…sustainable building services solutions

mansfield bowling club

sustainability statement - january 2015

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OBJECTIVE

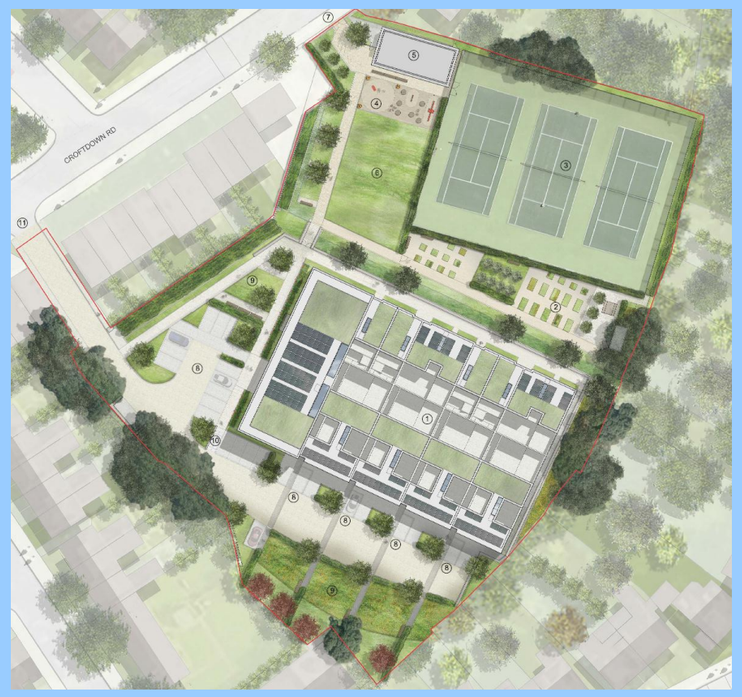
This Sustainability Statement has been prepared by mTT/SUSTAIN Limited on behalf of Generator Group LLP and forms part of a detailed planning application for the Mansfield Bowling Club redevelopment, addressing sustainable development policies of the London Borough of Camden.

Sustainable Development may be defined as 'achievement of a better quality of life through the efficient use of resources, which realise continued social progress while maintaining stable economic growth and caring for the environment.'

This document considers how the objectives of sustainable development are addressed in the proposed development's design, construction and occupation, identifying measures proposed to prevent, reduce, and where possible, offset significant adverse effects on the environment.

PROJECT BACKGROUND

The proposals comprise the redevelopment of the indoor bowling club to provide 21 residential homes through a combination of houses and flats. In addition, a community tennis club will be retained and improved and publicly accessible open space will be provided. The full planning application is formally for 'Iceni Projects to provide text.'



Architects Indicative Plan of the Proposed Mansfield Bowling Club Redevelopment

METHODOLOGY

Planning Policy issues highlighted in the London Borough of Camden's Core Strategy and Development Policies and their supporting documents (in particular Camden Planning Guidance – Sustainability (CPG 3) and the London Plan) have led to the incorporation of the key design features discussed in this document.

These key measures to be included as part of the Mansfield Bowling Club redevelopment with respect to sustainability and mitigating environmental impact are summarised in **section 2.0 Sustainability Commentary** of this document, with relevant policy background being reviewed in **appendix a**.

A key consideration for the Mansfield Bowling Club Sustainability Strategy has been on achieving a rating of 'Level 4' under the Code for Sustainable Homes (Nov. 10) for all dwellings and this Sustainability Statement supports this assessment, with full pre-assessment exercises undertaken for the houses and apartments.

SUSTAINABILITY BENCHMARKING

In order to evaluate the overall sustainability and measures included to mitigate the development's environmental impact, a Code for Sustainable Homes pre-assessment has been undertaken and the building is to undergo a full assessment process to achieve formal certification at the Design Stage and Post Construction Stage. The assessment is currently at the Design Stage, with mTT/SUSTAIN acting as the licensed Code for Sustainable Homes Assessor.

Two pre-assessment reviews have been undertaken – one for the apartments and one for the houses - with the Design Team, demonstrating that a 'Level 4' rating is achievable for the scheme, with an overall Credit score of 75.33% for the apartments and 69.05% for the houses, both above the Code threshold for a rating of 'Level 4'.

The Code for Sustainable Homes process is reviewed (with full Credit Tracker tables for the Pre-Assessments) in **appendix b** and **appendix c.**

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SUMMARY STATEMENT

The proposed redevelopment of the Mansfield Bowling Club site seeks to ensure that the highest levels of sustainability (in a social, economic and environmental sense) are attained for a scheme of this nature.

This report addresses the relevant Planning Policy issues and accordingly follows the guidance in the London Borough of Camden's Core Strategy and Development Policies and their supporting documents which indicate the Council's development aspirations on the subject areas of sustainable design and construction and energy.

The report describes how the design of the project addresses these aspirations and compares the proposals to qualitative good-practice benchmarks demonstrating the effectiveness of proposals where necessary. Related issues are reviewed in detail in the Energy Report, Daylight and Sunlight report and External Lighting Report which also form part of this planning application.

Building Fabric and Services Design (please refer to Energy Report for Details)

- In the new-build element, building fabric, glazing and services required shall be designed to exceed the requirements of Part L1A 2013 of the Building Regulations.
- Opportunities for incorporating passive design features such as changing orientation and site layout have been pursued as far as possible and the proposals include high performance solar glazing design and courtyards to optimise daylight.
- A balance has been struck between the need for effective daylighting and the desire to minimise excessive solar gains into the building.
- Cooling and Heating will be provided using high efficiency gas boiler systems with mechanical ventilation with heat recovery (MVHR) units.
- Renewable energy technology – in the form of roof-mounted photovoltaic (PV) panels – has been implemented for each dwelling.

Ecology

- The existing site is expected to be defined as land of low ecological value, generally comprising hard standing, buildings and amenity grassland.
- Opportunities for landscaping and planting are have been pursued for the various areas of green space on the site.
- If any features of ecological value (adjacent to the construction zone) may be affected by the proposed works, these will be protected in line with the best practice requirements.

Site Drainage

- According to the Environment Agency's indicative flood mapping, the site is located within a Flood Risk Zone 1 area. The site is considered to be at a low probability of flooding from tidal and fluvial sources.
- Incorporation of Sustainable Urban Drainage System (SUDS) is proposed for the development in addition to the implementation of the flood control measures, by way of permeable paving to the car park hard landscaping, to prevent additional rainwater run-off as a result of the development.

Water Saving Features

- Water meters shall be installed for each dwelling and any area of high water use to help monitor and potentially reduce operational water use.
- Water efficient fittings are proposed throughout, including the installation of dual flush WCs, spray taps and low flow showers.
- Water consumption shall be reduced in line with the Code for Sustainable Homes' recommendations.

Building Materials

- The majority of building materials shall have an 'A' or 'A+' rating in the Green Guide to Specification, as a reflection of their lower environmental impact.
- Insulating materials used on site shall also have a global warming potential (GWP) of less than 5 and an ozone depleting potential (ODP) of zero.
- Responsible sourcing of materials shall be encouraged throughout the development; in particular all timber shall be certified as being responsibly sourced through a scheme such as FSC or PEFC and all timber shall be certified sustainable in line with the UK Government's Timber Procurement Policy.
- Consideration will be given to locally sourcing materials where possible to reduce site related transport emissions.

Waste Reduction

- Construction site waste shall be reduced through the formulation and implementation of a construction Site Waste Management Plan. This will include procedures and targets for reducing the overall amount of waste generated and recycling a high proportion of the waste that is generated.
- Construction waste, where possible, shall be segregated into at least five categories for recycling in line with the requirements established by WRAP.
- Recycling by occupants during occupation shall be encouraged through the provision of dedicated central recyclable waste storage facilities.

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Pollution

- Measures shall be implemented on site during demolition and construction to prevent air and water pollution, to include such measures as regular damping down and the use of dustsheets.
- Compliance with the Considerate Constructors scheme will help to ensure on-site environmentally responsible behaviour.
- Artificial light pollution shall be prevented through compliance with the Institute of Lighting Professionals guidelines.

Transport

- Construction related transport will be managed through a Construction Environment Management Plan.
- The site is supported by good transport links including numerous bus stops and underground and surface railway stations, within reasonable walking distance of the site.
- The provision of cycle storage spaces in line with the expectations of Code for Sustainable Homes is proposed to encourage the use of this more sustainable form of transport.

Further Details

Sustainability issues are reviewed in **section 3.0 Sustainability Commentary** of this document, with relevant planning policy background being reviewed in **appendix a**.

The Code for Sustainable Homes process is reviewed in **section 4.0 Sustainability Benchmarking** of this document, with a full Credit Tracker for the assessment provided in **appendix b** and **appendix c**.

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SITE BACKGROUND

This document has been prepared to review sustainability issues associated with the proposed redevelopment of the site known as Mansfield Bowling Club, Croftdown Road, London NW5 1EP. The site local planning authority is the London Borough of Camden.

Aerial View of the Existing Site

LOCATION

The surrounding area consists of primarily residential dwellings which are well screened by established landscaping and shrubbery. Specifically, the boundaries of the site sit adjacent to the rear gardens of properties on Croftdown Road, Regency Lawn, Dartmouth Park Avenue, Laurier Road and York Rise.

'The site is accessed via Croftdown Road and has a Public Transport Accessibility Level rating of 3. (moderate) although neighbouring properties have a PTAL rating of 4. The nearest underground station is Tufnell Park, located approximately 750m away.

Site Location Map

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EXISTING MANSFIELD BOWLING CLUB SITE DESCRIPTION

The application site comprises a vacant indoor bowling facility which consisted of a six rink indoor bowling green, part 2/part 3 storey clubhouse with associated changing rooms and function room (Class D2).

Two ancillary residential flats (Class C3) are also accommodated in the building. The remainder of the site is made up of associated car parking and hardstanding for the aforementioned vacant building, areas of open space, an outdoor bowling green, two tennis courts and associated clubhouse, and a small allotment area.

The existing site area is approximately 0.85 hectares (ha) or 8,500 square metres.

Photograph of the Existing Mansfield Bowling Clubhouse

PROPOSED MANSFIELD BOWLING CLUB DEVELOPMENT DESCRIPTION

The application is formally for the Creation of a new publicly accessible open space; enhanced tennis facilities including the reconfiguration and extension of the courts to provide an additional court and increased playing area to accord with LTA requirements; the provision of a new ancillary pavilion (Class D2) to replace existing ancillary buildings and structures providing community and leisure space; a new community garden; and the demolition and replacement of the existing bowling club building with a new part three storey, part 2 storey building providing 21 residential dwellings (Class C3) with associated access, parking and landscaping.'

Architects Indicative View of the Proposed Mansfield Bowling Club Redevelopment

2.0 policy background…

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OVERVIEW

Objective

Sustainable Development may be defined as 'achievement of a better quality of life through the efficient use of resources, which realise continued social progress while maintaining stable economic growth and caring for the environment.'

Review of Policy and Good Practice Guidance

Please refer to **appendix a** for a detailed review of National, Regional and Local (London Borough of Camden) policy related to energy efficiency and low carbon design and other sources of good practice guidance.

The most important policies and guidance for Mansfield Bowling Club are:

- National Planning Policy Framework and National Planning Policy Guidance- Department for Communities and Local Government
- The Sustainable Design and Construction SPG May 2006 and Sustainable Design and Construction SPG April 2014
- London Borough of Camden Camden's Core Strategy (in particular CS 13), Development Policies (in particular DP 22) and Planning Guidance CPG 3 Sustainability.

KEY POLICIES

National - National Planning Policy Framework (Paragraph 14) and National Planning Practice Guidance

The National Planning Policy Framework (NPPF) states at Paragraph 14 that 'there is a presumption in favour of sustainable development, which should be seen as a golden thread running through plan making and decision taking.'

In determining planning applications, Paragraph 96 of the NPPF states that 'new development should comply with adopted Local Plan policies and requirements for decentralised energy supplies and to take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.'

The NPPG is supported by the National Planning Practice Guidance (NPPG), which was launched on 6th March 2014 as a resource replacing almost all previously recognised planning guidance documents with a web-based resource.

Regional – Greater London Authority

This Sustainability Statement has been in accordance with the guidance set out in The Mayor of London's Sustainable Design and Construction SPG May 2006 and Sustainable Design and Construction SPG July 2013, and with reference to all appropriate national and regional planning policies.

Local – London Borough of Camden Core Strategy, Development Policies and Related Documents

Camden's Core Strategy 2010, Development Policies 2010 and Planning Guidance CPG 3 Sustainability 2013 are the key sources of guidance on sustainability issues for the proposed redevelopment.

3.0 sustainability commentary…

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SUSTAINABILITY DRIVERS

Background

mTT/SUSTAIN have undertaken a review of sustainability issues for the development, demonstrating how principles incorporated in the current design contribute to ensuring sustainability throughout construction and use.

The proposed redevelopment of Mansfield Bowling Club seeks to ensure that the highest levels of sustainability (in a social, economic and environmental sense) are attained within the commercial and site constraints imposed by redeveloping an existing site.

This review seeks to demonstrate to Camden Council that planning policies relevant to sustainability have been addressed in a structured and comprehensive manner by the proposals in the planning application. It is supported by the Energy Statement also prepared for the application.

The scheme responds to a number of sustainability drivers, including national and local planning policies but also encompassing the applicant's own Sustainability Strategy and other guidance listed below.

RIBA Plan of Work Sustainability Checkpoints

The design progress has been reviewed against the RIBA 2013 Plan of Work Sustainability Checkpoints 2 schedule.

Code for Sustainable Homes

The environmental and sustainability credentials of the proposals are verified by the predicted Code for Sustainable Homes 'Level 4' rating, as reviewed in **section 4.0** and **appendix b** for the apartments and **appendix c** for the houses.

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LONDON PLAN SUSTAINABILITY CHECKLIST

Overview

The sustainability assessment has been prepared in the form of a matrix, which is intended to summarise the extent to which proposals for the site currently meet the Mayor's Essential and Preferred standards set out in the London Plan Supplementary Planning Guidance on Sustainable Design and Construction (May 2006). It should be noted that the description in the standards copied from the SPG refer to a previous version of The London Plan, however, the general principles are still relevant.

Legend

A tick (✓) indicates where is it considered the Policy criteria has been met
A double tick (✓✓) indicates where it is considered that the criteria has been exceeded or where the preferred standard has been met.
A cross (x) indicates where the measures proposed fall short of the Policy supporting text requirements
A dash (-) indicates where the criteria is indeterminate prior to detailed design proposals for the building being finalised, or is not applicable to the site.

Sustainable Design and Construction SPG			Application at Mansfield Bowling Club		Benchmark	
Section	**Essential Standard**	**Mayor's Preferred Standard**			**Scheme**	**Detail**
2.1.2 Land	100% of development on previously developed land, unless very special circumstances can be demonstrated.		The new dwellings and their surroundings are located in an area that was previously developed as the bowling clubhouse, tennis courts and an outdoor bowling green.	✓		
	Development density should be maximised based on local context (Policy 4B.7) design principles (Policy 4B.1) open space provision (Policy 3D.10) and public transport capacity (Policy 3D.10). Residential development will be assessed on the Matrix of Sustainable Residential Density in the London Plan (Table 4B.1).		The proposed development is for 21 dwellings (a mixture of houses and flats with varying tenure types). Please refer to other reports within this Planning Application for a discussion on the development density.	✓		
2.1.3 Buildings	Existing building are reused where practicable, where the density of development and residential amenity are optimised and where the building conforms or has the potential to meet the standards for energy, materials, biodiversity and water conservation set out in this SPG.	Existing roof space is reused where practicable to create new outdoor spaces and enhance biodiversity alongside the integration of renewable energy (section 2.3.2).	The proposed new dwellings are to be built on the site of the bowling clubhouse. It has been established that this building does not have the potential to meet the standards for energy, materials, biodiversity and water conservation set out in the SPG, but that the replacement dwellings will fully address these standards.	✓		
2.2.2 Location and Urban Design	All development to follow the principles of good design set out in London Plan policy 4B.1		The development will aim to follow the principles of good design set out in The London Plan Please Refer to the Architect's Design and Access Statement for details.	✓		

Sustainable Design and Construction SPG			Application at Mansfield Bowling Club		Benchmark	
Section	**Essential Standard**	**Mayor's Preferred Standard**			**Scheme**	**Detail**
	Minimise need for and use of mechanical ventilation, heating and cooling systems.		The new dwellings are designed to be energy efficient with high levels of insulation. They are provided with mechanical ventilation with heat recovery serving each dwelling individually. Cooling is not provided in the dwellings. For more details, please refer to the Energy Report. The dwellings heating requirements will be reduced by improvements to the insulation of the walls and roof and the provision of a new high efficiency boiler.	✓		
2.2.3 Adapting To Climate Change	Buildings provide for flexibility of uses during their projected operational lives.		It has been established that the existing bowling club building does not have the potential to meet the identified uses on the site. The new buildings are for residential use and would typically remain as so in future. They are being designed in accordance with 'Lifetime Homes' standards and so will have a high level of flexibility to accommodate residents changing lifestyle needs.	-		
	Buildings adapt to and mitigate for the effects of the urban heat island and the expected increases in hot dry summers and wet mild winters.		The majority of the dwellings are mostly dual aspect and so will be well ventilated to prevent the build-up of heat. The windows on the south façade will be designed to limit the solar gain and incorporate triple glazing and/or solar control glazing	✓		
	Design in facilities for bicycles and electric vehicles.		Cycle parking will be provided to the requisite planning and CSH standards.	✓	THE CODE FOR SUSTAINABLE HOMES	Ene 8 Cycle Storage
2.3.2 Energy	Carry out an energy demand assessment.		An energy assessment has been carried out for the dwellings. This assessment is set out in the Energy Report which forms part of this Planning Application as a separate document.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Ene 1 Dwelling Emissions Rate
	Maximise energy efficiency.		The dwellings are energy efficient and exceed the minimum requirements of the Building Regulations Part L2A 2013 through energy efficiency measures only.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Ene 1 Dwelling Emission Rate

Sustainable Design and Construction SPG			Application at Mansfield Bowling Club		Benchmark	
Section	**Essential Standard**	**Mayor's Preferred Standard**			**Scheme**	**Detail**
	Major commercial and residential developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary cooling systems: Passive design Community heating and cooling then Combined heat and power for heating and cooling preferably fuelled by renewables then Solar water heating then Heat pumps and then Gas condensing boilers	All developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary for cooling systems and should incorporate the highest feasible of the following options: combined heat and power/tri-generation, preferably fuelled by renewables, community heating, then solar water heating. New developments should always be connected to existing community heating networks preferably fuelled by renewables where feasible.	Please refer to the **Energy Report** for further details The development is too small to technically justify an effective communal heating system and CHP, with no viable means of connecting to a community heating system identified.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Ene 7 Low & Zero Carbon Technologies
	Wherever on site outdoor lighting is proposed as part of a development it should be energy efficient, minimising light lost to sky.	Wherever outdoor lighting or other electrically powered street furniture is proposed on site, it should be solar powered and minimise light lost to the sky.	Energy Efficient lighting will be provided to all external areas. Light pollution will be minimised by selection of luminaires with zero upward light pollution. Please Refer to the **External Lighting Impact Assessment Report** for further details.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Ene 6 External Lighting
		Lighting, heating and cooling controls should enable services to operate efficiently under different loadings and allow for localised control.	Each dwelling will be individually controlled by the resident, with a Building User Guide provided to assist them in understanding the heating and ventilation systems and their controls.	✓✓		
	Carbon emissions from the total energy needs (heat, cooling and power) of the development should be reduced by at least 10% by the onsite generation of renewable energy.	Major developments should be zero carbon emission developments (ZCDs)	Renewable energy technologies will be provided on each house. The total carbon savings for the dwellings through renewables will be 35.33% of the regulated emissions.	✓	THE CODE FOR SUSTAINABLE HOMES	Ene 1 * Dwelling Emission Rate Ene 7 Low & Zero Carbon Technologies
		Major developments should make a contribution to London's hydrogen economy through the adoption of hydrogen and/or fuel cell technologies and infrastructure.	This emerging technology is not considered suitable for a development of this type, with no viable hydrogen network being identified close to the site..	X		
2.3.3 Materials		Neither construction nor specification of material with high-embodied impact to be used (as defined by the summary ratings in the Green Guide to specification) unless compelling whole life energy or technical case for its use exists.	The use of 'A' rated materials from the Green Guide to Specification will be encouraged for all dwellings and landscaped areas.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Mat 1 Environmental Impact of Materials
	50% timber and timber products from Forest Stewardship Council (FSC) source and balance from a known temperate source	90% structural timber from FSC source and the balance of timber products from a known temperate source.	All permanent and temporary (site) timber shall be supplied from legal and sustainable sources.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Mat 2 Responsible sourcing of Materials: Basic Building Elements
		No peat or natural weathered limestone should be used in buildings or landscaping.	No peat or natural weathered limestone is specified to be used in buildings or landscaping.	✓✓		
	Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming must not be used		All insulation shall have GWP <5 and zero ODP.	✓	THE CODE FOR SUSTAINABLE HOMES	Pol 1 Global Warming Potential of Insulants

3.0 sustainability commentary…

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Sustainable Design and Construction SPG			Application at Mansfield Bowling Club		Benchmark	
Section	**Essential Standard**	**Mayor's Preferred Standard**			**Scheme**	**Detail**
		Before demolition, appraisal of maximising recycling of materials by use of ICE's Demolition Protocol	An appropriate site waste management plan will be used following the guidance provided in Camden's Planning Guidance on Sustainability (CPG 3)	✓✓		
		50% of construction materials by mass used in the development to be sourced from a factory/plant, quarry, wharf, railhead or recycling centre within 35 miles of site wherever feasible	Local sourcing of material will be pursued where possible.	✓		
	Minimise use of new aggregates.	10% total value of materials used to be derived from recycled and reused content in products and materials selected.	It is proposed to use recycled aggregate for landscaping fill and where possible (to suit the structural constraints) within the dwellings.	✓		
2.3.4 Water	Residential developments to achieve average water use in new dwellings of less than 40m^3 per bed space per year (approximately 110 litres/head/day)	Residential developments to achieve average water use in new dwellings of less than 25m^3 per bed space per year (approximately 70 litres/head/day)	The development shall meet the target levels required by the Code For Sustainable Homes for Water and will be provided with water efficient facilities such as dual flush toilets, aerated low flow taps and low flow showers.	✓	THE CODE FOR SUSTAINABLE HOMES	Wat 1 Internal Potable Water Use
	100% metering of all newly built property		Metering and sub-metering (by fuel type) will be provided throughout.	✓		
		Use of grey water for all non-potable uses	Grey water systems are not proposed for this development.	✓		
2.4.2 Noise	Demonstrate that adverse impacts of noise have been minimised, using measures at source or between source and receptor (including choice and location of plant or method, layout, screening and sound absorption) in preference to sound insulation at the receptor, wherever practicable		The dwellings contain no new noise sources that will cause a nuisance to the surrounding dwellings.	✓	THE CODE FOR SUSTAINABLE HOMES	Hea 2 Sound Insulation
2.4.3 Air Pollution	All new boilers should produce low levels of NOx		The new gas fired boilers to be provided to the dwellings will have NOx emissions less than 40mg/kWh.	✓		
		Low emission developments that are designed to minimize the air quality impact of plant, vehicles and other sources over the lifetime of the development.	No comment	-		
	Take measures to reduce and mitigate exposure to air pollution.		The site is located in an area with acceptable air quality so additional measures are not required.	✓		
2.4.4 Water Pollution and Flooding	Use Sustainable Urban Drainage Systems (SUDS) measures, wherever practical Achieve 50% attenuation of the undeveloped site's surface water run off at peak times	Achieve 100% attenuation of the undeveloped site's surface water run off at peak times	SUDS will be implemented and will ensure that the peak flow rate following development will be no greater that the current flow rate. The SUDS methods being utilised on this project include permeable paving, green roofs and areas of soft landscaping.	✓	THE CODE FOR SUSTAINABLE HOMES	Sur 1 Reduction of Surface Water Runoff from Site
2.5.2 Indoor Comfort	Inert and low emission finishes, construction materials, carpets and furnishings should be used wherever practical.		Adhesives, carpets and other finishes materials will be specified with low VOC content will be specified where possible alongside other considerations such as lifespan.	✓		
		Design buildings for indoor comfort of users	The dwellings are mostly dual aspect and well ventilated and it has been demonstrated by trial SAP calculations that they will not suffer overheating problems.	✓		

Sustainable Design and Construction SPG			Application at Mansfield Bowling Club		Benchmark	
Section	**Essential Standard**	**Mayor's Preferred Standard**			**Scheme**	**Detail**
	All plant and machinery should be accessible for easy maintenance		The plant serving dwellings will be limited to conventional domestic boiler and MVHR fans/filters which will be readily accessible to the residents.	✓		
2.5.3 Designing Inclusive Environments	All developments should meet the principles of inclusive design, adopting the principles of SPG "Accessible London: Achieving an Inclusive Environment".		The relevant standards will be met for this development, with each dwelling being designed to achieve the 'Lifetime Homes' standard.	✓		
	All residential development should meet Lifetime Home standards and 10% should meet wheelchair accessibility standards (London Plan Policy 3A.4)	All residential development should be designed to meet wheelchair accessibility standards or be easily adaptable to meet wheelchair standards	All dwellings are being designed to meet Lifetime Homes standards.	✓	THE CODE FOR SUSTAINABLE HOMES	Hea 4 Lifetime Homes
		Developments should be fully e-enabled	The houses will be provided with the facility for internet connectivity. Data cabling will be provided to the home office and other key areas specified by the client. It is anticipated that the owners will install a wi-fi system in addition.	✓	THE CODE FOR SUSTAINABLE HOMES	Ene 9 Home office
2.5.4 Secure Design	Developments should incorporate principles of "Secured by design"		Secure By Design principles will be applied across the site.	✓	THE CODE FOR SUSTAINABLE HOMES	Man 4 Security
2.6.2 Open Space	No net loss of publicly accessible open space	Net gain of publicly accessible open space	There is no loss of open spaces that are publicly accessible.	✓		
	Create appropriate new open, green, publicly accessible spaces where these can redress identified areas of deficiency of public open space		The development includes the creation of new landscaped gardens accessible to the general public	✓		
2.6.3 Natural Environment and Biodiversity	No net loss of biodiversity and access to nature on the development site Reduction in areas of deficiency in access to nature	Net gain of biodiversity and access to nature on the development site	Currently the site has no significant ecological features. The new development will enhance the ecology through the provision of new species and living roofs on the dwellings.	✓✓	THE CODE FOR SUSTAINABLE HOMES	Eco 1 Ecological Value of Site Eco 2 Ecological Enhancement
2.7.2 Waste	Minimise, reuse and recycle demolition waste on site where practical	Use prefabricated and standardized modulation components to minimise waste. If this is not feasible use low waste fabrication techniques	A full formal Site Waste Management Plan for site will be provided.	✓		
	Specify use of reused or recycled construction materials		Recycled construction waste will be used where practicable	✓		
	Provide facilities to recycle or compost at least 25% of household waste by means of separated dedicated storage space. By 2010 this should rise to 35%.	Provide facilities to recycle or compost at least 35% of household waste. By 2015 this should rise to 60%.	The dwellings will be provided with recycling facilities following the guidance of the Code for Sustainable Homes and to meet the requirements of the London Borough of Camden.	✓	THE CODE FOR SUSTAINABLE HOMES	Was 1 Household waste Storage and Recycling Facilities
		Provide facilities to recycle 70% of commercial and industrial waste by 2020.	Space will be provided to allow the storage of the limited recyclable waste streams from the pavilion building.	✓		
		Incorporation of or access to new waste recovery facilities (anaerobic digestion, pyrolysis/gasification) especially to provide a renewable source of energy e.g. methane or hydrogen	These facilities are not proposed for the site and there are no such facilities available at this time.	-		
	Recycling facilities should be as easy to access as waste facilities		Recycling facilities shall be located adjacent to the general waste facilities.	✓		

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Sustainable Design and Construction SPG			Application at Mansfield Bowling Club		Benchmark	
Section	**Essential Standard**	**Mayor's Preferred Standard**			**Scheme**	**Detail**
	Reduce waste during construction and demolition phases and sort waste stream on site where practical		The impact of the construction site will be managed and monitored in terms of resource use, energy consumption, waste management and pollution. Waste streams will be separated on site or at a local waste recycling facility.	✓✓		Was 2 Construction Site Waste Management
	Reduce the risk of statutory nuisance to neighbouring properties as much as possible through site management		The impact of the construction site will be managed and monitored in terms of resource use, energy consumption, waste management and pollution.	✓		
	All developers should consider and comply with the Mayor and ALG's London BPG on the control of dust and emissions during construction and demolition	All contractors should be required by tender requirements to sign up to the Mayor and ALG's London BPG on the control of dust and emissions during construction demolition	The impact of the construction site will be managed and monitored in terms of dust pollution and energy consumption.	✓✓		
	Comply with protected species legislation			-		
	All developers should sign up to the relevant Considerate Constructors Scheme or in the City of London to the Considerate Contractor scheme	All contractors should be required by tender requirements to sign up to the relevant Considerate Constructors Scheme or in the City of London to the Considerate Contractor scheme	The Considerate Constructors Scheme (or equivalent) will be complied with. The contractor will be given a target score of 35 to achieve.	✓✓		Man 2 Considerate Constructors

4.0 sustainability benchmarking…

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INTRODUCTION

The Need for Sustainability Benchmarking

The redevelopment of Mansfield Bowling Club should not only claim 'environmental friendliness' or 'sustainability credentials' but also be able to demonstrate such claims through benchmarking against a range of independent best-practice sustainability targets.

Sustainability benchmarking systems will allow the design team to establish where it wants to be with the performance of the scheme, decide how it is going to get there and to measure its progress along the way.

Effective sustainability benchmarking systems recognise the links between economic, social and environmental systems and allows the sustainability of a project to be measured and compared with best practice options. The purpose of the sustainability benchmark is to combine an appraisal of all the diverse issues that need to be considered to assess the sustainability of a project into a meaningful ranking against such best-practice approaches.

Application at Mansfield Bowling Club

In the case of Mansfield Bowling Club, the Code for Sustainable Homes (November 2010) has been identified as the most appropriate sustainability benchmark for the project.

The Design Team has been engaged in pre-assessment workshops to establish the optimal measures for the proposed redevelopment, under the guidance of a licensed Code for Sustainable Homes Assessor. The proposed redevelopment has been registered under this scheme with its operator, the BRE (Building Research Establishment).

BACKGROUND TO THE CODE FOR SUSTAINABLE HOMES

Background

The Code for Sustainable Homes ('the Code') is a performance based assessment method and certification scheme which seeks to improve the environmental performance of new homes whilst promoting a healthy indoor environment for occupants, with the November 2010 version being current form of the scheme. The scheme is owned by the Department for Communities and Local Government (DCLG) and administered by the Building Research Establishment (BRE).

The issues reviewed by the Code assessment help inform detailed decision-making at all stages of design development to completion, enabling continual monitoring and improvement in sustainability performance, and assisting in the delivery of sustainability objectives.

Methodology

Code for Sustainable Homes assessments are carried out by specialist Assessors who are trained and licensed by the BRE. The BRE is also responsible, on behalf of DCLG, for the quality assurance process and the development is certified by them following receipt of the final report from the Assessor.

The environmental impacts of a new development are assessed at the design stage, and compared with good practice by an independent Code Assessor. The development is finally assessed at post construction stage to ensure that the measures targeted at the design stage have been included in the completed development.

At each stage 'Credits' are awarded to a building in terms of management, energy use, health and wellbeing, pollution, transport, land use, ecology, materials and water according to its performance. A set of environmental weightings then enables the Credits to be added to produce a single overall score. The building is then rated on a scale of 'Level 1' to 'Level 6', and a certificate awarded.

4.0 sustainability benchmarking…

…sustainable building services solutions

Issues, Categories and Scoring

Credits are awarded for achieving specified levels of performance set by BRE and the DCLG under a large number of issues, which are grouped into nine categories of sustainable design and construction:

- Energy/CO_2 - Energy efficiency of lighting, heating, hot water and all other energy uses in the home
- Water - Measure of internal and external potable water consumption
- Materials - Environmental impact of materials and responsible sourcing
- Surface Water Run-Off - Surface water management, flood risk reduction
- Waste - Site waste management and household waste during occupation and use recycling, composting)
- Pollution - Air and Water Pollution (excluding CO_2)
- Health and Well Being - Daylight factors, sound insulation and principle of Lifetime Homes
- Management - Home user guides, information on site and surroundings
- Ecology - Protection and enhancement of site habitats

Credits are awarded by a Code Assessor to give a score for each section which is multiplied by the relevant environmental weighting allocated to each category. These weightings help define and rank the impact of the environmental issues.

The category scores are combined into a total Code score, expressed as a percentage of the maximum achievable score

Code for Sustainable Homes Ratings

The building's overall performance is expressed as rating from 'Level 1' to 'Level 6', which is determined from the total Code score. The various Code ratings and the associated threshold score for each is shown on the following page.

In addition to this threshold score, there are mandatory performance levels for certain issues at each rating level.

Evidence for the Code for Sustainable Homes

To ensure that certification can be awarded, the Code for Sustainable Homes requires formal evidence for each feature of the development assessed – in the form of calculations, specification extracts, annotated drawings, minutes of meetings, manufacturer's product information or formal correspondence.

It is important for the team to ensure compliance with the Code criteria and provide suitable evidence as soon as possible in order to secure the best possible rating.

Optimising Code for Sustainable Homes Ratings

The most valuable and cost-effective way to ensure a high Code rating is to introduce the main issues at an early stage in the design process, to form a focus for the discussion of the environmental impacts of the building.

Input will be needed from across the design team. Although the architect and building services designers have the largest involvement, the project manager, structural engineer and contractors all may have a part to play. In addition, the Quantity Surveyor should have an input where there is potential for items on the Cost Plan to be added or amended.

The role of the Code Assessor is to coordinate the input of the team, and to track the development of ideas over time.

4.0 sustainability benchmarking…

…sustainable building services solutions

CODE FOR SUSTAINABLE HOMES ASSESSMENT OF MANSFIELD BOWLING CLUB

Overview

BACKGROUND

MTT/SUSTAIN have been appointed to undertake a Code for Sustainable Homes assessment for Mansfield Bowling Club, with a target rating of 'Level 4' sought for the redevelopment. Currently, the Design Stage assessment is at an early stage.

ASSESSMENT PROCESS

The Code for Sustainable Homes pre-assessment summarised in this report has been developed by a licensed Code Assessor and the current predicted rating is based on Pre-Assessment Workshops held with the Design Team, general Design Team Meetings and subsequent input from the team.

The scoring shown in this document is based on commitments made during these meetings and further dialogue with members of the team (client, architect, engineers, landscape architect, and other specialists).

The Pre-Assessment Credit Tracker has been issued to the Design Team, setting out the Code performance and evidence criteria which will be used to assess this project; together with the current predicted scores under each issue, the parties responsible for ensuring compliance and the provision of appropriate supporting evidence.

ASSESSOR AND REGISTRATION

It is confirmed that the Code for Sustainable Homes pre-assessments included in our Sustainability Strategy Report were undertaken by a registered Code Assessor as follows:

Licenced Assessor Name – Martin Lawless
Licenced Assessor Organisation – MTT/SUSTAIN Limited
Licensor – Building Research Establishment

The project has been registered with the BRE under the name 'Mansfield Bowling Club' on 13/08/12. The Registration Number is BRE-00018915-ds-001-00

TARGET SCORE AND RATING AND PRE-ASSESSMENTS UNDERTAKEN

The required rating for the project is Level 4, which has a threshold score of 68%.

Please refer to **appendix b** and **appendix c** for a full copies of the current Design Stage Credit Trackers for the apartments and houses respectively.

Separate Pre-Assessments were undertaken for the houses and apartments because they have different scopes in terms of what measures may be achieved, particularly in terms of energy performance and so a different selection of Credits is necessary in each case.

The Code for Sustainable Homes certifies developments on a dwelling by dwelling basis, but allows performance in certain categories to be assessed on a block-wide basis.

4.0 sustainability benchmarking…

…sustainable building services solutions

Predicted Rating - Apartments

SUMMARY TABLE

The table below summarises the current Credit scores targeted by category for the apartments at the Pre-Assessment Stage, showing a total score of **75.33%**, equivalent to a Code for Sustainable Homes rating of '**Level 4**'.

Category	Credits Available	Current Credits Sought	Weighting Factor	%of Group	Weighted Credit Score
Energy	31	22	36.4%	71%	25.83%
Water	6	4	9.0%	67%	6.00%
Materials	24	12	7.2%	50%	3.60%
Surface Water	4	4	2.2%	100%	2.20%
Waste	8	8	6.4%	100%	6.40%
Pollution	4	4	2.8%	100%	2.80%
Health and Wellbeing	12	9	14.0%	75%	10.50%
Management	9	9	10.0%	100%	10.00%
Ecology	9	6	12.0%	67%	8.00%
Total Score					**75.33%**

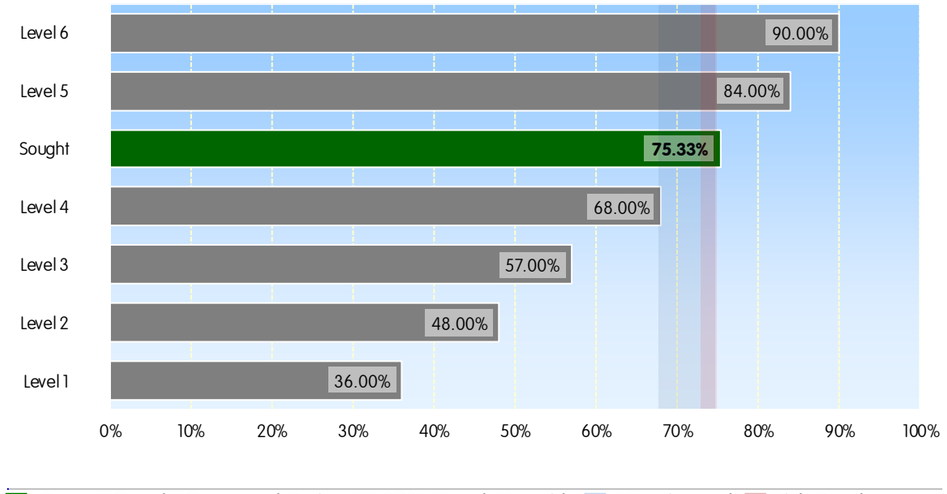
The table above verifies that the requirement within London Borough of Camden's policy CPG 3 that 50% of the available Credits in each of the Water, Materials and Energy categories are achieved has been met. A copy of the full Credit Tracker report with a description of each Credit has been provided in **appendix b**.

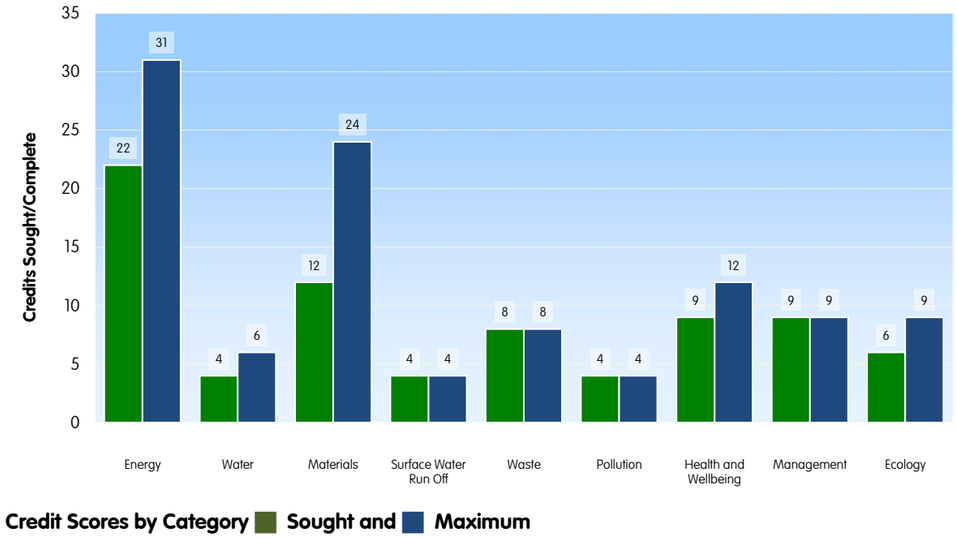
NOTES

The mandatory requirements for a 'Level 4' rating (Credits Mat 01 Environmental Impact of Materials, Sur 1 Management of Surface Water Run-Off from Developments, Was 1 Storage of Non-Recyclable Waste and Recyclable Household Waste, Ene 01 Dwelling Emission Rate and Wat 01 Internal Water Consumption) are all considered to be achievable and are included in the sought Credits.

The scoring represents the potential score for the scheme rather than the actual achieved rating. A Code for Sustainable Homes rating can only be formally achieved after completion of construction and when all necessary evidence for the Code Credits has been collected and BRE have formally certificated the assessment.

SUMMARY GRAPHS





4.0 sustainability benchmarking…

…sustainable building services solutions

Predicted Rating - Houses

SUMMARY TABLE

The table below summarises the current Credit scores targeted by category for the houses at the Pre-Assessment Stage, showing a total score of **69.05%**, equivalent to a Code for Sustainable Homes rating of '**Level 4**'.

Category	Credits Available	Current Credits Sought	Weighting Factor	%of Group	Weighted Credit Score
Energy	16	18	36.4%	52%	18.79%
Water	4	4	9.0%	67%	6.00%
Materials	19	15	7.2%	79%	5.70%
Surface Water	4	4	2.2%	100%	2.20%
Waste	8	8	6.4%	100%	6.40%
Pollution	4	2	2.8%	100%	2.80%
Health and Wellbeing	9	10	14.0%	75%	10.50%
Management	9	9	10.0%	100%	10.00%
Ecology	5	8	12.0%	56%	6.67%
Total Score					**69.05%**

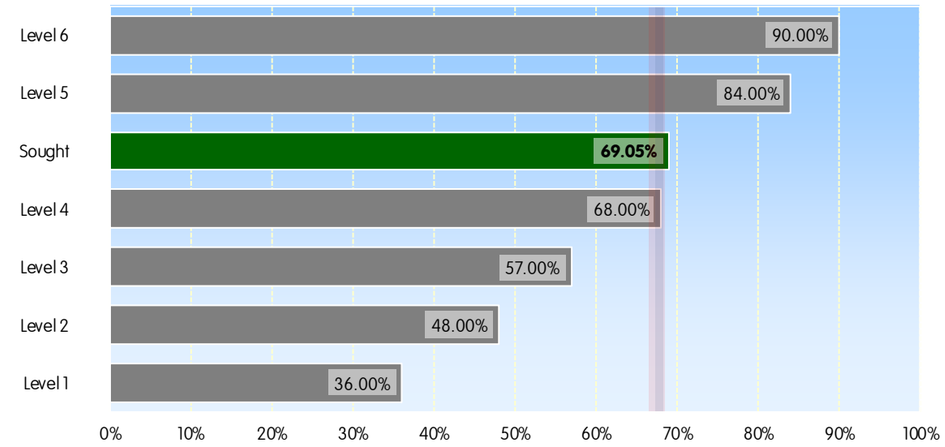
The table above verifies that the requirement within London Borough of Camden's policy CPG 3 that 50% of the available Credits in each of the Water, Materials and Energy categories are achieved has been met. A copy of the full Credit Tracker report with a description of each Credit has been provided in **appendix c**.

NOTES

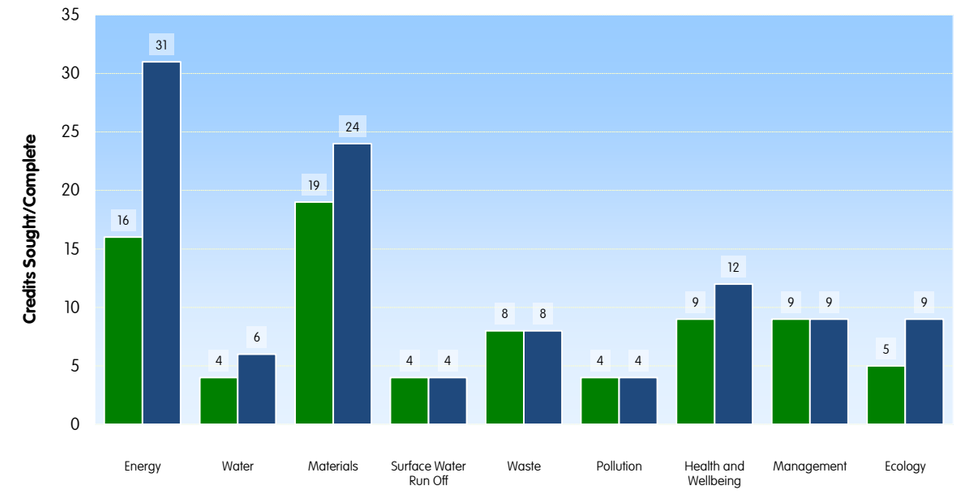
The mandatory requirements for a 'Level 4' rating (Credits Mat 01 Environmental Impact of Materials, Sur 1 Management of Surface Water Run-Off from Developments, Was 1 Storage of Non-Recyclable Waste and Recyclable Household Waste, Ene 01 Dwelling Emission Rate and Wat 01 Internal Water Consumption) are all considered to be achievable and are included in the sought Credits.

The scoring represents the potential score for the scheme rather than the actual achieved rating. A Code for Sustainable Homes rating can only be formally achieved after completion of construction and when all necessary evidence for the Code Credits has been collected and BRE have formally certificated the assessment.

SUMMARY GRAPHS



Current Sought Score and Rating 69.05%, 'Level 4' – with Margin and Risk Bands



Credit Scores by Category Sought and Maximum

appendix a – review of planning policy and good practice…

…sustainable building services solutions

NATIONAL POLICIES

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
National Planning Policy Framework CLG, March 2012	The National Planning Policy Framework (NPPF) sets out the Government's planning policies on the delivery of sustainable development through the planning system in England and indicates how these are expected to be applied, informing Local Councils and communities with regards to local plans and planning applications.	Key sections of the National Planning Policy Framework include '**Responding to Climate Change**' and '**Conserving and Enhancing the Natural Environment**'.
National Planning Policy Guidance CLG, March 2014	The National Planning Practice Guidance (NPPG) was launched on 6 March 2014 as a resource replacing almost all previously recognised planning guidance documents with a web-based resource. The NPPG is intended to make the planning system simpler clearer and easier for people to use by reducing the volume of guidance significantly and consolidating it into one resource sitting alongside the National Planning Policy Framework (NPPF).	Key sections of the National Planning Policy Guidance include **Air Quality, Climate Change, Design, Flood Risk and Coastal Change, Health and Wellbeing, Light Pollution, Natural Environment, Noise, Renewable and Low Carbon Energy, Rural Housing, Waste, Water Supply, Wastewater and Water Quality** As an example of a section of the NPPG, ID 6, Paragraph 001 Climate Change (Reference ID: 6-001-20140306) it is stated: In addition to supporting the delivery of appropriately sited green energy, effective spatial planning is an important part of a successful response to climate change as it can influence the emission of greenhouse gases. In doing so, local planning authorities should ensure that protecting the local environment is properly considered alongside the broader issues of protecting the global environment.

REGIONAL POLICIES

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
The London Plan, Spatial Development Strategy for Greater London, Greater London Authority (GLA), 2011	This is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20–25 years. It seeks to ensure London can adapt to climate change and is prepared for heat waves and their impacts, and addressing the consequence of the 'urban heat island' effect – the way dense urban areas tend to get warmer than less built-up areas, and to cool more slowly. It states that there will also be an increased probability of flooding and a need to cope with the greater consequences when it does happen. Sea levels will be higher; there will be more frequent and higher tidal surges; significant increases in peak Thames and other river flows; and the potential for more surface water flooding. A further problem arising from climate change will be an increasing shortage of water. London's water consumption outstrips available supply – and per capita water usage is increasing. It states that "Encouraging energy efficiency is important for reasons going beyond climate change. A growing city with more households and jobs will need reliable and sustainable supplies of electricity and gas to power its homes, offices and other workplaces, transport network and leisure facilities. Energy issues, including resilience, security of supply and infrastructure provision are likely to be increasingly important in the years to 2031. "One key objective is to make London a city that becomes a world leader in improving the environment locally and globally, taking the lead in tackling climate change, reducing pollution, developing a low carbon economy, consuming fewer resources and using them more effectively.	Under the section 5 Climate Change Mitigation the following are key policies: **Policy 5.1 Climate Change Mitigation** - The Mayor seeks to achieve an overall reduction in London's CO2 emissions of 60% by 2025 and expects that all new development will fully contribute towards the reduction. **Policy 5.2 Minimising Carbon Dioxide Emissions** - Developments should follow the energy hierarchy: • Be Lean - use less energy • Be Clean – supply energy more efficiently • Be Green – use renewable energy It sets standards for the improvement of Target Emission Rates (TER) over 2010 Building Regulations. Between 2013 and 2016 the target is 40% improvement for major commercial and residential developments. It sets out that all developments should provide an energy assessment. **Policy 5.3 Sustainable Design and Construction** - This states that the highest standards of sustainable design and construction should be achieved to improve environmental performance 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 SPG and this should be clearly demonstrated within a design and access statement. Sustainable design principles to be achieved include: • Minimising CO2 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 maximise reuse or recycling; • Avoiding impacts from natural hazards (including flooding); • Ensuring developments are comfortable and secure for users, including avoiding the creation of

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
		adverse local climatic conditions; • Securing sustainable procurement of materials, use local supplies where feasible; and • Promoting and protecting biodiversity and green infrastructure. **Policy 5.4 Retrofitting -** Policies and programmes that bring existing buildings up to the Mayor's standards on sustainable design and construction should reduce carbon dioxide emissions, improve the efficiency of resource use (such as water) and minimise the generation of pollution and waste from existing building stock. **Policy 5.5 Decentralised Energy Networks -** Prioritises the development of decentralised heating and cooling networks at the development and area wide levels. Policy 5.6: Decentralised Energy in Development Proposals - Requires development proposals to evaluate the feasibility of CHP systems. Developments should select the energy systems in accordance with the following hierarchy: • Connection to existing heating or cooling networks; • Site wide CHP network; and • Communal heating and cooling. Where future network opportunities are identified, proposals should be designed to connect to these networks. **Policy 5.7: Renewable Energy -** Major development proposals will provide a reduction in CO2 emissions through the use of on-site renewable energy generation. The London Plan also states that all major development proposals will seek to reduce CO_2 emissions by at least 20% through the use of onsite renewable energy generation. **Policy 5.8 Innovative Energy Technologies** - Supports the use of alternative energy technologies, such as: the uptake of electric and hydrogen fuel cell vehicles, hydrogen supply and distribution infrastructure and the uptake of advanced conversion technologies such as anaerobic digestion, gasification and pyrolysis. **Policy 5.9: Overheating and Cooling** - Seeks to reduce potential overheating and reliance on air conditioning systems, and avoid the heat island effect, and demonstrate this in accordance with the recommended cooling hierarchy. **Policy 5.10 Urban Greening** - Development proposals are expected to include green infrastructure such as tree planting, green roofs and walls, and soft landscaping. **Policy 5.11 Green Roofs and Development Site Environs** - Major development proposals should be designed to include roof, wall and site planting, especially green roofs and walls where feasible. **Policy 5.12 Flood Risk Management** - The London Plan states that development proposals must comply with the flood risk assessment and management requirements set out in Planning Policy Statement (PPS) 25 (now replaced by the National Planning Policy Framework, 2012) **Policy 5.13 Sustainable Drainage** - Sustainable urban drainage systems (SUDS) should be utilised unless there are practical reasons for not doing so. The aim should be to achieve greenfield run-off rates and ensure that surface water runoff is managed as close to its source as possible in line with the recommended drainage hierarchy. **Policy 5.14 Water Quality and Waste Water Infrastructure** - Adequate wastewater infrastructure capacity should be available in tandem with development. **Policy 5.15 Water Use and Supplies** - Developments should minimise water use by incorporating water saving measures and equipment. **Policy 5.16 Waste Self-Sufficiency** - London's targets will be helped by setting increased targets for recycling and composting in commercial, industrial and municipal areas.

appendix a – review of planning policy and good practice…

…sustainable building services solutions

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
Sustainable Design and Construction, The London Plan Supplementary Planning Guidance Greater London Authority (GLA), 2006	The Supplementary Planning Guidance (SPG) is applicable to all development types and associated spaces. The SPG provides guidance on the way that the seven measures identified in the London Plan policy can be implemented to meet the London Plan objectives on sustainable design and construction. All future developments should meet the highest standards of sustainable design and construction: These will include measures to: • Re-use land and buildings • Conserve energy, materials, water and other resources • Ensure designs make the most of natural systems, both within, in and around the building • Reduce the impacts of noise, pollution, flooding and micro-climatic effects • Ensure developments are comfortable and secure for users • Conserve and enhance the natural environment, particularly in relation to biodiversity • Promote sustainable waste behaviour in new and existing developments, including support for local integrated recycling schemes, CHP schemes and other treatment.	Applications for strategic developments should include a statement showing how sustainability principles will be met in terms of demolition, construction and long-term management. Boroughs should ensure that, where appropriate, the same sustainability principles are used to address planning applications.
The Mayor's Waste Management Strategies - London's Wasted Resource: The Mayor's Municipal Waste Management Strategy and Making Business Sense of Waste: The Mayor's Business Waste Management Strategy, Greater London Authority (GLA), 2011	The Mayor's key targets set out in the Mayor's Waste Management Strategies 2011 for the management of business waste is as follows: - Achieve 70% reuse, recycling and composting of commercial and industrial (C&I) waste by 2020, maintaining these levels to 2031 - Achieve 95% reuse, recycling and composting of construction, demolition and excavation (CDE) waste by 2020, maintaining these levels to 2031	The Mayor's key targets for the management of municipal waste are as follows: • To achieve zero municipal waste direct to landfill by 2025 • To reduce the amount of household waste produced from 970 kg per household in 2009/10 to 790kg per household in 2031. This is equivalent to a 20% reduction per household • To increase London's capacity to reuse or repair municipal waste from approximately 6,000 tonnes a year in 2008 to 20,000 tonnes a year in 2015 and 30,000 tonnes in 2031 12 • To recycle or compost at least 45 per cent of municipal waste by 2015, 50% by 2020 and 60% by 2031 • To cut London's greenhouse gas emissions through the management of London's municipal waste • To generate as much energy as practicable from London's organic and non-recycled waste in a way that is no more polluting in carbon terms than the energy source it is replacing. This is estimated to be possible for about 40% of London's municipal waste after recycling or composting targets are achieved by 2031.

appendix a – review of planning policy and good practice…

…sustainable building services solutions

LOCAL POLICIES

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
London Borough of Camden Core Strategy 2010 – 2025 London Borough of Camden, 2010	Camden's Core Strategy sets out the key elements of the Council's planning vision and strategy for the borough. It is the central part of the Local Development Framework (LDF), a group of documents setting out the planning strategy and policies. The Core Strategy contributes to achieving the vision and objectives of Camden's Community Strategy and helps the Council's partners and other organisations deliver relevant parts of their programmes. Section 3: A Sustainable and Attractive Camden – Tackling Climate Change and Improving and Protecting Camden's Quality of Life sets out key elements: • Making Camden more sustainable and tackling climate change, in particular improving the energy performance of buildings, providing decentralised energy and heating networks and reducing and managing our water use. • Promoting a more attractive local environment by securing high quality places, conserving our heritage, providing parks and open spaces, and encouraging biodiversity. • Improving health and wellbeing. • Making Camden a safer place whilst retaining its vibrancy. • Dealing with waste and increasing recycling.	**Policy CS13: Tackling Climate Change Through Promoting Higher Environmental Standards** - Reducing the effects of and adapting to climate change. - The Council will require all development to take measures to minimise the effects of, and adapt to, climate change and encourage all development to meet the highest feasible environmental standards that are financially viable during construction and occupation by: • Ensuring patterns of land use that minimise the need to travel by car and help support local energy networks. • Promoting the efficient use of land and buildings. • Minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing, in order, all of the elements of the energy hierarchy. • Ensuring developments use less energy, making use of energy from efficient sources, such as the King's Cross, Gower Street, Bloomsbury and proposed Euston Road decentralised energy networks. • Generating renewable energy on-site; and ensuring buildings and spaces are designed to cope with, and minimise the effects of climate change. The Council will have regard to the cost of installing measures to tackle climate change as well as the cumulative future costs of delaying reductions in carbon dioxide emissions. The Council will promote local energy generation and networks by: • Working with partners and developers to implement local energy networks in the parts of Camden most likely to support them, and • Protecting existing local energy networks where possible (e.g. at Gower Street and Bloomsbury) and safeguarding potential network routes (e.g. Euston Road).

appendix a…

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
London Borough of Camden Development Policies, 2010 London Borough of Camden, 2010	Camden Development Policies form part of the Council's Local Development Framework (LDF), the group of documents setting out the planning strategy and policies. The lead Local Development Framework document is the Core Strategy discussed above, which sets out the key elements of the Council's planning vision and strategy for the borough and contains strategic policies.	**Policy DP17 Walking, Cycling and Public Transport** - Development should make suitable provision for pedestrians, cyclists and public transport and, where appropriate, will also be required to provide for interchanging between different modes of transport. Provision may include: • Convenient, safe and well-signalled routes including footways and cycle ways designed to appropriate widths. • Other features associated with pedestrian and cycling access to the development, where needed, for example seating for pedestrians, signage, high quality cycle parking, workplace showers and lockers. • Safe road crossings where needed. • Bus stops, shelters, passenger seating and waiting areas, signage and timetable information. **Policy DP18 - Parking Standards and Limiting the Availability of Car Parking** - The Council seeks to ensure that developments provide the minimum necessary car parking provision. Developments should either be car free, or where parking provision is accepted, minimum standards should be observed. Developments will also be expected to meet the Council's minimum standards for cycle parking. **Policy DP22 Promoting Sustainable Design and Construction** - The Council will require developments to incorporate sustainable design and construction measures. Schemes must: • Demonstrate how sustainable development principles, including the relevant measures set out in the Core Strategy Policy CS13 above, have been incorporated into the design and proposed implementation, and • Incorporate green or brown roofs and green walls wherever suitable. The Council will promote and measure sustainable design and construction by: • Expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016 • Expecting developments (except new build) of 500 m2 of residential floor space or above or 5 or more dwellings to achieve "Very Good" in EcoHomes assessments prior to 2013 and encouraging "Excellent" from 2013; • Expecting non-domestic developments of 500 m2 of floor space or above to achieve 'Very good' in BREEAM assessments and "Excellent" from 2016 and encouraging zero carbon from 2019. The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as: • Summer shading and planting • Limiting run-off • Reducing water consumption • Reducing air pollution, and • Not locating vulnerable uses in basements in flood-prone areas. **Policy DP23 Water** - The Council will require developments to reduce their water consumption, the pressure on the combined sewer network and the risk of flooding by: • Incorporating water efficient features and equipment and capturing, retaining and reusing surface water and grey water on-site • Limiting the amount and rate of run-off and waste water entering the combined storm water and sewer network through sustainable urban drainage methods to reduce the risk of flooding • Reducing the pressure placed on the combined storm water and sewer network from foul water and surface water run-off and ensuring developments in the areas identified by the North London Strategic Flood Risk Assessment as being at risk of surface water flooding are designed to cope with the potential flooding ensuring that developments are assessed for upstream and downstream groundwater flood risks in areas where historic underground streams are known to have been present, and encouraging the provision of attractive and efficient water features.

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
Camden Planning Guidance – Sustainability (CPG 3), 2013 London Borough of Camden, 2013	The guidance is in support of the Local Development Framework and provides information on ways to achieve carbon reductions and more sustainable developments. It covers: • Energy Statements • The Energy Hierarchy • Water Efficiency • Sustainable Use of Materials • Sustainability Assessment Tools – including BREEAM • Green roofs, brown roofs and green walls • Flooring • Climate Change Adaption	For existing building projects CPG 3 states that 10% of the project cost should be spent on environmental improvements and developments are to target at least a 20% reduction in carbon dioxide emissions through the installation of on-site renewable technologies. The creation of 5 or more homes will need to be designed in line with EcoHomes (or BREEAM Domestic Refurbishment 2012 which now supercedes this). All non-residential floor space over 500sqm will need to be designed in line with BREEAM. All developments should incorporate green or brown roofs. They should be considered as to how they could be occupied in the future and to mitigate against flooding. Proposals should demonstrate positive measures for enhancing biodiversity

OTHER REFERENCES

Policy/Standard/Initiative	Commentary	Key Policies and Targets Summary
Code for Sustainable Homes DCLG and BRE, November 2010	The Code for Sustainable Homesis a widely used environmental assessment methodology for new homes in England and Wales, covering a broad range of sustainability categories. This includes Management, Health and Wellbeing, Energy, Transport, Water, Materials, Waste, Land Use and Ecology and Pollution. The methodology is used to quantify and reduce the environmental impacts of the built environment by rewarding designs that take positive steps to minimise their environmental effects. Undertaking a Code for Sustainable Homes assessment and integrating the associated design requirements into the scheme helps to set Best Practice sustainability standards across a broad range of building design, construction and operational targets, summarised by a single rating, from 'Level 1' to 'Level 6'.	As part of their Sustainability Policy, the London Borough of Camden has a minimum Code rating requirement for the scheme of 'Level 4'. Minimum Credit requirements are set by the Code rating target, which are detailed in the Code Technical Manual.

appendix b – CSH Pre-Assessment (apartments)…

…sustainable building services solutions

appendix b…

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Ene 1	Dwelling Emission Rate	**10**	**4**			% Improvement 2010 Credits DER/TER ≥ 8% 1 ≥16% 2 ≥ 25% 3 Level 4 ≥ 36% 4 ≥ 47% 5 ≥ 59% 6 ≥ 72% 7 ≥ 85% 8 ≥ 100% 9 Level 5 Zero Net CO2 Emissions 10 Level 6 *1 Performance requirements are equivalent to those in previous scheme versions but are now measured using the AD L1A 2010 TER as the Minimum. *2 Up to nine Credits are awarded on a sliding scale. The scale is based on increments of 0.1 Credits, distributed equally between the benchmarks defined in this table.			Detailed documentary evidence confirming the TER, DER and percentage improvement of DER over TER based on design stage SAP outputs OR Where applicable: A copy of calculations as detailed in the assessment methodology based on design stage SAP outputs AND Confirmation of FEE performance where SAP section 16 allowances have been included in the calculation. Dated outputs with accredited energy assessor name and registration number, assessment status, plot number and development address. If not produced by an accredited energy assessor additional verification is required as detailed in the assessment methodology.	211114 - Reflecting the evolving design, revised SAP calculations show a 40% improvement upon the 2010 Building Regulations, which allows 4 Credits to be awarded. ___ 101114 (Pre-Assessment Workshop) - Currently calculations show that no Credits are being met. 3 Credits is the requirement to meet Level 4 and therefore must be targeted. The Council will require the following (CPG 3) - - A full model of the building should be carried out to ensure the building design optimises solar gain and daylight without resulting in overheating for developments comprising 5 dwellings or more or 500sq m or more of any floorspace - Consider maximising the use of natural systems within buildings before any mechanical services are considered CPG 3 requires that 50% of the Energy section is achieved.	**BSE**	
Ene 2	Fabric Energy Efficiency	**9**	**7**			Apart/MidTerr. ET/Semi/Det. Credits kWh/m2/year kWh/m2/year ≤ 48 ≤ 60 3 ≤ 45 ≤ 55 4 ≤ 43 ≤ 52 5 *3 ≤ 41 ≤ 49 6 ≤ 39 ≤ 46 7 Levels 5 & 6 ≤ 35 ≤ 42 8 ≤ 32 ≤ 38 9 *1 To determine the applicable performance scale the dwelling type under assessment must be accurately defined according to the guidance at www.zerocarbonhub.org *2 Credits are awarded on a sliding scale. The scale is based on increments of 0.1 Credits, distributed equally between the benchmarks defined in this table. *3 This is the level being considered for Part L of the Building Regulations in 2013 on which a public consultation is expected in late 2011/early 2012.			Detailed documentary evidence confirming fabric energy efficiency based on Pre-Assessment Stage SAP outputs OR Where applicable: A copy of calculations as detailed in the assessment methodology based on Pre-Assessment Stage SAP outputs. Dated outputs with accredited energy assessor name and registration number, assessment status, plot number and development address. If not produced by an accredited energy assessor additional verification is required as detailed in the assessment methodology.	211114 - Reflecting the evolving design, revised SAP calculations show that the expected FEE is 38 kWh/m2/year for the apartments, which is equivalent to 7 Credits. ___ 101114 (Pre Assessment Workshop) - he Design Team noted that the currently SAP calculations showed that no Credits could be awarded.	**BSE**	
Ene 3	Energy Display Devices	**2**	**2**			1 Credit - Where current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device. 2 Credits - Where current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device Default Cases Where electricity is the primary heating fuel and current electricity consumption data are displayed to occupants by a correctly specified energy display device.			Detailed documentary evidence confirming: That the correctly specified energy display device is dedicated to the dwelling AND The consumption data displayed by the correctly specified energy display device. Where detailed documentary evidence cannot be produced at this stage: A specification can be allowed as evidence of intent to meet specific requirements OR A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking can be allowed.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credits may be sought as the inclusion of an Energy Display Device is a reasonable measure for the dwellings.	**BSE**	

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Ene 4	Drying Space	1	1			1 Credit Where space and equipment are provided for drying clothes: • For 1 – 2 bedroom dwellings, the drying equipment must be capable of holding 4m+ of drying line • For 3+ bedroom dwellings, the drying equipment must be capable of holding 6m+ of drying line The drying space (internal or external) must be secure			For internal drying space, detailed documentary evidence confirming: • The location of drying fixings • The length of drying line • Details of the lock provided (for communal drying space only) Where detailed documentary evidence cannot be produced at this stage: A specification can be allowed as evidence of intent to meet specific requirements OR A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credits may be sought as the inclusion of an appropriate drying space or drying rack in the bathroom with controlled intermittent extract ventilation is a reasonable measure for the dwellings.	PRP	
									For internal drying space, detailed documentary evidence confirming: • Details/location of ventilation provided Where detailed documentary evidence cannot be produced at this stage: A specification can be allowed as evidence of intent to meet specific requirements OR A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking.	101114 (Pre Assessment Workshop) - The Design Team confirmed that internal drying lines can be provided in the ground floor utility toilet of the 4 bedroom houses and in the common bathrooms of the 2 bed houses and therefore the Credit can be awarded. Installing drying lines in the bathroom or a specific heated space with controlled intermittent extract ventilation is recommended.	BSE	
Ene 5	Energy Labelled White Goods	2	2			1 Credit: Where the following appliances are provided and have an A+ rating under the EU Energy Efficiency Labelling Scheme: • Fridges and freezers or fridge-freezers 1 Credit: Where the following appliances are provided and have an A rating under the EU Energy Efficiency Labelling Scheme: • Washing machines and dishwashers AND EITHER • Tumble dryers or washer dryers have a B rating (where a washer dryer is provided, it is not necessary to also provide a washing machine) OR • EU Energy Efficiency Labelling Scheme Information is provided to each dwelling in place of a tumble dryer or a washer dryer 1 Credit: Where no white goods are provided but EU Energy Efficiency Labelling Scheme Information is provided to each dwelling Note: To obtain this Credit, any white goods available to purchase from the developer must be compliant with the above criteria.			If any white goods are to be provided, detailed documentary evidence confirming: the appliances to be provided with their applicable ratings under the EU Energy Efficiency Labelling Scheme Where washer dryers or tumble dryers will not be provided and the second Credit is sought, provide detailed documentary evidence as follows: A copy of the EU Energy Efficiency Labelling Scheme Information AND Confirmation that the information will be provided to all dwellings If no white goods are provided, detailed documentary evidence as follows: A copy of the information that will be provided on the EU Energy Efficiency Labelling Scheme AND Confirmation that the information will be provided to all dwellings AND• Confirmation that all appliances available for purchase with the dwelling are compliant with the assessment criteria Where details cannot be produced at this stage: a formal letter from the developer giving the specific undertaking.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the provision of energy labelled white goods is a reasonable measure to incorporate in the scheme. For both Credits to be achieved, white goods must be provided in the affordable units as well as private.	PRP	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

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Assessor: Pallab Chatterjee **Date:** 27th November 2014

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APARTMENTS | PRE-ASSESSMENT

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Ene 6	External Lighting	**2**	**2**			1 Credit: Space Lighting Where all external space lighting, including lighting in common areas, is provided by dedicated energy efficient fittings with appropriate control systems. 1 Credit: Security Lighting Where all security lighting is designed for energy efficiency and is adequately controlled such that: All burglar security lights have: • A maximum wattage of 150 W AND • Movement detecting control devices (PIR) AND • Daylight cut-off sensors All other security lighting: • Is provided by dedicated energy efficient fittings AND • Is fitted with daylight cut-off sensors OR a time switch Default Cases 1 Credit: If no security lighting is installed, the security lighting Credit can be awarded by default, provided all of the requirements related to the specification of space lighting have been met. Dual lamp luminaires with both space and security lamps can be awarded both Credits provided they meet the above criteria for energy efficiency			Relevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittings Where detailed information is not available at this stage: a letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking	101114 (Pre Assessment Workshop) - The Architect (PRP) confirmed that they would meet with an ALO/CPDA to discuss Secured by Design (SBD) and security lighting for the site, with appropriate provision of energy efficient space and security lighting considered a reasonable measure for the dwellings.	**PRP**	
									Relevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittings Where detailed information is not available at this stage: a letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking	As above.	**BSE**	
Ene 7	Low and Zero Carbon Technologies	**2**	**2**			Where energy is supplied by low or zero carbon technologies AND There is a 10% reduction in CO2 emissions as a result 1 Credit OR There is a 15% reduction in CO2 emissions as a result 2 Credits			A copy of calculations as detailed in the assessment methodology based on Pre-Assessment Stage SAP outputs AND Detailed documentary evidence confirming that the specified low or zero carbon technologies: • Meet any additional requirements defined in Directive 2009/28/EC as applicable. And are: Certified under the Microgeneration Certification Scheme (as applicable) OR Certified under the CHPQA standard (as applicable).	211114 - As detailed in the energy Statement, roof-mounted photovoltaic panels have been identified as the most appropriate low and zero carbon technology for the dwellings, resulting in a 15% reduction in CO2 emissions. Note - London Borough of Camden Policy CPG 3 states that the Council will expect the following: - When demonstrating the feasibility and viability of not connecting to a decentralised energy network or including a combined heat and power plant developers will be required to address the relevant considerations above. - All developments are to target at least a 20% reduction in carbon dioxide emissions through the installation of on-site renewable energy technologies. - Special consideration will be given to heritage buildings and features to ensure that their historic and Architectural features are preserved. - When assessing the feasibility and viability of renewable energy technology, the Council will consider the overall cost of all the measures proposed and resulting carbon savings to ensure that the most cost-effective carbon reduction technologies are implemented in line with the energy hierarchy.	**BSE**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

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ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

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Ene 8	Cycle Storage	**2**	**2**			Where individual or communal cycle storage is provided, that is adequately sized, secure and convenient, for the following number of cycles: 1 Credit: Studios or 1 bedroom dwellings – storage for 1 cycle for every two dwellings 2 and 3 bedroom dwellings –- storage for 1 cycle per dwelling 4 bedrooms and above –- storage for 2 cycles per dwelling OR 2 Credits Studios or 1 bedroom dwellings – storage for 1 cycle per dwelling 2 and 3 bedroom dwellings – storage for 2 cycles per dwelling 4 bedrooms and above – storage for 4 cycles per dwelling Note: The requirements for secure cycle storage are met where compliance with clause 35 of Secured by Design (SBD) New Homes 2010 is achieved.			Detailed documentary evidence showing: • The number of bedrooms and the corresponding number of cycle storage spaces per dwelling • Location, type and size of storage • Convenient access to cycle storage • Any security measures • Details of the proprietary system (if applicable) • How the requirements of clause 35 of Secured by Design – New Homes 2010 will be met (if applicable) Where detailed information is not available at this stage: A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking.	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that 20 cycle spaces will be provided for the affordable units, exceeding the Code requirement for 19 cycle spaces to achieve 2 Credits. In addition, 4 spaces will be provided for each of the 4 bedroom houses and 2 spaces will be provided for each of the 2 bedroom houses. Accordingly, 2 Credits may be sought.	**PRP**	
Ene 9	Home Office	**1**	**0**			1 Credit: Where sufficient space and services have been provided which allow occupants to set up a home office in a suitable room. The space dedicated for use as a home office must have adequate ventilation and achieve an average daylight factor of 1.5%.			Detailed documentary evidence showing: • Location of and sufficient space for the home office	211114 - The Design Team confirmed that the measures necessary to achieve the Credits were not achievable on the scheme as initial daylighting calculations indicate that only Plots 11, 14 and 18 can provide a daylight factor of 1.5%. The other units do not provide the sufficient daylight factor to achieve this Credit.		
									Detailed documentary evidence showing: • Location of and sufficient space for the home office	As above.		
									Detailed documentary evidence showing: • That an average daylight factor of at least 1.5% is achieved	As above.		

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									Detailed documentary evidence showing: • Location and number of sockets • Location of telephone points • That adequate ventilation will be provided • Confirmation of one of the following: 1. cable connection 2. that broadband is available at the site level (not for individual dwellings), i.e. a letter from the developer confirming that they have checked that broadband is available 3. two telephone points (or double telephone point) Where detailed information is not available at this stage: a letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking	211114 - MEP to make sure that double sockets are provided in the bedrooms allocated for Home Office.	**BSE**	
Wat 1	Indoor Water Use	**5**	**3**			Water consumption (litres/person/day) Credits Mandatory Levels ≤ 120 l/p/day 1 Levels 1 and 2 ≤110 l/p/day 2 ≤ 105 l/p/day 3 Levels 3 and 4 ≤ 90 l/p/day 4 ≤ 80 l/p/day 5 Levels 5 and 6			Detailed documentary evidence showing: • Location, details and type of appliances/ fittings that use water in the dwelling including any specific water reduction equipment with the capacity / flow rate of equipment.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that a water consumption performance of no greater than 105 l/p/day shall be specified via water efficient fittings to ensure that the mandatory requirement for Code Level 4 may be achieved. Note - London Borough of Camden Policy CPG 3 requires that 50% of the available Credits in the Water section are achieved. Camden CPG 3 also states 'The Council will require developments over 10 units or 1000sq m and/or intense water use developments, such as hotels, hostels, student housing etc. to include a grey water harvesting system, unless the applicant demonstrates to the Council's satisfaction that this is not feasible.'	**PRP**	
									Detailed documentary evidence showing: • Location, size and details of any rainwater and greywater collection systems provided for use in the dwelling	As above.	**BSE**	
Wat 2	External Water Use	**1**	**1**			1 Credit: Where a correctly specified and sufficient sized system to collect rainwater for external/internal irrigation/use has been provided to a dwelling with a garden, patio or communal garden space (examples of such systems include rainwater butts and central rainwater collection systems Default Cases If no individual or communal garden spaces are specified or if only balconies are provided, the Credit can be awarded by default.			Detailed documentary evidence stating type, size and location of any rainwater collection systems	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credit would be sought as it is expected that appropriately sized water butts will be provided in the gardens and terraces. Note - London Borough of Camden Policy CPG 3 states the Council will require 'buildings with gardens or landscaped areas that require regular maintenance to be fitted with water butts.'	**PRP**	
									Detailed documentary evidence stating type, size and location of any rainwater collection systems	As above.	**PRP**	

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Mat 1	Environmental Impact of Materials	**15**	**6**			Up to fifteen Credits are available for the specification of three key construction elements: external walls, windows, roof, internal walls and ground & upper floor slabs. This Credit rewards those projects that specify key construction building elements that achieve an A/A+ rating under the BRE's Green Guide to Specification. The Architect and Structural Engineers are required to provide the following information for each key building element: - Key Building Element Specification detail; - Corresponding Green Guide Element Number (which can be obtained from the www.greenguide.org.uk website); - Green Guide Rating (A+ to E); - Area of each building element type. Refer to Mat 01 Table - To be completed by Architect and Structural Engineer.			Completed Code Mat 1 Table - this should be completed by the Architect. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by the Architect. AND Completed Mat 01 Calculator Tool for submission to the BRE.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that 6 Credits may be sought here as this is a conservative estimate of the likely performance for the construction types expected for a development of apartments of this type. Note - Camden CPG 3 also requires that 50% of the available Credits in the Materials section are achieved. Camden CPG 3 also states that 'all developments should aim for at least 10% of the total value of materials used to be derived from recycled and reused sources'	**PRP**	
									Completed Code Mat 1 Table - this should be completed by the structural engineer. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by the structural engineer. AND Completed Mat 01 Calculator Tool for submission to the BRE.	As above.	**PRP**	
Mat 2	Responsible Sourcing of Materials - Basic Building Elements	**6**	**4**			1 - 6 Credits available where 80% of the assessed materials in the following Building Elements are responsibly sourced: a) Frame b) Ground floor c) Upper floors (including separating floors) d) Roof e) External walls f) Internal walls (including separating walls) g) Foundation/substructure (excluding sub-base materials h) Staircase Additionally, 100% of any timber in these elements must be legally sourced.			Completed Mat 02 Table. This should be completed by the Architect/structural engineer for the relevant elements. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by both the Architect and Structural Engineer. AND Responsible Sourcing certificates confirming the requirement for sustainably sourced timber, certified concrete, etc. AND Completed Code Mat 2 Calculator Tool, showing building elements at the Design Stage	101114 (Pre-Assessment Workshop) - The Design Team confirmed that it reasonable to expect that 5 Credits may be sought, as this level of performance has been achieved within the Team on similar apartment projects. — Design Team should begin to gather an understanding of the ability of the proposed supply chains to deliver responsibly sourced and manufactured products. This means using products that are manufactured under a recognised Environmental Management System such as ISO 14001 as a minimum, and preferably under more robust responsible sourcing systems such as Forest Stewardship Council (FSC) or BES 6001.	**PM**	
Mat 3	Responsible Sourcing of Materials - Finishing Elements	**3**	**2**			1 - 3 Credits where 80% of the assessed materials in the following Finishing Elements are responsibly sourced: a) Staircase b) Windows c) External & internal doors d) Skirting e) Panelling f) Furniture g) Fascias h) Any other significant use Additionally, 100% of any timber in these elements must be legally sourced.			Completed Mat 03 Table. This should be completed by the Architect/structural engineer for the relevant elements. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by both the Architect and Structural Engineer. AND Responsible Sourcing certificates confirming the requirement for sustainably sourced timber, certified concrete, etc. AND Completed Code Mat 3 Calculator Tool, showing building elements at the Design Stage	101114 (Pre-Assessment Workshop) - The Design Team confirmed that it reasonable to expect that all 3 Credits may be sought, as this level of performance has been achieved within the Team on similar apartment projects. — Design Team should begin to gather an understanding of the ability of the proposed supply chains to deliver responsibly sourced and manufactured products. This means using products that are manufactured under a recognised Environmental Management System such as ISO 14001 as a minimum, and preferably under more robust responsible sourcing systems such as Forest Stewardship Council (FSC) or BES 6001.	**PM**	

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Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Sur 1	Management of Surface Water Run-off from Developments	**2**	**2**			Hydraulic Control Criteria - MANDATORY FOR ALL LEVELS The SuDS Management Train should be used as a guide to achieve the following: 1) Peak Rate of Run-off • Where there is an increase in impermeable area -ensure that the peak rate of run-off over the development lifetime, allowing for climate change, will be no greater for the developed site than it was for the pre-development site. • Where the pre-development peak rate of run-off for the site would result in a requirement for the post-development flow rate to be less than 5 l/s at a discharge point, a flow rate of up to 5 l/s may be used where required to reduce the risk of blockage. 2) Volume of Run-off Either: A: Ensure that the post development volume of run-off, allowing for climate change over the development lifetime, is no greater than it would have been before the development. The additional predicted volume of run-off for the 100 year 6 hour event must be prevented from leaving the site by using infiltration or other SuDS techniques (see Definitions). OR B: If A cannot be satisfied (full justification must be provided) then reduce the post development peak rate of run-off to the limiting discharge. 3) Designing for local drainage system failure. Demonstrate that the flooding of property would not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance). Water Quality Criteria 1 Credit can be awarded by ensuring there is no discharge from the developed site for rainfall depths up to 5 mm (see Calculation Procedures). 1 Credit can be awarded by ensuring that: • The run-off from all hard surfaces shall receive an appropriate level of treatment in accordance with The SuDS Manual to minimise the risk of pollution. Note: The SuDS Manual best practice recommendations should be followed where there is a risk to groundwater from infiltration (for example contaminated land, developments with high risk of pollution incidents)			Mandatory Requirements: Statement from the appropriately qualified professional confirming that they are 'suitably qualified' in line with the Code definition. AND The appropriately qualified professional's report containing all information necessary to demonstrate compliance with the peak rate of run-off and volume of run-off requirements - see additional guidance document AND A Flood Risk Assessment confirming the risk of flooding from all sources of flooding AND Drawings showing the pre-development drainage for the site (natural or constructed) AND Drawings showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels AND Confirmation from the appropriately qualified professional that local drainage system failure would not cause an increase in the risk of flooding within dwellings either on or off site Where Credits are sought: The appropriately qualified professional's report detailing the design specifications, calculations and drawings to support the awarding of the Credit(s)	101114 (Pre-Assessment Workshop) - The two Credits are sought is it is considered reasonable at this stage of the design process for the measures to be applied to the houses. ___ Note - The mandatory standard of this Credit should be carefully reviewed. The drainage strategy of the development should also ensure there is no discharge from the developed site for rainfall depths up to 5mm and that SUDs are specified, which would lead to the award of two points.	**STRU**	

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Sur 2	Flood Risk	**2**	**2**			2 Credits: are available for developments situated in Zone 1 – low annual probability of flooding (as defined in PPS25 Development and Flood Risk) and where the site-specific Flood Risk Assessment (FRA) indicates that there is low risk of flooding from all sources. OR 1 Credit: is available for developments situated in Zones 2 and 3a – medium and high annual probability of flooding where the finished ground floor level of all habitable parts of dwellings and access routes to the ground level and the site, are placed at least 600 mm above the design flood level of the flood zone. The Flood Risk Assessment accompanying the planning application must demonstrate to the satisfaction of the local planning authority and statutory body that the development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed.			For developments situated in Zone 1: • A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows that there is a low risk of flooding from all sources. For medium (Zone 2) or high (Zone 3a) flood risk areas: • A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows there is a medium or high risk of flooding AND • Site plans indicating the design flood level, the range of ground levels of the dwellings, car parking areas and site access (lowest to highest), showing that the criteria (finished floor levels of all habitable rooms and access routes being at least 600 mm above the design flood level) are met, along with any notes explaining the function of any areas lying below the design flood level AND • Confirmation from the local planning authority that the development complies with PPS25 and is appropriately flood resilient and resistant, and has managed any residual risk safely. Where the site is under the protection of flood defences and the flood risk category of the site is reduced: • Written confirmation from the Environment Agency of the reduction in flood risk category *. *Note: There are many defences, owned by third parties, which, owing to their location, act as a defence by default, e.g. motorway and railway embankments, walls. Confirmation is required that these defences will remain in place for the lifetime of the development if a significant risk is predicted.	101114 (Pre-Assessment Workshop) - Site is in low flood zone. A flood risk assessment will be required to confirm Credits.	**STRU**	

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ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Wst 1	Storage of Non-recyclable Waste and Recyclable Household Waste	**4**	**4**			An adequate external space should be allocated for waste storage and sized to accommodate containers according to the largest of the following two volumes: • The minimum volume recommended by British Standard 5906 (British Standards Institution, 2005) based on a maximum collection frequency of once per week. This volume is 100 litres for a single bedroom dwelling, with a further 70 litres for each additional bedroom. • The total volume of the external waste containers provided by the Local Authority. Storage space must provide inclusive access and usability (Checklist IDP). Containers must not be stacked. 2 Credits Dedicated internal storage for recyclable household waste can be Credited where there is no (or insufficient) dedicated external storage capacity for recyclable material, no Local Authority collection scheme and where the following criteria are met: At least three internal storage bins: • all located in an adequate internal space • with a minimum total capacity of 60 litres. 4 Credits A combination of internal storage capacity provided in an adequate internal space, with either: • a Local Authority collection scheme, or • no Local Authority collection scheme but adequate external storage capacity. Local Authority collection scheme In addition to a Local Authority collection scheme (with a collection frequency of at least fortnightly), at least one of the following requirements must be met: • Recyclable household waste is sorted after collection and a single bin of at least 30 litres is provided in an adequate internal space. • Materials are sorted before collection and at least three separate bins are provided with a total capacity of 30 litres. Each bin must have a capacity of at least 7 litres and be located in an adequate internal space. • An automated waste collection system which collects at least three different types of recyclable waste. No Local Authority collection scheme but adequate external storage capacity For houses and flats there must be at least three identifiably different internal storage bins for recyclable waste located in an adequate internal space: • with a minimum total capacity of 30 litres • with a minimum individual capacity of at least 7 litres. AND For houses, an adequate external space must be provided for storing at least three external bins for recyclable waste: • with a minimum total capacity of 180 litres • with a minimum individual capacity of 40 litres. For flats, a private recycling scheme operator must be appointed to maintain bins and collect recyclable waste regularly. Recycling containers must: • be located in an adequate external space • be sized according to the frequency of collection, based on guidance from the recycling scheme operator • store at least three types of recyclable waste in identifiably different bins.			Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP - see additional guidance document Detailed documentary evidence stating: • the location of external (basement) storage • the number, types and sizes of external (basement) storage AND A letter, leaflet, website or other published information from the Local Authority/waste scheme provider* describing; • the types of waste collected • the frequency of collection • if there will be pre or post collection sorting * In the case of an automated collection system, the waste scheme operator will only need to confirm the types of waste collected and if there will be pre or post collection sorting	101114 (Pre-Assessment Workshop) - The Architect (PRP) stated that they have provided a waste area in accordance with the London Borough of Camden's requirements, which should match of exceed the requirements of the Code.	**PRP**	
									Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP - see additional guidance document Detailed documentary evidence stating: • the location of internal (flat) storage • the number, types and sizes of internal (flat) storage	As above.	**PRP**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
									Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP - see additional guidance document Detailed documentary evidence stating: • the location of internal (flat) storage • the number, types and sizes of internal (flat) storage	As above.	**PRP**	
Was 2	Construction Site Waste Management	**3**	**3**			1 Credit - Minimising Construction Waste Where there is a compliant Site Waste Management Plan (SWMP) that contains: a. Target benchmarks for resource efficiency, i.e. m3 of waste per 100 m2 or tonnes of waste per 100 m2 set in accordance with best practice b. Procedures and commitments to minimize non-hazardous construction waste at Design Stage. Specify waste minimisation actions relating to at least 3 waste groups and support them by appropriate monitoring of waste. c. Procedures for minimising hazardous waste d. Monitoring, measuring and reporting of hazardous and non-hazardous site waste production according to the defined waste groups (according to the waste streams generated by the scope of the works) 2 Credits - Diverting Waste from Landfill Where there is a compliant Site Waste Management Plan (SWMP) including procedures and commitments to sort and divert waste from landfill, through either; a. Re-use on site (in situ or for new applications) b. Re-use on other sites c. Salvage/reclaim for re-use d. Return to the supplier via a 'take-back' scheme e. Recovery and recycling using an approved waste management contractor f. Compost according to the defined waste groups (in line with the waste streams generated by the scope of the works). AND One of the following has been achieved: Where at least 50% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill. OR 3 Credits - Where at least 85% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill.			A copy of the compliant SWMP containing the appropriate benchmarks, commitments and procedures for waste minimisation and diversion from landfill in line with the criteria and with Checklists Was 2a, Was 2b and Was 2c OR Confirmation from the developer that the SWMP includes/will include benchmarks, procedures and commitments for minimising and diverting waste from landfill in line with the criteria and with Checklists Was 2a, Was 2b and Was 2c	101114 (Pre-Assessment Workshop) - The Design Team confirmed that appropriate levels of resource efficiency (net waste for resource efficiency) and diversion of waste from landfill may be achieved for the proposed dwellings, with these requirements conveyed on to the Main Contractor via the Contract Preliminaries by the Project Manager.	**PM**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

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ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Was 3	Composting	**1**	**1**			1 Credit • Individual home composting facilities. OR • A local communal or community composting service, which the Local Authority runs or where there is a management plan in place. OR • A Local Authority green/kitchen waste collection system (this can include an automated waste collection system). All facilities must also: • be in a dedicated position • provide inclusive access and usability (Checklist IDP) • have a supporting information leaflet provided to each dwelling.			Detailed documentary evidence stating: • the location and size of internal and external storage • that an information leaflet will be supplied • distance of storage from dwelling AND Completed Checklist IDP For communal/community composting schemes, detailed documentary evidence stating; • distance of storage from dwelling • management arrangements • location and size of storage • details of the scheme including opening times and access restrictions • confirmation that an information leaflet will be supplied AND Completed Checklist IDP Where applicable, detailed documentary evidence stating: • Details of the Local Authority kitchen/garden waste collection scheme • Details of the automated waste collection system Where detailed documentary evidence is not available at this stage; A letter of instruction to a contractor/supplier, a formal letter from the developer giving the specific undertaking or the manufacturer's information, for all the above required details.	101114 (Pre-Assessment Workshop) - The Architect (PRP) stated confirmed that they intend to provide a waste area in accordance with the London Borough of Camden's requirements, which includes separate food waste storage.	**PRP**	
Pol 1	Global Warming Potential (GWP) of Insulants	**1**	**1**			1 Credit Credits are awarded where all insulating materials in the elements of the dwelling listed below only use substances that have a GWP < 5 (in manufacture AND installation) - • Roofs: including loft access • Walls: internal and external including lintels and all acoustic insulation • Floors: including ground and upper floors • Hot water cylinder: pipe insulation and other thermal stores • Cold water storage tanks: where provided • External doors			Completed Checklist Pol 1 showing the proposed insulation materials (or none) for each element and whether they are foamed using blowing agents or are unfoamed (from table Cat 6.1)	101114 (Pre-Assessment Workshop) - The Design Team confirmed that it would be reasonable to expect that insulating materials with low GWP would be specified for the works.	**PRP**	
									Completed Checklist Pol 1 showing the proposed insulation materials (or none) for each element and whether they are foamed using blowing agents or are unfoamed (from table Cat 6.1)	As above.	**BSE**	
Pol 2	NOx Emissions	**3**	**3**			Dry NOX (mg/kWh) Boiler Class* Credits ≤ 100 4 1 ≤ 70 5 2 ≤ 40 - 3 Default Cases Where all space heating and hot water energy requirements are fully met by systems which do not produce NOX emissions, 3 Credits *Boiler class (BS EN 297: 1994)			Criteria Detailed documentary evidence describing: • The primary and any secondary heating systems and flue type • Dry NOX levels and/or boiler class of the primary and any secondary heating systems Where NOX averaging is required due to multiple heating systems within the dwelling: Copy of calculations as detailed in the methodology based on Pre-Assessment Stage SAP outputs Where detailed documentary evidence is not available at this stage; a letter of instruction to a contractor/supplier or a formal letter from the developer to the Code assessor giving the specific undertaking	101114 (Pre-Assessment Workshop) - The Design Team confirmed that, as individual gas boilers will be used in the houses, it is reasonable to expect that low NOx boilers may be specified.	**BSE**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Hea 1	Daylighting	**3**	**1**			1 Credit: Kitchens must achieve a minimum Average Daylight Factor of at least 2% 1 Credit: All living rooms, dining rooms and studies (including any room designated as a home office under Ene 9 – Home Office) must achieve a minimum Average Daylight Factor of at least 1.5% 1 Credit: 80% of the working plane in each kitchen, living room, dining room and study (including any room designated as a home Building 3 - Residential under Ene 9 – Home Building 3 - Residential) must receive direct light from the sky			Copy of calculations as detailed in the methodology to demonstrate: • Average daylight factor using the formula described in the definitions section (method described in Littlefair (1998) as set out in BS 8206–2) or computer simulation or scale model measurements • Position of the no-sky line and percentage of area of the working plane that receives direct light from the sky Confirmation from the developer that the calculations accurately reflect the dwelling as designed.	211114 - Initial daylight calculations show that 1 Credit should be achievable in all the units.	**PRP**	
Hea 2	Sound Insulation	**4**	**3**			1 Credit Where: • airborne sound insulation values are at least 3dB higher • impact sound insulation values are at least 3dB lower OR 3 Credits • airborne sound insulation values are at least 5dB higher • impact sound insulation values are at least 5dB lower OR 4 Credits • airborne sound insulation values are at least 8dB higher • impact sound insulation values are at least 8dB lower than the performance standards set out in the Building Regulations approved for England and Wales, Approved Document E (2003 Edition, with amendments 2004). This can be demonstrated through EITHER A programme of pre-completion testing based on the Normal programme of testing described in Approved Document E, for every group or sub-group of houses or flats, demonstrating that the above standard or standards are achieved. OR Use of constructions for all relevant building elements that have been assessed and approved as Robust Details by Robust Details Limited (RDL) and found to achieve the performance standards stated above. All relevant dwellings must be registered with RDL. Default cases Detached dwellings (4 Credits) Attached dwellings where separating walls or floors occur only between non-habitable rooms (3 Credits)			A report from a 'Suitably Qualified Acoustician' confirming the requirements opposite shall be met. Where pre-completion testing will be carried out; A letter from the developer confirming the intent to: • Meet the relevant sound insulation performance levels • Use a Compliant Test Body to complete testing	101114 (Pre-Assessment Workshop) - The Design Team noted that Sandy Brown Associates have been appointed as acoustic consultants, but that the performance of the building against the acoustic performance standards and testing requirements would be subject to review as the design advanced. It was concluded that three Credits should be sought.	**SBA**	
									Where Robust Details will be used; • Confirmation that the Robust Details chosen will achieve the required performance standards for sound insulation (as applicable) • Confirmation that the relevant plots are registered with RDL (the Purchase Statement)	As above.	**PRP**	
									Where pre-completion testing will be carried out; A letter from the developer confirming the intent to: • Meet the relevant sound insulation performance levels • Use a Compliant Test Body to complete testing	As above.	**PRP**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Hea 3	Private Space	**1**	**1**			1 Credit Where outdoor space (private or semi-private) has been provided that is: • Of a minimum size that allows all occupants to use the space. • Provided with inclusive access and usability (Checklist IDP). • Accessible only to occupants of designated dwellings. Minimum space requirements: • Private space: 1.5 m2 per bedroom • Shared space: minimum 1 m2 per bedroom.			Detailed documentary evidence confirming: • The number of bedrooms served by the outdoor space • That the outdoor space meets the minimum size requirements AND Completed Checklist IDP Where a shared outdoor space is provided, detailed documentary evidence demonstrating: • The private space is accessible only to occupants of designated dwellings Where detailed documentary evidence is not available at this stage; A letter of instruction to a contractor/supplier or a formal letter from the developer to the assessor giving a specific undertaking	101114 (Pre-Assessment Workshop) - The Design Team confirmed that all units have either a balcony or garden and therefore this Credit may be sought.	**PRP**	
Hea 4	Lifetime Homes	**4**	**4**			4 Credits Where all principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with. OR 3 Credits Where an exemption from Lifetime Homes criteria 2 and/or 3 is applied to selected pathways subject to a steeply sloping plot gradient, but all other principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with.			Confirmation from the developer that all 16 of the Lifetime Homes design criteria are met OR Where an exemption from Lifetime Homes criteria 2 and/or 3 is sought: • Confirmation from the developer that all other design criteria are met AND Detailed documentary evidence demonstrating access routes subject to steeply sloping gradients at pre development and completion	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that the requirements for Lifetime Homes will be incorporated into the design for all dwellings and that this Credit may be sought.	**PRP**	
									Confirmation from the developer that all 16 of the Lifetime Homes design criteria are met OR Where an exemption from Lifetime Homes criteria 2 and/or 3 is sought: • Confirmation from the developer that all other design criteria are met AND Detailed documentary evidence demonstrating access routes subject to steeply sloping gradients at pre development and completion	As above.	**PRP**	
Man 1	Home User Guide	**3**	**3**			1 Credit Provision of a Home User Guide, compiled in accordance with Checklist Man 1, Part 1, together with confirmation that the guide is available in alternative formats. 2 Credits Where the guide includes additional information relating to the site and its surroundings and is compiled in accordance with Checklist Man 1, Part 2.			Where a home user guide will be supplied covering operational issues relating to the site and its surroundings. Confirmation in the form of a letter from the developer or in the specification that the guide will be: • Supplied to all dwellings within the development • Be developed to the required standards (as a minimum including a list of contents showing that the guide will cover all of the issues required in Checklist Man 1 Part 1 & Part 2) • Be provided in different formats	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Main Contractor will be required to provide a Home User Guide as part of the Contract Preliminaries.	**PM**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

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ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Man 2	Considerate Constructors Scheme	**2**	**2**			Up to Two Credits are available where there is a commitment to comply with best practice site management principles using either the CCS or an alternative locally/nationally recognised scheme. To achieve One Credit for compliance with the approved scheme (a CCS score between 25 and 34, with a score of at least 5 in each section). To achieve Two Credits where contractor 'significantly exceeds' compliance of the relevant scheme (a CCS score between 35 and 39, with a score of 7 in each section). Exemplary performance is achieved for scores of 40 or more.			For Considerate Constructors Scheme: Specification clause or other confirmation of commitment from the contractor or developer to comply with the Considerate Constructors Scheme and achieve formal certification under the scheme with either a pass score or a score of 35 points and above AND Confirmation that registration with the Considerate Constructor Scheme has taken place no later than the commencement of the construction phase.	101114 (Pre-Assessment Workshop)- The Design Team confirmed that the measures necessary to achieve the Credits should be achievable on the scheme and agreed to put these in place via the Contract Preliminaries, with the Main Contractor being made responsible for registering the scheme with the CCS.	**PM**	
Man 3	Construction Site Impacts	**2**	**2**			1 Credit - Where there are procedures that cover two or more of the following items: • Monitor, report and set targets for CO2 production or energy use arising from site activities • Monitor and report CO2 or energy use arising from commercial transport to and from site • 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 the site 80% of site timber is reclaimed, re-used or responsibly sourced OR 2 Credits - Where there are procedures that cover four or more of the items listed above.			Completed copy of Checklist Man 3 (signed and dated) detailing the procedures that will be employed to minimise construction site impacts.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the site measures necessary to achieve the Credits should be achievable on the scheme and agreed to put these in place via the Contract Preliminaries.	**PM**	
Man 4	Security	**2**	**2**			2 Credits An Architectural Liaison Officer(ALO) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at the Design Stage and their recommendations are incorporated into the design of the dwelling. AND Section 2 – Physical Security from 'Secured by Design – New Homes' is complied with (Secured by Design certification is not required)			Detailed documentary evidence showing: • That an ALO/CPDA has been consulted with to ensure that the requirements of Section 2 – Physical Security from 'Secured by Design – New Homes' are met • A commitment to follow the advice provided by the ALO/CPDA	101114 (Pre-Assessment Workshop) - The Architect confirmed that they will consult with an ALO/CPDA and ensure that the relevant security measures are incorporated in the scheme.	**PRP**	
									Detailed documentary evidence showing: • That an ALO/CPDA has been consulted with to ensure that the requirements of Section 2 – Physical Security from 'Secured by Design – New Homes' are met • A commitment to follow the advice provided by the ALO/CPDA	As above.	**PRP**	
Eco 1	Ecological Value of Site	**1**	**1**			1 Credit Where the development site is confirmed as land of inherently low ecological value EITHER By meeting the criteria for low ecological value (using Checklist Eco 1 – Land of Low Ecological Value under Checklists and Tables below) OR By being confirmed by a suitably qualified ecologist OR Where an independent ecological report of the site, prepared by a suitably qualified ecologist, confirms that the construction zone is of low or insignificant ecological value AND Any land of ecological value outside the construction zone but within the development site will remain undisturbed by the construction works.			Where using Checklist Eco 1, provision of: • Site visit report from the design team/assessor confirming details adequate to meet Checklist Eco 1 based on plans of the site and surrounding area prior to the commencement of construction works/site clearance Where a suitably qualified ecologist is appointed: A copy of a report or letter from the ecologist highlighting the information required as set out in the 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence identifying the construction zone and how any areas of ecological value outside the construction zone will remain undisturbed in accordance with the ecologist's recommendations.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the proposed dwellings will replace an existing building within its footprint therefore this Credit may be sought.	**ECO**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

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Assessor: Pallab Chatterjee **Date:** 27th November 2014

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ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Eco 2	Ecological Enhancement	**1**	**1**			1 Credit Where a suitably qualified ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site. AND Where the developer adopts all key recommendations and 30% of additional recommendations.			A copy of the ecologist's report highlighting the information required as set out in 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence stating: • How the key recommendations and 30% of additional recommendations will be incorporated into the design • The planting schedule of any species to be incorporated from suitably qualified ecologists recommendations	101114 (Pre-Assessment Workshop) - The Design Team noted that, whilst an ecologist has yet to be appointed, the credit may be sought as it is reasonable to expect that an appropriate level of ecological enhancement will occur on site. Note - London Borough of Camden Policy CPG 3 states that the Council will expect 'all developments to incorporate brown roofs, green roofs and green walls unless it is demonstrated this is not possible or appropriate'.	**ECO**	
Eco 3	Protection of Ecological Features	**1**	**1**			1 Credit Where all existing features of ecological value on the development site potentially affected by the works are maintained and adequately protected during site clearance, preparation and construction works. Default Cases The Credit can be awarded by default where the site has been classified as having low ecological value in accordance with Section 1 of Checklist Eco 1, Ecological features of the site, AND no features of ecological value have been identified. If a suitably qualified ecologist has confirmed a feature can be removed because of its insignificant ecological value or where an arboriculturalist has confirmed a feature can be removed owing to poor health/condition (e.g. diseased trees which require felling for health and safety and/or conservation reasons), the Credit can be achieved provided all other requirements are met.			Detailed documentary evidence confirming (Where compliance with the criteria is demonstrated by the relevant documents submitted to the Planning Authority which gained planning approval, these can be used as evidence) ecological features present and how they will be protected. Written evidence from an appropriate statutory body / arboriculturalist confirming the requirement to remove any features Where ecological features are being removed and are of low ecological value; a copy of the ecologist's report highlighting the information required as set out in the Code for Sustainable Homes Ecology Report Template Where using Checklist Eco 1, to demonstrate that there are no features to protect provision of: • Site visit report from the design team/ assessor confirming details adequate to meet Checklist Eco 1 based on plans of the site and surrounding area prior to the commencement of construction works/site clearance	101114 (Pre-Assessment Workshop) - The Design Team stated that the credit may be sought as it is reasonable to expect the level of ecological protection will occur on site.	**ECO**	
Eco 4	Change in Ecological Value of Site	**4**	**2**			The ecological value before and after development is measured, and the overall change in species per hectare is: 1 Credit • Minor negative change: between –9 and less than or equal to –3 2 Credits • Neutral: greater than –3 and less than or equal to +3 3 Credits • Minor enhancement: greater than 3 and less than or equal to 9 4 Credits • Major enhancement: greater than +9			Copy of the calculations completed by the assessor and supported by the following detailed documentary evidence: • Proposed site layout • The pre-development site survey, clearly indicating natural and built features on both the site and land surrounding the site before the proposed development • Landscape and plot categories (in accordance with the Assessment Methodology) with a list of site areas provided for both before and after development Where the advice of an ecologist is sought, the following detailed documentary evidence must be provided: Code for Sustainable Homes Ecology Report Template completed by the ecologist AND Written confirmation from the developer confirming how the ecologist's recommendations will be implemented including a planting schedule.	101114 (Pre-Assessment Workshop) - The Design Team stated that the credit may be sought as it is reasonable to expect that before and after development is measured, and the overall change in species per hectare shall be greater than –3 and less than or equal to +3 Note - London Borough of Camden Policy CPG 3 states that the Council will expect 'all developments to incorporate brown roofs, green roofs and green walls unless it is demonstrated this is not possible or appropriate.'	**ECO**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Apartments

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

APARTMENTS | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 75.33% Sought Rating: Level 4 Margin %: 7.33% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Eco 5	Building Footprint	**2**	**1**			1 Credit For houses, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 2.5: 1 OR For blocks of flats, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 3: 1 OR For a combination of houses and flats, the ratio of total net internal floor area: total net internal ground floor area of all houses and flats (i.e. the site-wide footprint to floor area ratio) is greater than the area weighted average of the two target ratios above (see Calculation Procedures) 2 Credits For houses, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 3: 1 OR For blocks of flats, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 4: 1 OR For a combination of houses and flats, the ratio of total net internal floor area: total net internal ground floor area of all houses and flats (i.e. the site-wide footprint to floor area ratio) is greater than the area weighted average of the two target ratios above (see Calculation Procedures)			Calculation of the building footprint ratio, stating the Net Internal Floor Area (NIFA) and the Net Internal Ground Floor Area (NIGFA). Refer to calculation method provided in additional guidance document.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credit is likely to be achievable for the as the apartments block's floor area extends across 3 storeys.	**PRP**	

credit tracker...

appendix c – CSH Pre-Assessment (houses)…

…sustainable building services solutions

appendix c…

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Houses

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

HOUSES | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 69.05% Sought Rating: Level 4 Margin %: 1.05% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Ene 1	Dwelling Emission Rate	**10**	**4**			% Improvement 2010 DER/TER Credits ≥ 8% 1 ≥16% 2 ≥ 25% 3 Level 4 ≥ 36% 4 ≥ 47% 5 ≥ 59% 6 ≥ 72% 7 ≥ 85% 8 ≥ 100% 9 Level 5 Zero Net CO2 Emissions 10 Level 6 *1 Performance requirements are equivalent to those in previous scheme versions but are now measured using the AD L1A 2010 TER as the Minimum. *2 Up to nine Credits are awarded on a sliding scale. The scale is based on increments of 0.1 Credits, distributed equally between the benchmarks defined in this table.			Detailed documentary evidence confirming the TER, DER and percentage improvement of DER over TER based on design stage SAP outputs OR Where applicable: A copy of calculations as detailed in the assessment methodology based on design stage SAP outputs AND Confirmation of FEE performance where SAP section 16 allowances have been included in the calculation. Dated outputs with accredited energy assessor name and registration number, assessment status, plot number and development address. If not produced by an accredited energy assessor additional verification is required as detailed in the assessment methodology.	211114 - Reflecting the evolving design, revised SAP calculations show a 40% improvement upon the 2010 Building Regulations, which allows 4 Credits to be awarded. ___ 101114 (Pre Assessment Workshop): The Design Team noted that the currently SAP calculations showed that no Credits could be awarded, but that a minimum score of 3 Credits was the requirement to meet Level 4 and therefore must be targeted. Note - London Borough of Camden Policy CPG 3 states that the Council will expect the following: - A full model of the building should be carried out to ensure the building design optimises solar gain and daylight without resulting in overheating for developments comprising 5 dwellings or more or 500sq m or more of any floorspace - Consider maximising the use of natural systems within buildings before any mechanical services are considered Camden CPG 3 also requires that 50% of the available Credits in the Energy section are achieved.	**BSE**	
Ene 2	Fabric Energy Efficiency	**9**	**0**			Apart/MidTerr. kWh/m2/year ET/Semi/Det. kWh/m2/year Credits ≤ 48 ≤ 60 3 ≤ 45 ≤ 55 4 ≤ 43 ≤ 52 5 *3 ≤ 41 ≤ 49 6 ≤ 39 ≤ 46 7 Levels 5 & 6 ≤ 35 ≤ 42 8 ≤ 32 ≤ 38 9 *1 To determine the applicable performance scale the dwelling type under assessment must be accurately defined according to the guidance at www.zerocarbonhub.org *2 Credits are awarded on a sliding scale. The scale is based on increments of 0.1 Credits, distributed equally between the benchmarks defined in this table. *3 This is the level being considered for Part L of the Building Regulations in 2013 on which a public consultation is expected in late 2011/early 2012.			Detailed documentary evidence confirming fabric energy efficiency based on Pre-Assessment Stage SAP outputs OR Where applicable: A copy of calculations as detailed in the assessment methodology based on Pre-Assessment Stage SAP outputs. Dated outputs with accredited energy assessor name and registration number, assessment status, plot number and development address. If not produced by an accredited energy assessor additional verification is required as detailed in the assessment methodology.	211114 - Reflecting the evolving design, revised SAP calculations show that the expected FEE is 62 to 63 kWh/m2/year for the houses, which is allows no Credits to be awarded. ___ 101114 (Pre Assessment Workshop) - The Design Team noted that the currently SAP calculations showed that no Credits could be awarded.		
Ene 3	Energy Display Devices	**2**	**2**			1 Credit - Where current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device. 2 Credits - Where current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device Default Cases Where electricity is the primary heating fuel and current electricity consumption data are displayed to occupants by a correctly specified energy display device.			Detailed documentary evidence confirming: That the correctly specified energy display device is dedicated to the dwelling AND The consumption data displayed by the correctly specified energy display device. Where detailed documentary evidence cannot be produced at this stage: A specification can be allowed as evidence of intent to meet specific requirements OR A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking can be allowed.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credits may be sought as the inclusion of an Energy Display Device is a reasonable measure for the dwellings.	**BSE**	

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Houses

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

HOUSES | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 69.05% Sought Rating: Level 4 Margin %: 1.05% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Ene 4	Drying Space	1	1			1 Credit Where space and equipment are provided for drying clothes: • For 1 – 2 bedroom dwellings, the drying equipment must be capable of holding 4m+ of drying line • For 3+ bedroom dwellings, the drying equipment must be capable of holding 6m+ of drying line The drying space (internal or external) must be secure			For internal drying space, detailed documentary evidence confirming: • The location of drying fixings • The length of drying line • Details of the lock provided (for communal drying space only) Where detailed documentary evidence cannot be produced at this stage: A specification can be allowed as evidence of intent to meet specific requirements OR A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking.	101114 (Pre Assessment Workshop) - The Design Team confirmed that internal drying lines can be provided in the ground floor utility toilet of the 4 bedroom houses and in the common bathrooms of the 2 bed houses and therefore the Credit can be awarded. Installing drying lines in the bathroom or a specific heated space with controlled intermittent extract ventilation is recommended.	PRP	
									For internal drying space, detailed documentary evidence confirming: • Details/location of ventilation provided Where detailed documentary evidence cannot be produced at this stage: A specification can be allowed as evidence of intent to meet specific requirements OR A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credits may be sought as the inclusion of an appropriate drying space or drying rack in the bathroom with controlled intermittent extract ventilation is a reasonable measure for the dwellings Installing drying lines in the bathroom or a specific heated space with controlled intermittent extract ventilation is recommended.	PRP	
Ene 5	Energy Labelled White Goods	2	2			1 Credit: Where the following appliances are provided and have an A+ rating under the EU Energy Efficiency Labelling Scheme: • Fridges and freezers or fridge-freezers 1 Credit: Where the following appliances are provided and have an A rating under the EU Energy Efficiency Labelling Scheme: • Washing machines and dishwashers AND EITHER • Tumble dryers or washer dryers have a B rating (where a washer dryer is provided, it is not necessary to also provide a washing machine) OR • EU Energy Efficiency Labelling Scheme Information is provided to each dwelling in place of a tumble dryer or a washer dryer 1 Credit: Where no white goods are provided but EU Energy Efficiency Labelling Scheme Information is provided to each dwelling Note: To obtain this Credit, any white goods available to purchase from the developer must be compliant with the above criteria.			If any white goods are to be provided, detailed documentary evidence confirming: the appliances to be provided with their applicable ratings under the EU Energy Efficiency Labelling Scheme Where washer dryers or tumble dryers will not be provided and the second Credit is sought, provide detailed documentary evidence as follows: A copy of the EU Energy Efficiency Labelling Scheme Information AND Confirmation that the information will be provided to all dwellings If no white goods are provided, detailed documentary evidence as follows: A copy of the information that will be provided on the EU Energy Efficiency Labelling Scheme AND Confirmation that the information will be provided to all dwellings AND• Confirmation that all appliances available for purchase with the dwelling are compliant with the assessment criteria Where details cannot be produced at this stage: a formal letter from the developer giving the specific undertaking.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the provision of energy labelled white goods is a reasonable measure to incorporate in the scheme. For both Credits to be achieved, white goods must be provided in the affordable units as well as private.	PRP	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Houses

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

HOUSES | PRE-ASSESSMENT

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Ene 6	External Lighting	**2**	**2**			1 Credit: Space Lighting Where all external space lighting, including lighting in common areas, is provided by dedicated energy efficient fittings with appropriate control systems. 1 Credit: Security Lighting Where all security lighting is designed for energy efficiency and is adequately controlled such that: All burglar security lights have: • A maximum wattage of 150 W AND • Movement detecting control devices (PIR) AND • Daylight cut-off sensors All other security lighting: • Is provided by dedicated energy efficient fittings AND • Is fitted with daylight cut-off sensors OR a time switch Default Cases 1 Credit: If no security lighting is installed, the security lighting Credit can be awarded by default, provided all of the requirements related to the specification of space lighting have been met. Dual lamp luminaires with both space and security lamps can be awarded both Credits provided they meet the above criteria for energy efficiency			Relevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittings Where detailed information is not available at this stage: a letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking	101114 (Pre Assessment Workshop) - The Architect (PRP) confirmed that they would meet with an ALO/CPDA to discuss Secured by Design (SBD) and security lighting for the site, with appropriate provision of energy efficient space and security lighting considered a reasonable measure for the dwellings.	**PRP**	
									Relevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittings Where detailed information is not available at this stage: a letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking	As above.	**BSE**	
Ene 7	Low and Zero Carbon Technologies	**2**	**2**			Where energy is supplied by low or zero carbon technologies AND There is a 10% reduction in CO2 emissions as a result 1 Credit OR There is a 15% reduction in CO2 emissions as a result 2 Credits			A copy of calculations as detailed in the assessment methodology based on Pre-Assessment Stage SAP outputs AND Detailed documentary evidence confirming that the specified low or zero carbon technologies: • Meet any additional requirements defined in Directive 2009/28/EC as applicable. And are: Certified under the Microgeneration Certification Scheme (as applicable) OR Certified under the CHPQA standard (as applicable).	211114 - As detailed in the Energy Statement, roof-mounted photovoltaic panels have been identified as the most appropriate low and zero carbon technology for the dwellings, resulting in a 15% reduction in CO2 emissions. Note - London Borough of Camden Policy CPG 3 states that the Council will expect the following: - When demonstrating the feasibility and viability of not connecting to a decentralised energy network or including a combined heat and power plant developers will be required to address the relevant considerations above. - All developments are to target at least a 20% reduction in carbon dioxide emissions through the installation of on-site renewable energy technologies. - Special consideration will be given to heritage buildings and features to ensure that their historic and Architectural features are preserved. - When assessing the feasibility and viability of renewable energy technology, the Council will consider the overall cost of all the measures proposed and resulting carbon savings to ensure that the most cost-effective carbon reduction technologies are implemented in line with the energy hierarchy.	**BSE**	

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Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Houses

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

HOUSES | PRE-ASSESSMENT

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Ene 8	Cycle Storage	**2**	**2**			Where individual or communal cycle storage is provided, that is adequately sized, secure and convenient, for the following number of cycles: 1 Credit: Studios or 1 bedroom dwellings – storage for 1 cycle for every two dwellings 2 and 3 bedroom dwellings –- storage for 1 cycle per dwelling 4 bedrooms and above –- storage for 2 cycles per dwelling OR 2 Credits Studios or 1 bedroom dwellings – storage for 1 cycle per dwelling 2 and 3 bedroom dwellings – storage for 2 cycles per dwelling 4 bedrooms and above – storage for 4 cycles per dwelling Note: The requirements for secure cycle storage are met where compliance with clause 35 of Secured by Design (SBD) New Homes 2010 is achieved.			Detailed documentary evidence showing: • The number of bedrooms and the corresponding number of cycle storage spaces per dwelling • Location, type and size of storage • Convenient access to cycle storage • Any security measures • Details of the proprietary system (if applicable) • How the requirements of clause 35 of Secured by Design – New Homes 2010 will be met (if applicable) Where detailed information is not available at this stage: A letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking.	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that 20 cycle spaces will be provided for the affordable units, exceeding the Code requirement for 19 cycle spaces to achieve 2 Credits. In addition, 4 spaces will be provided for each of the 4 bedroom houses and 2 spaces will be provided for each of the 2 bedroom houses. Accordingly, 2 Credits may be sought.	**PRP**	
Ene 9	Home Office	**1**	**1**			1 Credit: Where sufficient space and services have been provided which allow occupants to set up a home office in a suitable room. The space dedicated for use as a home office must have adequate ventilation and achieve an average daylight factor of 1.5%.			Detailed documentary evidence showing: • Location of and sufficient space for the home office	211114 - The Design Team confirmed that the measures necessary to achieve the Credits were achievable for the apartments as initial daylighting calculations indicate that the appropriate daylight factor of 1.5% is achievable in all the bedrooms in all the houses therefore the home office should be allocated in the 2nd bedroom of the 2 bed houses and the most appropriate bedroom (other than the main bedroom) in the 4 bed houses.	**PRP**	
									Detailed documentary evidence showing: • Location of and sufficient space for the home office	101114 (Pre-Assessment Workshop) - As above.	**PRP**	
									Detailed documentary evidence showing: • That an average daylight factor of at least 1.5% is achieved	As above.	**PRP**	

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									Detailed documentary evidence showing: • Location and number of sockets • Location of telephone points • That adequate ventilation will be provided • Confirmation of one of the following: 1. cable connection 2. that broadband is available at the site level (not for individual dwellings), i.e. a letter from the developer confirming that they have checked that broadband is available 3. two telephone points (or double telephone point) Where detailed information is not available at this stage: a letter of instruction to a contractor/supplier or a formal letter from the developer giving the specific undertaking	211114 - The Building Services Engineer should make sure that double sockets are provided in the bedrooms allocated for Home Office.	**BSE**	
Wat 1	Indoor Water Use	**5**	**3**			Water consumption (litres/person/day) Credits Mandatory Levels ≤ 120 l/p/day 1 Levels 1 and 2 ≤110 l/p/day 2 ≤ 105 l/p/day 3 Levels 3 and 4 ≤ 90 l/p/day 4 ≤ 80 l/p/day 5 Levels 5 and 6			Detailed documentary evidence showing: • Location, details and type of appliances/ fittings that use water in the dwelling including any specific water reduction equipment with the capacity / flow rate of equipment.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that a water consumption performance of no greater than 105 l/p/day shall be specified to ensure that the mandatory requirement for Code Level 4 may be achieved. Note - London Borough of Camden Policy CPG 3 requires that 50% of the available Credits in the Water section are achieved. Camden CPG 3 also states 'The Council will require developments over 10 units or 1000sq m and/or intense water use developments, such as hotels, hostels, student housing etc. to include a grey water harvesting system, unless the applicant demonstrates to the Council's satisfaction that this is not feasible.'	**PRP**	
									Detailed documentary evidence showing: • Location, size and details of any rainwater and greywater collection systems provided for use in the dwelling	As above.	**BSE**	
Wat 2	External Water Use	**1**	**1**			1 Credit: Where a correctly specified and sufficient sized system to collect rainwater for external/internal irrigation/use has been provided to a dwelling with a garden, patio or communal garden space (examples of such systems include rainwater butts and central rainwater collection systems Default Cases If no individual or communal garden spaces are specified or if only balconies are provided, the Credit can be awarded by default.			Detailed documentary evidence stating type, size and location of any rainwater collection systems	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credit would be sought as it is expected that appropriately sized water butts will be provided in the gardens and terraces. Note - London Borough of Camden Policy CPG 3 states the Council will require 'buildings with gardens or landscaped areas that require regular maintenance to be fitted with water butts.'	**PRP**	
									Detailed documentary evidence stating type, size and location of any rainwater collection systems	As above.	**PRP**	

credit tracker...

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Mat 1	Environmental Impact of Materials	**15**	**10**			Up to fifteen Credits are available for the specification of three key construction elements: external walls, windows, roof, internal walls and ground & upper floor slabs. This Credit rewards those projects that specify key construction building elements that achieve an A/A+ rating under the BRE's Green Guide to Specification. The Architect and Structural Engineers are required to provide the following information for each key building element: - Key Building Element Specification detail; - Corresponding Green Guide Element Number (which can be obtained from the www.greenguide.org.uk website); - Green Guide Rating (A+ to E); - Area of each building element type. Refer to Mat 01 Table - To be completed by Architect and Structural Engineer.			Completed Code Mat 1 Table - this should be completed by the Architect. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by the Architect. AND Completed Mat 01 Calculator Tool for submission to the BRE.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that 10 Credits may be sought here as this is a conservative estimate of the likely performance for the construction types expected for a development of houses of this type. Note - Camden CPG 3 also requires that 50% of the available Credits in the Materials section are achieved. Camden CPG 3 also states that 'all developments should aim for at least 10% of the total value of materials used to be derived from recycled and reused sources'	**PRP**	
									Completed Code Mat 1 Table - this should be completed by the structural engineer. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by the structural engineer. AND Completed Mat 01 Calculator Tool for submission to the BRE.	As above.	**PRP**	
Mat 2	Responsible Sourcing of Materials - Basic Building Elements	**6**	**6**			1 - 6 Credits available where 80% of the assessed materials in the following Building Elements are responsibly sourced: a) Frame b) Ground floor c) Upper floors (including separating floors) d) Roof e) External walls f) Internal walls (including separating walls) g) Foundation/substructure (excluding sub-base materials h) Staircase Additionally, 100% of any timber in these elements must be legally sourced.			Completed Mat 02 Table. This should be completed by the Architect/structural engineer for the relevant elements. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by both the Architect and Structural Engineer. AND Responsible Sourcing certificates confirming the requirement for sustainably sourced timber, certified concrete, etc. AND Completed Code Mat 2 Calculator Tool, showing building elements at the Design Stage	101114 (Pre-Assessment Workshop) - The Design Team confirmed that it reasonable to expect that all 6 Credits may be sought, as this level of performance has been achieved within the Team on similar house projects. — Design Team should begin to gather an understanding of the ability of the proposed supply chains to deliver responsibly sourced and manufactured products. This means using products that are manufactured under a recognised Environmental Management System such as ISO 14001 as a minimum, and preferably under more robust responsible sourcing systems such as Forest Stewardship Council (FSC) or BES 6001.	**PM**	
Mat 3	Responsible Sourcing of Materials - Finishing Elements	**3**	**3**			1 - 3 Credits where 80% of the assessed materials in the following Finishing Elements are responsibly sourced: a) Staircase b) Windows c) External & internal doors d) Skirting e) Panelling f) Furniture g) Fascias h) Any other significant use Additionally, 100% of any timber in these elements must be legally sourced.			Completed Mat 03 Table. This should be completed by the Architect/structural engineer for the relevant elements. AND Specification sections/clauses and /or marked up drawings confirming the location of each key building element. To be provided by both the Architect and Structural Engineer. AND Responsible Sourcing certificates confirming the requirement for sustainably sourced timber, certified concrete, etc. AND Completed Code Mat 3 Calculator Tool, showing building elements at the Design Stage	101114 (Pre-Assessment Workshop) - The Design Team confirmed that it reasonable to expect that all 3 Credits may be sought, as this level of performance has been achieved within the Team on similar house projects. — Design Team should begin to gather an understanding of the ability of the proposed supply chains to deliver responsibly sourced and manufactured products. This means using products that are manufactured under a recognised Environmental Management System such as ISO 14001 as a minimum, and preferably under more robust responsible sourcing systems such as Forest Stewardship Council (FSC) or BES 6001.	**PM**	

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Sur 1	Management of Surface Water Run-off from Developments	**2**	**2**			Hydraulic Control Criteria - MANDATORY FOR ALL LEVELS The SuDS Management Train should be used as a guide to achieve the following: 1) Peak Rate of Run-off • Where there is an increase in impermeable area -ensure that the peak rate of run-off over the development lifetime, allowing for climate change, will be no greater for the developed site than it was for the pre-development site. • Where the pre-development peak rate of run-off for the site would result in a requirement for the post-development flow rate to be less than 5 l/s at a discharge point, a flow rate of up to 5 l/s may be used where required to reduce the risk of blockage. 2) Volume of Run-off Either: A: Ensure that the post development volume of run-off, allowing for climate change over the development lifetime, is no greater than it would have been before the development. The additional predicted volume of run-off for the 100 year 6 hour event must be prevented from leaving the site by using infiltration or other SuDS techniques (see Definitions). OR B: If A cannot be satisfied (full justification must be provided) then reduce the post development peak rate of run-off to the limiting discharge. 3) Designing for local drainage system failure. Demonstrate that the flooding of property would not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance). Water Quality Criteria 1 Credit can be awarded by ensuring there is no discharge from the developed site for rainfall depths up to 5 mm (see Calculation Procedures). 1 Credit can be awarded by ensuring that: • The run-off from all hard surfaces shall receive an appropriate level of treatment in accordance with The SuDS Manual to minimise the risk of pollution. Note: The SuDS Manual best practice recommendations should be followed where there is a risk to groundwater from infiltration (for example contaminated land, developments with high risk of pollution incidents)			Mandatory Requirements: Statement from the appropriately qualified professional confirming that they are 'suitably qualified' in line with the Code definition. AND The appropriately qualified professional's report containing all information necessary to demonstrate compliance with the peak rate of run-off and volume of run-off requirements - see additional guidance document AND A Flood Risk Assessment confirming the risk of flooding from all sources of flooding AND Drawings showing the pre-development drainage for the site (natural or constructed) AND Drawings showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels AND Confirmation from the appropriately qualified professional that local drainage system failure would not cause an increase in the risk of flooding within dwellings either on or off site Where Credits are sought: The appropriately qualified professional's report detailing the design specifications, calculations and drawings to support the awarding of the Credit(s)	101114 (Pre-Assessment Workshop) - The two Credits are sought is it is considered reasonable at this stage of the design process for the measures to be applied to the houses. — Note - The mandatory standard of this Credit should be carefully reviewed. The drainage strategy of the development should also ensure there is no discharge from the developed site for rainfall depths up to 5mm and that SUDs are specified, which would lead to the award of two points.	**STRU**	

credit tracker...

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Sur 2	Flood Risk	**2**	**2**			2 Credits: are available for developments situated in Zone 1 – low annual probability of flooding (as defined in PPS25 Development and Flood Risk) and where the site-specific Flood Risk Assessment (FRA) indicates that there is low risk of flooding from all sources. OR 1 Credit: is available for developments situated in Zones 2 and 3a – medium and high annual probability of flooding where the finished ground floor level of all habitable parts of dwellings and access routes to the ground level and the site, are placed at least 600 mm above the design flood level of the flood zone. The Flood Risk Assessment accompanying the planning application must demonstrate to the satisfaction of the local planning authority and statutory body that the development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed.			For developments situated in Zone 1: • A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows that there is a low risk of flooding from all sources. For medium (Zone 2) or high (Zone 3a) flood risk areas: • A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows there is a medium or high risk of flooding AND • Site plans indicating the design flood level, the range of ground levels of the dwellings, car parking areas and site access (lowest to highest), showing that the criteria (finished floor levels of all habitable rooms and access routes being at least 600 mm above the design flood level) are met, along with any notes explaining the function of any areas lying below the design flood level AND • Confirmation from the local planning authority that the development complies with PPS25 and is appropriately flood resilient and resistant, and has managed any residual risk safely. Where the site is under the protection of flood defences and the flood risk category of the site is reduced: • Written confirmation from the Environment Agency of the reduction in flood risk category *. *Note: There are many defences, owned by third parties, which, owing to their location, act as a defence by default, e.g. motorway and railway embankments, walls. Confirmation is required that these defences will remain in place for the lifetime of the development if a significant risk is predicted.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Site is in low flood zone, but noted that a formal flood risk assessment would be required to confirm the final Credit score.	**STRU**	

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ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Wst 1	Storage of Non-recyclable Waste and Recyclable Household Waste	**4**	**4**			An adequate external space should be allocated for waste storage and sized to accommodate containers according to the largest of the following two volumes: • The minimum volume recommended by British Standard 5906 (British Standards Institution, 2005) based on a maximum collection frequency of once per week. This volume is 100 litres for a single bedroom dwelling, with a further 70 litres for each additional bedroom. • The total volume of the external waste containers provided by the Local Authority. Storage space must provide inclusive access and usability (Checklist IDP). Containers must not be stacked. 2 Credits Dedicated internal storage for recyclable household waste can be Credited where there is no (or insufficient) dedicated external storage capacity for recyclable material, no Local Authority collection scheme and where the following criteria are met: At least three internal storage bins: • all located in an adequate internal space • with a minimum total capacity of 60 litres. 4 Credits A combination of internal storage capacity provided in an adequate internal space, with either: • a Local Authority collection scheme, or • no Local Authority collection scheme but adequate external storage capacity. Local Authority collection scheme In addition to a Local Authority collection scheme (with a collection frequency of at least fortnightly), at least one of the following requirements must be met: • Recyclable household waste is sorted after collection and a single bin of at least 30 litres is provided in an adequate internal space. • Materials are sorted before collection and at least three separate bins are provided with a total capacity of 30 litres. Each bin must have a capacity of at least 7 litres and be located in an adequate internal space. • An automated waste collection system which collects at least three different types of recyclable waste. No Local Authority collection scheme but adequate external storage capacity For houses and flats there must be at least three identifiably different internal storage bins for recyclable waste located in an adequate internal space: • with a minimum total capacity of 30 litres • with a minimum individual capacity of at least 7 litres. AND For houses, an adequate external space must be provided for storing at least three external bins for recyclable waste: • with a minimum total capacity of 180 litres • with a minimum individual capacity of 40 litres. For flats, a private recycling scheme operator must be appointed to maintain bins and collect recyclable waste regularly. Recycling containers must: • be located in an adequate external space • be sized according to the frequency of collection, based on guidance from the recycling scheme operator • store at least three types of recyclable waste in identifiably different bins.			Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP - see additional guidance document Detailed documentary evidence stating: • the location of external (basement) storage • the number, types and sizes of external (basement) storage AND A letter, leaflet, website or other published information from the Local Authority/waste scheme provider* describing; • the types of waste collected • the frequency of collection • if there will be pre or post collection sorting * In the case of an automated collection system, the waste scheme operator will only need to confirm the types of waste collected and if there will be pre or post collection sorting	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that they shall provide a waste area in accordance with the London Borough of Camden's requirements, which should match of exceed the requirements of the Code.	**PRP**	
									Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP - see additional guidance document Detailed documentary evidence stating: • the location of internal (flat) storage • the number, types and sizes of internal (flat) storage	As above.	**PRP**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Houses

Assessor: Pallab Chatterjee **Date:** 27th November 2014

Checked By: Martin Lawless **Date:** 27th November 2014

ASSESSMENT - SUMMARY

HOUSES | PRE-ASSESSMENT

Req. %: >68% Req. Rating: Level 4 Sought %: 69.05% Sought Rating: Level 4 Margin %: 1.05% Risk %: 2.10%

ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
									Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP - see additional guidance document Detailed documentary evidence stating: • the location of internal (flat) storage • the number, types and sizes of internal (flat) storage	As above.	**PRP**	
Was 2	Construction Site Waste Management	**3**	**3**			1 Credit - Minimising Construction Waste Where there is a compliant Site Waste Management Plan (SWMP) that contains: a. Target benchmarks for resource efficiency, i.e. m3 of waste per 100 m2 or tonnes of waste per 100 m2 set in accordance with best practice b. Procedures and commitments to minimize non-hazardous construction waste at Design Stage. Specify waste minimisation actions relating to at least 3 waste groups and support them by appropriate monitoring of waste. c. Procedures for minimising hazardous waste d. Monitoring, measuring and reporting of hazardous and non-hazardous site waste production according to the defined waste groups (according to the waste streams generated by the scope of the works) 2 Credits - Diverting Waste from Landfill Where there is a compliant Site Waste Management Plan (SWMP) including procedures and commitments to sort and divert waste from landfill, through either; a. Re-use on site (in situ or for new applications) b. Re-use on other sites c. Salvage/reclaim for re-use d. Return to the supplier via a 'take-back' scheme e. Recovery and recycling using an approved waste management contractor f. Compost according to the defined waste groups (in line with the waste streams generated by the scope of the works). AND One of the following has been achieved: Where at least 50% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill. OR 3 Credits - Where at least 85% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill.			A copy of the compliant SWMP containing the appropriate benchmarks, commitments and procedures for waste minimisation and diversion from landfill in line with the criteria and with Checklists Was 2a, Was 2b and Was 2c OR Confirmation from the developer that the SWMP includes/will include benchmarks, procedures and commitments for minimising and diverting waste from landfill in line with the criteria and with Checklists Was 2a, Was 2b and Was 2c	101114 (Pre-Assessment Workshop) - The Design Team confirmed that appropriate levels of resource efficiency (net waste for resource efficiency) and diversion of waste from landfill may be achieved for the proposed dwellings, with these requirements conveyed on to the Main Contractor via the Contract Preliminaries by the Project Manager.	**PM**	

credit tracker...

Code for Sustainable Homes - Credit Tracker

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Was 3	Composting	**1**	**1**			1 Credit • Individual home composting facilities. OR • A local communal or community composting service, which the Local Authority runs or where there is a management plan in place. OR • A Local Authority green/kitchen waste collection system (this can include an automated waste collection system). All facilities must also: • be in a dedicated position • provide inclusive access and usability (Checklist IDP) • have a supporting information leaflet provided to each dwelling.			Detailed documentary evidence stating: • the location and size of internal and external storage • that an information leaflet will be supplied • distance of storage from dwelling AND Completed Checklist IDP For communal/community composting schemes, detailed documentary evidence stating; • distance of storage from dwelling • management arrangements • location and size of storage • details of the scheme including opening times and access restrictions • confirmation that an information leaflet will be supplied AND Completed Checklist IDP Where applicable, detailed documentary evidence stating: • Details of the Local Authority kitchen/garden waste collection scheme • Details of the automated waste collection system Where detailed documentary evidence is not available at this stage; A letter of instruction to a contractor/supplier, a formal letter from the developer giving the specific undertaking or the manufacturer's information, for all the above required details.	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that they shall provide a waste area in accordance with the London Borough of Camden's requirements, which includes separate food waste storage.	**PRP**	
Pol 1	Global Warming Potential (GWP) of Insulants	**1**	**1**			1 Credit Credits are awarded where all insulating materials in the elements of the dwelling listed below only use substances that have a GWP < 5 (in manufacture AND installation): • Roofs: including loft access • Walls: internal and external including lintels and all acoustic insulation • Floors: including ground and upper floors • Hot water cylinder: pipe insulation and other thermal stores • Cold water storage tanks: where provided • External doors			Completed Checklist Pol 1 showing the proposed insulation materials (or none) for each element and whether they are foamed using blowing agents or are unfoamed (from table Cat 6.1)	101114 (Pre-Assessment Workshop) - The Design Team confirmed that it would be reasonable to expect that insulating materials with low GWP would be specified for the works.	**PRP**	
									Completed Checklist Pol 1 showing the proposed insulation materials (or none) for each element and whether they are foamed using blowing agents or are unfoamed (from table Cat 6.1)	As above.	**BSE**	
Pol 2	NOx Emissions	**3**	**3**			Dry NOX (mg/kWh) Boiler Class* Credits ≤ 100 4 1 ≤ 70 5 2 ≤ 40 - 3 Default Cases Where all space heating and hot water energy requirements are fully met by systems which do not produce NOX emissions, 3 Credits *Boiler class (BS EN 297: 1994)			Criteria Detailed documentary evidence describing: • The primary and any secondary heating systems and flue type • Dry NOX levels and/or boiler class of the primary and any secondary heating systems Where NOX averaging is required due to multiple heating systems within the dwelling: Copy of calculations as detailed in the methodology based on Pre-Assessment Stage SAP outputs Where detailed documentary evidence is not available at this stage; a letter of instruction to a contractor/supplier or a formal letter from the developer to the Code assessor giving the specific undertaking	101114 (Pre-Assessment Workshop) - The Design Team confirmed that, as individual gas boilers will be used in the houses, it is reasonable to expect that low NOx boilers may be specified.	**BSE**	

Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

Project: Mansfield Bowling Club **Job Number:** 3369

Subject: Code for Sustainable Homes Pre-Assessment - Houses

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ASSESSMENT - SUMMARY

HOUSES | PRE-ASSESSMENT

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ASSESSMENT - MAIN TABLE

Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Hea 1	Daylighting	**3**	**0**			1 Credit: Kitchens must achieve a minimum Average Daylight Factor of at least 2% 1 Credit: All living rooms, dining rooms and studies (including any room designated as a home office under Ene 9 – Home Office) must achieve a minimum Average Daylight Factor of at least 1.5% 1 Credit: 80% of the working plane in each kitchen, living room, dining room and study (including any room designated as a home Building 3 - Residential under Ene 9 – Home Building 3 - Residential) must receive direct light from the sky			Copy of calculations as detailed in the methodology to demonstrate: • Average daylight factor using the formula described in the definitions section (method described in Littlefair (1998) as set out in BS 8206–2) or computer simulation or scale model measurements • Position of the no-sky line and percentage of area of the working plane that receives direct light from the sky Confirmation from the developer that the calculations accurately reflect the dwelling as designed.	211114 - Initial daylight calculations show mixed results with the 2 bedroom likely to achieve all 3 Credits and Plots 2, 3, 4, 5 and 8 achieving 1. Only Plot 1 does not achieve any.		
Hea 2	Sound Insulation	**4**	**4**			1 Credit Where: • airborne sound insulation values are at least 3dB higher • impact sound insulation values are at least 3dB lower OR 3 Credits • airborne sound insulation values are at least 5dB higher • impact sound insulation values are at least 5dB lower OR 4 Credits • airborne sound insulation values are at least 8dB higher • impact sound insulation values are at least 8dB lower than the performance standards set out in the Building Regulations approved for England and Wales, Approved Document E (2003 Edition, with amendments 2004). This can be demonstrated through EITHER A programme of pre-completion testing based on the Normal programme of testing described in Approved Document E, for every group or sub-group of houses or flats, demonstrating that the above standard or standards are achieved. OR Use of constructions for all relevant building elements that have been assessed and approved as Robust Details by Robust Details Limited (RDL) and found to achieve the performance standards stated above. All relevant dwellings must be registered with RDL. Default cases Detached dwellings (4 Credits) Attached dwellings where separating walls or floors occur only between non-habitable rooms (3 Credits)			A report from a 'Suitably Qualified Acoustician' confirming the requirements opposite shall be met. Where pre-completion testing will be carried out; A letter from the developer confirming the intent to: • Meet the relevant sound insulation performance levels • Use a Compliant Test Body to complete testing	101114 (Pre-Assessment Workshop) - The Design Team noted that Sandy Brown Associates have been appointed as acoustic consultants, but that the performance of the building against the acoustic performance standards and testing requirements would be subject to review as the design advanced. It was concluded that four Credits should be sought.	**SBA**	
									Where Robust Details will be used; • Confirmation that the Robust Details chosen will achieve the required performance standards for sound insulation (as applicable) • Confirmation that the relevant plots are registered with RDL (the Purchase Statement)	As above.	**PRP**	
									Where pre-completion testing will be carried out; A letter from the developer confirming the intent to: • Meet the relevant sound insulation performance levels • Use a Compliant Test Body to complete testing	As above.	**PRP**	

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Code for Sustainable Homes - Credit Tracker

MTT/SUSTAIN

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Subject: Code for Sustainable Homes Pre-Assessment - Houses

Assessor: Pallab Chatterjee **Date:** 27th November 2014

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HOUSES | PRE-ASSESSMENT

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Credit ID	Credit Name	Maximum Credits	Sought Credits		Credit Status	Credit Criteria	Evidence ID	Ev. Status	Evidence Requirements	MTTS Commentary	Resp. Party	Risk
Hea 3	Private Space	**1**	**1**			1 Credit Where outdoor space (private or semi-private) has been provided that is: • Of a minimum size that allows all occupants to use the space. • Provided with inclusive access and usability (Checklist IDP). • Accessible only to occupants of designated dwellings. Minimum space requirements: • Private space: 1.5 m2 per bedroom • Shared space: minimum 1 m2 per bedroom.			Detailed documentary evidence confirming: • The number of bedrooms served by the outdoor space • That the outdoor space meets the minimum size requirements AND Completed Checklist IDP Where a shared outdoor space is provided, detailed documentary evidence demonstrating: • The private space is accessible only to occupants of designated dwellings Where detailed documentary evidence is not available at this stage; A letter of instruction to a contractor/supplier or a formal letter from the developer to the assessor giving a specific undertaking	101114 (Pre-Assessment Workshop) - The Design Team confirmed that all units have either a balcony or garden and therefore this Credit may be sought.	**PRP**	
Hea 4	Lifetime Homes	**4**	**4**			4 Credits Where all principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with. OR 3 Credits Where an exemption from Lifetime Homes criteria 2 and/or 3 is applied to selected pathways subject to a steeply sloping plot gradient, but all other principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with.			Confirmation from the developer that all 16 of the Lifetime Homes design criteria are met OR Where an exemption from Lifetime Homes criteria 2 and/or 3 is sought: • Confirmation from the developer that all other design criteria are met AND Detailed documentary evidence demonstrating access routes subject to steeply sloping gradients at pre development and completion	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that the requirements for Lifetime Homes will be incorporated into the design for all dwellings and that this Credit may be sought.	**PRP**	
									Confirmation from the developer that all 16 of the Lifetime Homes design criteria are met OR Where an exemption from Lifetime Homes criteria 2 and/or 3 is sought: • Confirmation from the developer that all other design criteria are met AND Detailed documentary evidence demonstrating access routes subject to steeply sloping gradients at pre development and completion	As above.	**PRP**	
Man 1	Home User Guide	**3**	**3**			1 Credit Provision of a Home User Guide, compiled in accordance with Checklist Man 1, Part 1, together with confirmation that the guide is available in alternative formats. 2 Credits Where the guide includes additional information relating to the site and its surroundings and is compiled in accordance with Checklist Man 1, Part 2.			Where a home user guide will be supplied covering operational issues relating to the site and its surroundings. Confirmation in the form of a letter from the developer or in the specification that the guide will be: • Supplied to all dwellings within the development • Be developed to the required standards (as a minimum including a list of contents showing that the guide will cover all of the issues required in Checklist Man 1 Part 1 & Part 2) • Be provided in different formats	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Main Contractor will be required to provide a Home User Guide as part of the Contract Preliminaries.	**PM**	

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Man 2	Considerate Constructors Scheme	**2**	**2**			Up to Two Credits are available where there is a commitment to comply with best practice site management principles using either the CCS or an alternative locally/nationally recognised scheme. To achieve One Credit for compliance with the approved scheme (a CCS score between 25 and 34, with a score of at least 5 in each section). To achieve Two Credits where contractor 'significantly exceeds' compliance of the relevant scheme (a CCS score between 35 and 39, with a score of 7 in each section). Exemplary performance is achieved for scores of 40 or more.			For Considerate Constructors Scheme: Specification clause or other confirmation of commitment from the contractor or developer to comply with the Considerate Constructors Scheme and achieve formal certification under the scheme with either a pass score or a score of 35 points and above AND Confirmation that registration with the Considerate Constructor Scheme has taken place no later than the commencement of the construction phase.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the measures necessary to achieve the Credits should be achievable on the scheme and agreed to put these in place via the Contract Preliminaries, with the Main Contractor being made responsible for registering the scheme with the CCS.	**PM**	
Man 3	Construction Site Impacts	**2**	**2**			1 Credit - Where there are procedures that cover two or more of the following items: • Monitor, report and set targets for CO2 production or energy use arising from site activities • Monitor and report CO2 or energy use arising from commercial transport to and from site • 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 the site 80% of site timber is reclaimed, re-used or responsibly sourced OR 2 Credits - Where there are procedures that cover four or more of the items listed above.			Completed copy of Checklist Man 3 (signed and dated) detailing the procedures that will be employed to minimise construction site impacts.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the site measures necessary to achieve the Credits should be achievable on the scheme and agreed to put these in place via the Contract Preliminaries.	**PM**	
Man 4	Security	**2**	**2**			2 Credits An Architectural Liaison Officer(ALO) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at the Design Stage and their recommendations are incorporated into the design of the dwelling. AND Section 2 – Physical Security from 'Secured by Design – New Homes' is complied with (Secured by Design certification is not required)			Detailed documentary evidence showing: • That an ALO/CPDA has been consulted with to ensure that the requirements of Section 2 – Physical Security from 'Secured by Design – New Homes' are met • A commitment to follow the advice provided by the ALO/CPDA	101114 (Pre-Assessment Workshop) - The Architect (PRP) confirmed that they will consult with an ALO/CPDA and ensure that the relevant security measures are incorporated in the scheme.	**PRP**	
									Detailed documentary evidence showing: • That an ALO/CPDA has been consulted with to ensure that the requirements of Section 2 – Physical Security from 'Secured by Design – New Homes' are met • A commitment to follow the advice provided by the ALO/CPDA	As above.	**PRP**	
Eco 1	Ecological Value of Site	**1**	**1**			1 Credit Where the development site is confirmed as land of inherently low ecological value EITHER By meeting the criteria for low ecological value (using Checklist Eco 1 – Land of Low Ecological Value under Checklists and Tables below) OR By being confirmed by a suitably qualified ecologist OR Where an independent ecological report of the site, prepared by a suitably qualified ecologist, confirms that the construction zone is of low or insignificant ecological value AND Any land of ecological value outside the construction zone but within the development site will remain undisturbed by the construction works.			Where using Checklist Eco 1, provision of: • Site visit report from the design team/assessor confirming details adequate to meet Checklist Eco 1 based on plans of the site and surrounding area prior to the commencement of construction works/site clearance Where a suitably qualified ecologist is appointed: A copy of a report or letter from the ecologist highlighting the information required as set out in the 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence identifying the construction zone and how any areas of ecological value outside the construction zone will remain undisturbed in accordance with the ecologist's recommendations.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the proposed dwellings will replace an existing building within its footprint therefore this Credit may be sought.	**ECO**	

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Eco 2	Ecological Enhancement	1	1			1 Credit Where a suitably qualified ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site. AND Where the developer adopts all key recommendations and 30% of additional recommendations.			A copy of the ecologist's report highlighting the information required as set out in 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence stating: • How the key recommendations and 30% of additional recommendations will be incorporated into the design • The planting schedule of any species to be incorporated from suitably qualified ecologists recommendations	101114 (Pre-Assessment Workshop) - The Design Team noted that, whilst an ecologist has yet to be appointed, the credit may be sought as it is reasonable to expect that an appropriate level of ecological enhancement will occur on site. Note - London Borough of Camden Policy CPG 3 states that the Council will expect 'all developments to incorporate brown roofs, green roofs and green walls unless it is demonstrated this is not possible or appropriate'.	ECO	
Eco 3	Protection of Ecological Features	1	1			1 Credit Where all existing features of ecological value on the development site potentially affected by the works are maintained and adequately protected during site clearance, preparation and construction works. Default Cases The Credit can be awarded by default where the site has been classified as having low ecological value in accordance with Section 1 of Checklist Eco 1, Ecological features of the site, AND no features of ecological value have been identified. If a suitably qualified ecologist has confirmed a feature can be removed because of its insignificant ecological value or where an arboriculturalist has confirmed a feature can be removed owing to poor health/condition (e.g. diseased trees which require felling for health and safety and/or conservation reasons), the Credit can be achieved provided all other requirements are met.			Detailed documentary evidence confirming (Where compliance with the criteria is demonstrated by the relevant documents submitted to the Planning Authority which gained planning approval, these can be used as evidence) ecological features present and how they will be protected. Written evidence from an appropriate statutory body / arboriculturalist confirming the requirement to remove any features Where ecological features are being removed and are of low ecological value; a copy of the ecologist's report highlighting the information required as set out in the Code for Sustainable Homes Ecology Report Template Where using Checklist Eco 1, to demonstrate that there are no features to protect provision of: • Site visit report from the design team/ assessor confirming details adequate to meet Checklist Eco 1 based on plans of the site and surrounding area prior to the commencement of construction works/site clearance	101114 (Pre-Assessment Workshop) - The Design Team stated that the credit may be sought as it is reasonable to expect the level of ecological protection will occur on site.	ECO	
Eco 4	Change in Ecological Value of Site	4	2			The ecological value before and after development is measured, and the overall change in species per hectare is: 1 Credit • Minor negative change: between –9 and less than or equal to –3 2 Credits • Neutral: greater than –3 and less than or equal to +3 3 Credits • Minor enhancement: greater than 3 and less than or equal to 9 4 Credits • Major enhancement: greater than +9			Copy of the calculations completed by the assessor and supported by the following detailed documentary evidence: • Proposed site layout • The pre-development site survey, clearly indicating natural and built features on both the site and land surrounding the site before the proposed development • Landscape and plot categories (in accordance with the Assessment Methodology) with a list of site areas provided for both before and after development Where the advice of an ecologist is sought, the following detailed documentary evidence must be provided: Code for Sustainable Homes Ecology Report Template completed by the ecologist AND Written confirmation from the developer confirming how the ecologist's recommendations will be implemented including a planting schedule.	101114 (Pre-Assessment Workshop) - The Design Team stated that the credit may be sought as it is reasonable to expect that before and after development is measured, and the overall change in species per hectare shall be greater than –3 and less than or equal to +3 Note - London Borough of Camden Policy CPG 3 states that the Council will expect 'all developments to incorporate brown roofs, green roofs and green walls unless it is demonstrated this is not possible or appropriate.'	ECO	

credit tracker...

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Eco 5	Building Footprint	**2**	**0**			1 Credit For houses, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 2.5: 1 OR For blocks of flats, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 3: 1 OR For a combination of houses and flats, the ratio of total net internal floor area: total net internal ground floor area of all houses and flats (i.e. the site-wide footprint to floor area ratio) is greater than the area weighted average of the two target ratios above (see Calculation Procedures) 2 Credits For houses, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 3: 1 OR For blocks of flats, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 4: 1 OR For a combination of houses and flats, the ratio of total net internal floor area: total net internal ground floor area of all houses and flats (i.e. the site-wide footprint to floor area ratio) is greater than the area weighted average of the two target ratios above (see Calculation Procedures)			Calculation of the building footprint ratio, stating the Net Internal Floor Area (NIFA) and the Net Internal Ground Floor Area (NIGFA). Refer to calculation method provided in additional guidance document.	101114 (Pre-Assessment Workshop) - The Design Team confirmed that the Credit is unlikely to be achievable for the as the house floor areas do not appear to meet the necessary ratio.		

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