that have a GWP of less than 5. Select the most appropriate option All insulants have a GWP less than 5 (●) OR Some insulants have a GWP of less than 5 ( ) OR No insulants have a GWP of less than 5 ( )	1 of 1 Credits	-		
Pol 2 NOx Emissions	Credits are awarded on the basis of NOx emissions arising from the operation of the space and water heating system within the dwelling. Select the most appropriate option Greater than 100 mg/kWh ( ) OR Less than 100 mg/kWh ( ) OR Less than 70 mg/kWh ( ) OR Less than 40 mg/kWh (●) OR Class 4 boiler ( ) OR Class 5 boiler ( ) OR All space and hot water energy requirements are met by systems who do not produce NOx emissions ( )	3 of 3 Credits	-		

CATEGORY 7 HEALTH & WELLBEING	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 75.00%		Credits	Level		
Contribution to Overall Score: 10.50 points		9 of 12 Credits	No level		
Hea 1 Daylighting	Credits are awarded for ensuring key rooms in the dwelling have high daylight factors (DF) and a view of the sky. Select the compliant areas Room Kitchen: Avg DF of at least 2% ☐ Living Room*: Avg DF of at least 1.5% ☑ Dining Room*: Avg DF of at least 1.5% ☑ Study*: Avg DF of at least 1.5% ☑ 80% of working plane in all above rooms receive direct light from the sky? ☐ Any room used for Ene 9 Home Office must also achieve a min DF of 1.5%.	1 of 3 Credits	-		
Hea 2 Sound Insulation	Credits are awarded where performance standards exceed those required in Building Regulations Part E. This can be demonstrated by carrying out pre-completion testing or through the use of Robust Details Limited. Select a type of property Detached Property ○ Attached Properties: - Separating walls and floors only exist between non habitable spaces ○ - Separating walls and floors exist between habitable spaces ◉ Select a performance standard Performance standard not sought ○ Airborne: 3db higher; Impact: 3dB lower ○ OR Airborne: 5db higher; Impact: 5dB lower ◉ OR Airborne: 8db higher; Impact: 8dB lower ○	3 of 4 Credits	-		

Issue		Credits	Level	Assumptions Made	Evidence Required
Hea 3 Private Space	A credit is awarded for the provision of an outdoor space that is at least partially private. The space must allow easy access to all occupants. Will a private/ semi-private space be provided? Yes, private/semi-private space will be provided ◉ OR No private/semi-private space ○	1 of 1 Credits	-		
Hea 4 Lifetime Homes	Mandatory Requirement: Lifetime Homes is mandatory when a dwelling is to achieve Code Level 6. Tradable credits: Credits are awarded where the developer has implemented all of the principles of the Lifetime Homes scheme. Mandatory Requirement Dwelling to achieve Code Level 6? ☐ Lifetime Homes Compliance All Lifetime Homes criteria will be met ◉ OR Exemption from LTH criteria 2/3 applied ○ Credit not sought ○	4 of 4 Credits	No level		

CATEGORY 8 MANAGEMENT	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 66.00%		Credits	Level		
Contribution to Overall Score: 6.66 points		6 of 9 Credits	All Levels		
Man 1 Home User Guide	Credits are awarded where a simple guide is provided to each dwelling covering information relevant to the 'non-technical' home occupier, in accordance with the Code requirements. Tick the topics covered by the Home User Guide Operational Issues? ☑ Site and Surroundings? ☑ Is available in alternative formats? ☑	3 of 3 Credits	-		
Man 2 Considerate Constructors Scheme	Credits are awarded where there is a commitment to comply with best practice site management principles using either the Considerate Constructors Scheme or an alternative locally/ nationally recognised scheme. Select the appropriate scheme and score No scheme used ○ Considerate Constructors OR Best Practice ◉ OR Significantly Beyond Best Practice ○ Alternative Scheme* OR Mandatory + 50% optional requirements ○ OR Mandatory + 80% optional requirements ○ * In the first instance, contact a Code Service Provider if you are considering to use an alternative scheme.	1 of 2 Credits	-		
Man 3 Construction Site Impacts	Credits are awarded where there is a commitment and strategy to operate site management procedures on site as following: Tick the impacts that will be addressed Monitor, report and set targets, where applicable, for: - CO_2/ energy use from site activities ☑ - CO_2/ energy use from site related transport ☑ - water consumption from site activities ☑ Adopt best practice policies in respect of: - air (dust) pollution from site activities ☑ - water (ground and surface) pollution on site ☐ 80% of site timber is reclaimed, re-used or responsibly sourced ☐	2 of 2 Credits	-		

Issue		Credits	Level	Assumptions Made	Evidence Required
Man 4 Security	Credits are awarded for complying with Section 2 - Physical Security from Secured by Design - New Homes. An Architectural Liaison Officer (ALO), or alternative, needs to be appointed early in the design process and their recommendations incorporated. Secured by Design Compliance Credit not sought ◉ OR Secured by Design Section 2 Compliance ○	**0 of 2 Credits**	-		

CATEGORY 9 ECOLOGY	Overall Level: 4	Overall Score	70.14	Assumptions Made	Evidence Required (The below cells can be formatted by assessors if required.)
% of Section Credits Predicted: 66.00%		Credits	Level		
Contribution to Overall Score: 8.00 points		6 of 9 Credits	All Levels		
Eco 1 Ecological Value of Site	One credit is awarded for developing land of inherently low value. Select the appropriate option Credit not sought ○ OR Land has ecological value ○ OR Land has low/ insignificant ecological value* ◉ * Low ecological value is determined either a) by using Checklist Eco 1 across the whole development site; or b) where an suitably qualified ecologist is appointed and can confirm or c) produces an independent ecological report of the site, that the construction zone is of low/ insignificant value; AND the rest of the development site will remain undisturbed by the works.	1 of 1 Credits	-		
Eco 2 Ecological Enhancement	A credit is awarded where there is a commitment to enhance the ecological value of the development site. Tick the appropriate boxes Will a *Suitably Qualified Ecologist* be appointed to recommend appropriate ecological features? ☐ AND Will all key recommendations be adopted? ☐ AND 30% of other recommendations be adopted? ☐	0 of 1 Credits	-		
Eco 3 Protection of Ecological Features	A credit is awarded where there is a commitment to maintain and adequately protect features of ecological value. Type and protection of existing features Site with features of ecological value? ◉ OR Site of low ecological value (as Eco 1)? ○ AND All* existing features potentially affected by site works are maintained and adequately protected? ☑ *If a suitably qualified ecologist has confirmed that a feature can be removed due to insignificant ecological value or poor health conditions, as long all the rest have been protected, then this box can be ticked.	1 of 1 Credits	-		

Issue		Credits	Level	Assumptions Made	Evidence Required
Eco 4 Change of Ecological Value of Site	Credits are awarded where the change in ecological value has been calculated in accordance with the Code requirements and is calculated to be: Change in Ecological Value Major negative change: fewer than -9 ○ Minor negative change: between -9 and -3 ○ OR Neutral: between -3 and +3 ◉ Minor enhancement: between +3 and +9 ○ Major enhancement: greater than 9 ○	**2 of 4 Credits**	-		
Eco 5 Building Footprint	Credits are awarded where the ratio of combined floor area of all dwellings on the site to their footprint is: Ratio of Net Internal Floor Area: Net Internal Ground Floor Area Credit Not Sought ○ OR Houses: 2.5:1 OR Flats: 3:1 ○ OR Houses: 3:1 OR Flats: 4:1 ◉ OR Houses & Flats Weighted (2.5:1 & 3:1) ○ OR Houses & Flats Weighted (3:1 & 4:1) ○	**2 of 2 Credits**			

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