373-375 Euston Road

Sustainability Statement

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Audit Sheet

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Contents

1.0 Executive Summary

The re-development of 373-375 Euston Road is being undertaken with due consideration to sustainability and energy efficiency throughout the design. The refurbishment will ensure that the retained elements are up-graded to maximise the improvement in performance of the refurbished building with all new-build elements being designed to achieve high levels of energy efficiency and carbon emission reductions.

The Pre-assessment credit targets have been developed to achieve an Excellent BREEAM Domestic Refurbishment 2012 rating, a Code for Sustainable Homes Level 4 rating and a Very Good BREEAM New Construction 2011 Retail rating.

The BREEAM & Code for Sustainable Homes assessments include both mandatory targets all of which must be achieved in order to obtain a specific rating and tradable credits which can be selected according to the design of the dwelling, a specific number of which needs to be included to obtain the score required to achieve the rating.

This report has been prepared to summarise the measures that are proposed by the design team to meet the required BREEAM & Code for Sustainable Homes ratings, improve energy efficiency and ensure the development is undertaken in a sustainable way.

Appendices A, B and C include the Code for Sustainable Homes, BREEAM Domestic Refurbishment and BREEAM Retail Pre-Assessments.

Energy & CO_2 Savings

Energy Savings

An energy demand assessment has been undertaken to demonstrate that passive design and energy efficiency measures will help to reduce energy demand substantially. Energy efficiency and passive design will be utilised in order to reduce CO_2 emissions before the incorporation of CHP.

*A **centralised Combined Heat and Power plant*** (CHP) is being proposed to serve the site. Centralised efficient gas boilers will provide the top-up and back-up capacity. The system will be designed to allow connectivity to adjacent properties outside of the development. This is expected to deliver a significant CO_2 reduction on regulated energy uses.

Sustainability measures
Among the key sustainability measures which have been incorporated into the design, and the key performance levels targeted, the following should be noted:

A ***construction waste management strategy*** will be implemented in order to limit construction waste sent to landfill. A target of 50% by weight or by volume of non-hazardous construction waste will be diverted from landfill in accordance with Code requirements.

The development will include ***water saving measures*** including efficient water installations. The water consumption for each of the apartments will be ≤ 105 litres per person per day.

Materials used in the development will be ***responsibly and sustainably sourced*** and recycled where feasible, and will be chosen with focus on achieving a low overall environmental impact.

Public transport and cycling will be promoted to and from the development. The site shall include bicycle parking facilities for the building residents.

Users of the building will have a ***Building User Guide*** to help them use the building in the most energy-efficient way.

The main contractor will conform to the ***Considerate Contractors Scheme*** and aspire to achieving a best practice score of no less than 32.

The project will adhere to the principles of ***Secured by Design, where feasible***.

2.0 Introduction

The Proposed Development comprises of residential areas and commercial space at ground floor located in the London Borough of Camden, situated on Euston Road.

The proposal includes ambitious sustainability targets to reduce the development's environmental impact through design, during construction, and sustainable operation. The following targets are proposed which demonstrate high levels of sustainability:

- To achieve the minimum requirements for **Code for Sustainable Homes Level 4** (minimum target score of 68%) for the new build residential, with aspirations to improve on the minimum requirements where possible
- BREEAM Domestic Refurbishment Excellent for the conversion of the existing parts of the building to residential
- BREEAM New Construction Very Good for the commercial
- Approximately ***25% CO_2 improvement on 2010 Building Regulations***, achieved through a combination of passive design, energy efficiency, and Low and Zero Carbon technologies.

The Proposed Development is connected by a number of bus routes and approximately 0.1 miles west of the Great Portland Street Underground Station.

This report describes how the Euston Road development will implement sustainable measures. The report takes a holistic approach to sustainability, addressing matters from management to energy and water savings, sourcing of materials, waste management, transport and more. The purpose of this statement is to promote sustainable development and to integrate the principles of sustainability into the preparation and adoption of plans.

This sustainability strategy responds specifically to:

- UK national sustainable development policy;
- The London Plan and the Supplementary Planning Guidance on Sustainable Design and Construction;
- The requirements of the London Borough of Camden Core Strategy.

3.0 Sustainability Strategy

A demonstration of the commitment to sustainable design and construction is the target of achieving Code for Sustainable Homes Level 4, BREEAM Excellent certification for the residential and BREEAM Very Good for the commercial areas respectively, with aspirations to improve on the minimum requirements where possible. The current pre-assessment scores are achievable based on current design proposals.

The following is a summary of the key sustainability points derived from the Code for Sustainable Homes and BREEAM Pre-Assessments.

Summary of Key Sustainability Points

Energy

The design proposals for the development will demonstrate energy efficiency, which will assist in reducing the overall carbon emissions from the development.

A SAP assessment will be carried out on the newly constructed and existing dwelling and the refurbished dwelling to calculate the improvement achieved over a Part L 2010 compliant dwelling. This is to ensure that this exceeds 25% to maintain Code Level 4 and the improvement in the dwellings Energy Efficiency Rating (EER) as a result of the refurbishment to ensure this meets the required BREEAM Domestic Refurbishment Excellent standard.

An SBEM assessment will be used to calculate the reduction in carbon emissions over a PartL2A compliant model for the retail areas.

The following additional measures will be considered to provide occupants with opportunities to reduce their energy use or their impact on transport energy use:

- Energy efficient white goods
- Reduced energy means of drying clothes
- The provision of energy efficient lighting
- A device for occupants to monitor energy use
- Adequate and secure cycle storage facilities
- The necessary space and services to be able to work from home

Water Strategy

In order to follow the principles of water conservation a number of measures will be considered in order to reduce the demand for mains water including efficient appliances, taps, showers, etc. The strategy will follow the water hierarchy:

- Demand minimisation
- Efficient supply
- Potential for recycling

Materials and Other Resources

Consideration will be given to the materials that are to be used in the construction of the development in order to minimise impact on the environment and on building users. In particular, materials will be reviewed using the BRE "Green Guide to Specification", aiming to maximise the proportion of A-rated materials in the overall construction and all main elements will achieve a minimum of a D rating.

Material selection will:

- Source responsibly e.g. FSC certified timber
- Use local materials where feasible
- Use recycled/ reclaimed materials where appropriate
- Maximise recycled content as much as feasible
- Select non-toxic materials with low environmental impact

The specifications of the building furniture, paints and other finishing elements will also be considered in terms of the above.

Transport Strategy

The site benefits from good access to public transport. Secure, sheltered cycle parking will be provided for the building residents.

Pollution Strategy

The gas fired boilers being considered will be of the condensing type and will be highly efficient (with operating seasonal efficiencies up to 90%). The considered boilers will also be of the low NOx type so the emissions will be minimised.

Thermal insulation applied to pipework, building fabric etc. will aim to be manufactured from zero ozone depleting materials.

Further Measures

The main contractor will aspire to achieve a best practice score of 32 or higher under the Considerate Constructors Scheme. The contractor will furthermore monitor and set targets for energy usage, water usage and construction waste related to the site for the duration of the works.

The proposed development will facilitate principles of 'Secured by Design', where feasible.

A building user guide will be produced on completion to give details of operation and energy performance.

The apartments will achieve compliant daylighting levels in the living room (1.5%), dining room (1.5%) and home office (1.5%).

Airborne sound insulation and impact sound insulation values will be at least 5 dB higher than those given in Approved Document E of the Building Regulations.

The new development will not lead to an increase in surface water run-off; this principle will be followed as far as possible within the drainage design.

Refuse and Recycling

Construction site waste management

A strategy to monitor, sort and recycle construction waste on site will be prepared by the contractor. Construction site waste will be minimised, and waste will be diverted from landfill where feasible.

Operational waste

Waste storage areas are incorporated into the development. The waste storage area has been sized based on the different waste streams which will arise in the building from the apartments of the building.

The refuse areas are designed for easy access and carefully placed to result in short dragging distances within the building as well as from the storage room to outside collection. A dedicated area for recycled waste will be provided within the refuse storage.



3.1 Code for Sustainable Homes

Code for Sustainable Homes Pre-Assessment – New Build Residential

The Code for Sustainable Homes is being used as a benchmarking tool in the design of new residential developments. The aim of the Code for Sustainable Homes is to estimate the sustainability of buildings and to promote a programme of design improvement.

Code for Sustainable Homes Pre-assessment Summary

The targeted score is **69.92% equivalent to Code Level 4 rating** with a margin of 1.92% above the minimum required score of 68%.

Table 3.2 is a summary of the key credits targeted for the Euston Road development.

Please refer to Appendix A for a full overview of the Cambridge House, Euston Road Code for Sustainable Homes pre-assessment.

Energy	– Exemplar CO_2 performance will be achieved through passive design, a very efficient fabric and very energy efficient services; – Low or zero carbon (LZC) technologies (i.e. CHP) will achieve at least a 15% reduction in the buildings' CO_2 emissions; – Cycle storage will be provided; – Suitable space to be provided along with adequate ventilation, power and data sockets to provide a home office; – All white goods will be provided within the dwellings and EU Energy Labelling Scheme details will be provided within the home user guide;
Water	– Internal water consumption will be limited to no more than 105 litres per person per day to comply with the minimum standard requirement for achievement of a Code Level 4.
Materials	– Materials will be responsibly sourced; – Timber products will require FSC or similar certification, and for non-timber products that the materials have EMS certification at either the process stage or the process and extraction phases.
Surface Water Run-off	– The peak rate of run-off into watercourses will be no greater for the developed site than it was for the pre-developed site and the additional predicted volume of rainwater discharge caused by the new development will be entirely reduced as far as possible in accordance with the Code criteria.
Waste	– Adequate storage for recyclable materials will be provided to ensure that all credits are achieved. A local authority collection scheme is in place which does not require recyclable waste to be sorted prior to collection; – At least 50% of non-hazardous construction waste will be diverted from landfill through either re-use on site or other sites, salvage/reclaim for re-use, return to the supplier via a 'take-back' scheme, compost, recovery and recycling using and approved waste management contractor.
Pollution	– All insulation materials within the development will have a GWP of no greater than 5; – A suitable low NOx emission heating plant will be specified <70mg/kWh

Health and Wellbeing	– Compliant daylight factors are anticipated in the living room, dining room and home office space; – Acoustic performance will be in compliance with a 5dB improvement over Part E; – Private external space will be provided for each flat.
Management	– A compliant home user guide will be provided to the dwelling; – The contractor will be required to achieve a score of at least 32 under the Considerate Constructors Scheme; – It is anticipated that Secured by Design compliance will be achieved.
Ecology	– A minor enhancement (between +3 and +9) will be achieved in the species numbers in the development site; – The development site is anticipated to have a low ecological value; – A suitably qualified ecologist will be appointed to recommend appropriate ecological features that will positively enhance the ecology of the site. The ecologist's key recommendations and 30% of additional recommendations will be adopted.

3.2 BREEAM Domestic Refurbishment 2012

The following section summarises the mandatory credits and tradable credit targets and highlights the credits which need to be targeted at early design stage to ensure the BREEAM Domestic Refurbishment level is reached for the conversion of the existing elements to residential.

MANDATORY CREDITS

ENE02 – Energy Efficiency Rating Post Refurbishment

Mandatory Requirement

2 credits are required within this section which equates to an improvement in the EPC rating of at least 17 points as compared to the existing building.

An EPC assessment of the existing building will be required for the design stage assessment.

WAT01 – Indoor Water Use

Mandatory Requirement

Internal water usage must be in the range of 129-139l/person/day.

HEA05 – Ventilation

Mandatory Requirement

Compliance with Part F throughout the dwelling.

HEA06 - Safety

Mandatory Requirement

Installation of carbon monoxide and fire sensors.

POL03 – Flooding

Mandatory Requirement

The development is anticipated to be in a low flood risk area and therefore will be compliant with the minimum standards. Confirmation to this effect will be required as part of the design stage assessment.

MAT02 – Materials

Mandatory Requirement

All timber must be FSC certified.

BREEAM Pre-assessment Summary

The targeted score is **71.61% equivalent to an 'Excellent' rating** with a margin of 1.61% above the minimum required score of 70%.

3.3 BREEAM New Construction (2011)

BREEAM Pre-Assessment – Commercial

BREEAM is being used as a benchmarking tool in the design of new commercial developments. The aim of BREEAM is to estimate the sustainability of buildings and to promote a programme of design improvement.

BREEAM Pre-assessment Summary

The targeted score is **63.05% equivalent to an 'Very Good' rating** with a margin of 8.05% above the minimum required score of 55%.

4.0 Conclusion

The proposals summarised within this report promote a design centred on a low energy and sustainable development with ambitious carbon performance, and Code for Sustainable Homes and BREEAM targets.

Environmental Assessment Method

The Proposed Development has been designed with the aim of achieving a Code for Sustainable Homes Level 4 for the residential new build accommodation, a BREEAM Domestic Refurbishment Excellent rating for the conversion of the existing elements to residential and a BREEAM Very Good rating for the commercial areas, with aspirations to improve on the minimum requirements for these ratings.

Energy & CO_2 Savings

An energy demand assessment has been undertaken to demonstrate that passive design and energy efficiency measures will help to reduce energy demand substantially. Energy efficiency and passive design will be utilised in order to reduce CO_2 emissions before the incorporation of CHP.

*A **centralised Combined Heat and Power plant*** (CHP) is being proposed to serve the site. Centralised efficient gas boilers will provide the top-up and back-up capacity. The system will be designed to allow future connectivity to adjacent properties outside of the development.

Sustainability measures
Among the key sustainability measures which have been incorporated into the design, and the key performance levels targeted, the following should be noted:

Materials used in the development will be ***responsibly and sustainably sourced*** and recycled where feasible, and will be chosen with focus on achieving a low overall environmental impact

The development will comprise **water saving measures** including the specification of highly efficient water installations. Each of the residential dwellings will meet the Code for Sustainable Homes mandatory water requirement of 105 litres per person/per day.

Facilitating **recycling of operational waste** has been a key component of the design: Waste storage areas are incorporated in the layouts.

A strategy to monitor, sort and recycle **construction waste** on site will be prepared by the contractor. Construction site waste will be minimised, and waste will be diverted from landfill where feasible.

Public transport and cycling will be promoted to and from the development. The site shall include bicycle parking facilities for the building residents.

Users of the buildings will have a ***Building User Guide*** to help them use the building in the most energy-efficient way.

The main contractor will conform to the ***Considerate Contractors Scheme*** and achieve a best practice score of no less than 32.

The project will adhere to the principles of ***Secured by Design,*** where feasible.

Appendix A – Code for Sustainable Homes Pre-Assessment

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Results

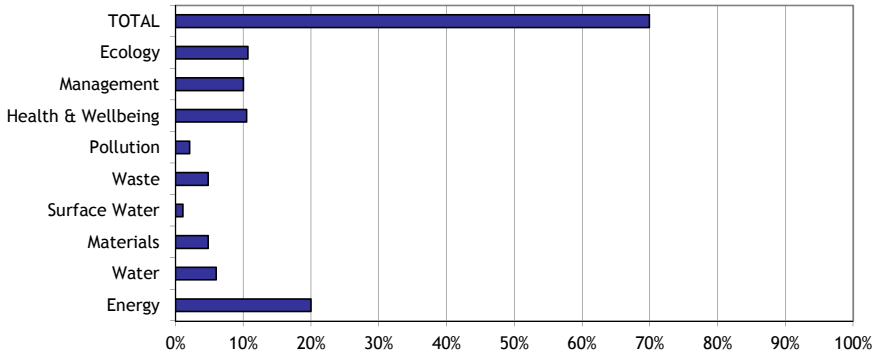
Development Name:	Cambridge House, Euston Road
Dwelling Description:	4th to 6th Floor Apartments
Name of Company:	Hoare Lea
Code Assessor's Name:	Katharine Rhodes
Company Address:	Enterprise House, Old School Closer, Ferndown, Bournemouth, BH22 9UN.
Notes/Comments:	Indicative pre-assessment based on a 2 bed property. A minimum score of 68 is required for Code Level 4.

PREDICTED RATING - CODE LEVEL: 4

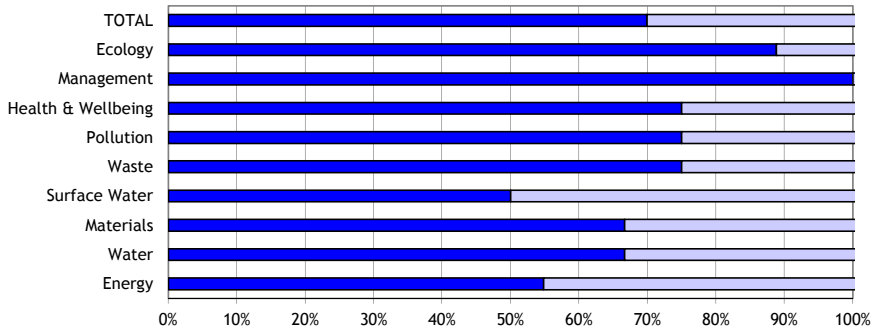
Mandatory Requirements: **All Levels**

% Points:	**69.92%**	**- Code Level: 4**
Breakdown:	**Energy**	**- Code Level: 4**
	Water	**- Code Level: 4**

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



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



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

CATEGORY 1 ENERGY	Overall Level: 4	Overall Score	69.92	
% of Section Credits Predicted:	54.83	Credits	Level	Assumptions Made
Contribution to Overall % Score:	19.96 points	17.0 of 31 Credits	Level 4	

Ene 1 Dwelling Emission Rate	Credits are awarded based on the percentage improvement of the Dwelling Emission Rate (DER) over the Target Emission Rate (TER) as calculated using SAP 2009. Minimum standards for each Code level apply. The Code energy calculator can be used to calculate a predicted score. Enter the predicted score What is the predicted number of credits? 3.0 OR Are zero net CO_2 emissions achieved? ☐	3.0 of 10 Credits	Level 4	The dwellings are required to achieve a minimum rating of 4**** therefore the mandatory requirements must be met of a 25% improvement in DER. This will be outlined within the Energy Strategy.
Ene 2 Fabric Energy Efficiency	Credits are awarded based on the Fabric Energy Efficiency (kWh/m^2/yr) of the dwelling. Minimum standards apply at Code levels 5 and 6. The Code energy calculator can be used to calculate a predicted score. Enter the predicted score Apartments, Mid-terrace ◉ OR End terrace, Semi and Detached ○ OR Staggered Mid terrace ○ What is the predicted number of credits? 3.0	3.0 of 9 Credits	No Level	This will be outlined within the Energy Strategy.
Ene 3 Energy Display Devices	Credits are awarded where a correctly specified Energy Display Device is installed monitoring electricity and/or primary heating fuel consumption. Select whether the EDD monitors electricity and/or fuel None Specified ○ Primary Heating only ○ OR Electricity only ○ OR Electricity and primary heating fuel ◉	2 of 2 Credits	-	It is anticipated that electricity and primary heating fuel monitoring will be provided.

Issue		Credits	Level	Assumptions Made
Ene 4 Drying Space	One credit is awarded for the provision of either internal or external secure drying space with posts and footings or fixings capable of holding 4m+ of drying line for 1-2 bed dwellings and 6m+ for dwellings with 3 bedrooms or greater. Will drying space meeting the criteria be provided? Yes ◉ OR No ○	1 of 1 Credits	-	It is anticipated that drying space will be provided within the proposed development. For 1 and 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 of external) must be secure.
Ene 5 Energy Labelled White Goods	Credits are awarded where each dwelling is provided with either information about the EU Energy Labelling Scheme, White Goods with ratings ranging from A+ to B or a combination of the previous according to the technical guide. Select the appropriate option below EU Energy labelling information only ☐ A+ rated appliances ☐ A+, A and B rated appliances ☐ Combination of compliant rated white goods with EU Energy Labelling Scheme ☑	2 of 2 Credits	-	It is anticipated that all white goods will be provided within the dwellings and EU Energy Labelling Scheme details will be provided within the home user guide. - Fridges and freezers or fridge-freezers must be A+ Rated; Washing machines and dishwashers must be A Rated; - Tumble dryers or washer dryers must be B Rated.
Ene 6 External Lighting	Credits are awarded based on the provision of space lighting* with dedicated energy efficient fittings and security lighting fittings with appropriate control gear.. Space Lighting None provided ○ OR Non Code compliant lighting ○ OR Code compliant lighting ◉ Security Lighting None provided ○ OR Non Code compliant lighting ○ OR Code compliant lighting and controls ◉ Dual lamp luminaires Compliant with both above criteria ☐ * Statutory safety lighting is not covered by this requirement	2 of 2 Credits	-	External lighting will be specified to be dedicated energy efficient fittings. Security lighting will be designed for energy efficiency and is adequately controlled such that: - All burglar security lights have a maximum wattage of 150 W; - Movement detecting control devices (PIR); - Daylight cut-off sensors.

Issue		Credits	Level	Assumptions Made
Ene 7 Low or Zero Carbon Technologies	Credits are awarded where there is a 10% or 15% reduction in CO_2 emissions resulting from the use of low or zero carbon technologies. Select % contribution made by low or zero carbon technologies Less than 10% of demand ○ OR 10% of demand or greater ○ OR 15% of demand or greater ◉	2 of 2 Credits	-	A reduction of more than 15% in CO2 emission resulting from use of low or zero carbon technologies is anticipated. This will be outlined within the Energy Strategy.
Ene 8 Cycle Storage	Credits are awarded where adequate, safe, secure and weather proof cycle storage is provided according to the Code requirements. Fill in the development details below Number of bedrooms: 3 Number of cycles stored per dwelling* 1.0 * if you have storage for 1 cycle per two dwellings insert 0.5 in number of cycles stored per dwelling	1 of 2 Credits	-	A compliant number of cycle spaces in a weatherproof secure location to be provided to achieve 2 Credits. For studios or 1 bedroom dwellings - storage for 1 cycle per dwelling; For 2-3 bedroom dwellings - storage for 2 cycles per dwelling; For 4 bedrooms and above - storage for 4 cycles per dwelling.
Ene 9 Home Office	A credit is awarded for the provision of a home office. The location, space and services provided must meet the Code requirements. Will there be provision for a Home Office? Yes ◉ OR No ○	1 of 1 Credits	-	Suitable space to be provided along with adequate ventilation, power and data sockets to provide a home office. The space dedicated for use as a home office must achieve an average daylight factor of 1.5%.

CATEGORY 2 WATER	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted: 66.66		Credits	Level	
Contribution to Overall Score: 6.00 points		4 of 6 Credits	Level 4	
Wat 1 Indoor Water Use	Credits are awarded based on the predicted average household water consumption, calculated using the Code Water Calculator Tool. Minimum standards for each code level apply. Select the predicted water use / Mandatory Requirement greater than 120 litres/ person/ day ○ OR ≤ less than 120 litres/ person/ day ○ OR ≤ less than 110 litres/ person/ day ○ OR ≤ less than 105 litres/ person/ day ◉ OR ≤ less than 90 litres/ person/ day ○ OR ≤ less than 80 litres/ person/ day ○	3 of 5 Credits	Level 3 AND Level 4	Internal water consumption will be limited to no more than 105 litres per person per day to comply with the minimum standard requirement for achievement of a Code Level 4.
Wat 2 External Water Use	A credit is awarded where a compliant system is specified for collecting rainwater for external irrigation purposes. Where no outdoor space is provided the credit can be achieved by default. Select the scenario that applies No internal or communal outdoor space ○ OR Outdoor space with collection system ◉ OR Outdoor space without collection system ○	1 of 1 Credits	-	Compliant sytem to be specified for collecting rainwater for external irrigation purposes. If no individual or communal garden spaces are specified or if only balconies are provided, the credit can be awarded by default.

CATEGORY 3 MATERIALS	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted: 66.66		Credits	Level	
Contribution to Overall Score: 4.80 points		16 of 24 Credits	All Levels	
Mat 1 Environmental Impact of Materials	Mandatory Requirement: At least three of the five key building elements must achieve a Green Guide 2008 Rating of A+ to D. Tradable Credits: Points are awarded on a scale based on the Green Guide Rating of the specifications. The Code Materials Calculator can be used to predict a potential score. Mandatory Requirement Will the mandatory requirement be met? ☑ Enter the predicted score What is the predicted number of credits? 10	10 of 15 Credits	All Levels	The mandatory requirement will be met along with elements having Green Guide 2008 ratings of average A to achieve additional tradable credits. The key elements of building elements are: Roof, External Walls, Internal Walls (including separating walls, Upper and Ground Floors (including separating floors), Windows.
Mat 2 Responsible Sourcing of Materials - Basic Building Elements	Credits are awarded where materials used in the basic building elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Enter the predicted Score What is the predicted number of credits? 4	4 of 6 Credits	-	The basic building elements are: frame, ground floor, upper floors, roof, external walls, internal walls, foundation/substructure, and staircase. A minimum of 5 elements must be assessed. A minimum 80% of an assessed element of each element must comply with Tiers 1 to 4. Additionally, 100% of any timber in these elements must be legally sourced.
Mat 3 Responsible Sourcing of Materials - Finishing Elements	Credits are awarded where materials used in the finishing elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Enter the predicted Score What is the predicted number of credits? 2	2 of 3 Credits	-	The finishing elements are: stair, window, external and internal door, skirting, panelling, furniture, fascias. A minimum of 5 elements must be assessed. A minimum 80% of an assessed element of each element must comply with Tiers 1 to 4. Additionally, 100% of any timber in these elements must be legally sourced.

CATEGORY 4 SURFACE WATER RUN-OFF	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted:	50.00%	Credits	Level	
Contribution to Overall Score:	1.10 points	2 of 4 Credits	All Levels	
Sur 1 Management of Surface Water Run-off from developments	Mandatory Requirement: Peak rate of run-off into watercourses is no greater for the developed site than it was for the pre-development site and that the additional predicted volume of rainwater discharge caused by the new development is entirely reduced as far as possible in accordance with the assessment criteria. Desiging the drainage system to be able to cope with local drainage system failure. Tradable Credits: Where SUDS are used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters. Mandatory Requirement Will the mandatory requirement be met? ☑ Select the appropriate option No SUDS ☐ No runoff into watercourses for the first 5 mm of rainfall ☐ Runoff from hard surfaces will receive an appropriate level of treatment ☐	0 of 2 Credits	All Levels	The mandatory requirements will be met.
Sur 2 Flood Risk	Credits are awarded where developments are located in areas of low flood risk or where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria in the technical guide. Select the annual probability of flooding (from PPS25*) Zone 1 - Low ◉ OR Zone 2 - Medium ○ OR Zone 3 - High ○ Select the apropriate option(s) Low risk of flooding from FRA** ☑ All measures of protection are demonstrated in FRA ☐ Ground floor level and access routes are 600 mm above design flood level ☐ * Planning Policy Statement 25 - Planning and Flood Risk ** FRA - Flood Risk Assessment	2 of 2 Credits	-	It has been assumed that the development is situated in Zones 1 - low annual probability of flooding. To be confirmed by Flood Risk Assessment

CATEGORY 5 WASTE	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted:	75.00%	Credits	Level	
Contribution to Overall Score:	4.80 points	6 of 8 Credits	All Levels	

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

Issue		Credits	Level	Assumptions Made
Was 2 Construction Site Waste Management	A credit is awarded where a compliant SWMP is provided with targets and procedures to minimise construction waste. Credits are available where the SWMP include procedures and commitments for diverting either 50% or 85% of waste generated from landfill. SWMP details Does the SWMP include: + No SWMP ○ + SWMP with targets and procedures to minimise waste? ○ + SWMP with procedures to divert 50% of waste ◉ + SWMP with procedures to divert 85% of waste ○	2 of 3 Credits		Compliant Site Waste Management Plan that contains target benchmarks for resource efficiency set in accordance with best practice, procedures and commitments to minimize non-hazardous construction waste, procedures for minimising hazardous waste, monitoring, measuring and reporting of hazardous and non-hazardous site waste according to the defined waste groups. At least 50% of non-hazardous construction waste has been diverted from landfill through either re-use on site or other sites, salvage/reclaim for re-use, return to the supplier via a 'take-back' scheme, compost, recovery and recycling using and approved waste management contractor.
Was 3 Composting	A credit is awarded where individual home composting facilities are provided, or where a community/ communal composting service, either run by the Local Authority or overseen by a management plan is in operation. Select the facilities available No composting facilities ◉ Individual composting facilities ○ OR Communal/ community composting*? ○ Local Authority ☐ OR Private with management plan ☐ * including if an automated waste collection system is in place	0 of 1 Credit	-	This credit is not sought.

CATEGORY 6 POLLUTION	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted: 75.00%		Credits	Level	
Contribution to Overall Score: 2.10 points		3 of 4 Credits	All Levels	
Pol 1 Global Warming Potential (GWP) of Insulants	A credit is awarded where all insulating materials only use substances (in manufacture AND installation) that have a GWP of less than 5. Select the most appropriate option All insulants have a GWP less than 5 (●) OR Some insulants have a GWP of less than 5 ( ) OR No insulants have a GWP of less than 5 ( )	1 of 1 Credits	-	All insulation materials within the development will have a GWP of no greater than 5.
Pol 2 NOx Emissions	Credits are awarded on the basis of NOx emissions arising from the operation of the space and water heating system within the dwelling. Select the most appropriate option Greater than 100 mg/kWh ( ) OR Less than 100 mg/kWh ( ) OR Less than 70 mg/kWh (●) OR Less than 40 mg/kWh ( ) OR Class 4 boiler ( ) OR Class 5 boiler ( ) OR All space and hot water energy requirements are met by systems who do not produce NOx emissions ( )	2 of 3 Credits	-	A suitable low NOx emission heating plant will be specified.

CATEGORY 7 HEALTH & WELLBEING	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted: 75.00%		Credits	Level	
Contribution to Overall Score: 10.50 points		9 of 12 Credits	No level	
Hea 1 Daylighting	Credits are awarded for ensuring key rooms in the dwelling have high daylight factors (DF) and a view of the sky. Select the compliant areas Room Kitchen: Avg DF of at least 2% ☐ Living Room*: Avg DF of at least 1.5% ☑ Dining Room*: Avg DF of at least 1.5% ☑ Study*: Avg DF of at least 1.5% ☑ 80% of working plane in all above rooms receive direct light from the sky? ☐ Any room used for Ene 9 Home Office must also achieve a min DF of 1.5%.	1 of 3 Credits	-	The compliant daylight factors are anticipated in the living room, dining room, and home office space.
Hea 2 Sound Insulation	Credits are awarded where performance standards exceed those required in Building Regulations Part E. This can be demonstrated by carrying out pre-completion testing or through the use of Robust Details Limited. Select a type of property Detached Property ○ Attached Properties: - Separating walls and floors only exist between non habitable spaces ○ - Separating walls and floors exist between habitable spaces ◉ Select a performance standard Performance standard not sought ○ Airborne: 3db higher; Impact: 3dB lower ○ OR Airborne: 5db higher; Impact: 5dB lower ◉ OR Airborne: 8db higher; Impact: 8dB lower ○	3 of 4 Credits	-	It is anticipated that the acoustic performance will be in compliance with a 5dB improvement over Part E.

Issue		Credits	Level	Assumptions Made
Hea 3 Private Space	A credit is awarded for the provision of an outdoor space that is at least partially private. The space must allow easy access to all occupants. Will a private/ semi-private space be provided? Yes, private/semi-private space will be provided ◉ OR No private/semi-private space ○	1 of 1 Credits	-	It is anticipated that private space will be provided for each dwelling. The private outdoor space could be balconies, roof terraces or patios. The private space is to be used only by occupants of designated dwellings. A minimum space requirement for private space is 1.5 m2 per bedroom.
Hea 4 Lifetime Homes	Mandatory Requirement: Lifetime Homes is mandatory when a dwelling is to achieve Code Level 6. Tradable credits: Credits are awarded where the developer has implemented all of the principles of the Lifetime Homes scheme. Mandatory Requirement Dwelling to achieve Code Level 6? ☐ Lifetime Homes Compliance All Lifetime Homes criteria will be met ◉ OR Exemption from LTH criteria 2/3 applied ○ Credit not sought ○	4 of 4 Credits	No level	Compliance with the requirements for Lifetime Homes is anticipated. To be confirmed.

CATEGORY 8 MANAGEMENT	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted:	100.00%	Credits	Level	
Contribution to Overall Score:	10.00 points	9 of 9 Credits	All Levels	
Man 1 Home User Guide	Credits are awarded where a simple guide is provided to each dwelling covering information relevant to the 'non-technical' home occupier, in accordance with the Code requirements. Tick the topics covered by the Home User Guide Operational Issues? ☑ Site and Surroundings? ☑ Is available in alternative formats? ☑	3 of 3 Credits	-	A compliant home user guide will be provided to the dwelling. The Home User Guide is a guide to occupants of the dwelling containing necessary details about the everyday use of the home in a form that is easy to users to understand. The Home User Guide should be provided in an appropriate format for users. This might include translation into foreign languages, braille, large print or audio cassette/CD.
Man 2 Considerate Constructors Scheme	Credits are awarded where there is a commitment to comply with best practice site management principles using either the Considerate Constructors Scheme or an alternative locally/ nationally recognised scheme. Select the appropriate scheme and score No scheme used ○ Considerate Constructors OR Best Practice: Score between 24 and 31.5 ○ OR Best Practice+: Score between 32 and 40 ◉ Alternative Scheme* OR Mandatory + 50% optional requirements ○ OR Mandatory + 80% optional requirements ○ * In the first instance, contact a Code Service Provider if you are considering to use an alternative scheme.	2 of 2 Credits	-	The contractor will be required to achieve a score of at least 32 under the Considerate Constructors Scheme. The CCS is a UK certification scheme that encourages the considerate management of construction sites. The scheme is operated by the Construction Confederation and points are awarded in increments of 0.5 over the following eight sections: Considerate; Environmentally Aware; site Cleanliness; Good Neighbour; Respectful; Safe; Responsible; Accountable.
Man 3 Construction Site Impacts	Credits are awarded where there is a commitment and strategy to operate site management procedures on site as following: Tick the impacts that will be addressed Monitor, report and set targets, where applicable, for: - CO_2/ energy use from site activities ☐ - CO_2/ energy use from site related transport ☐ - water consumption from site activities ☑ Adopt best practice policies in respect of: - air (dust) pollution from site activities ☑ - water (ground and surface) pollution on site ☑ 80% of site timber is reclaimed, re-used or responsibly sourced ☑	2 of 2 Credits	-	The contractor will be required to ensure the relevant targets and monitoring is undertaken during construction.

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

CATEGORY 9 ECOLOGY	Overall Level: 4	Overall Score	69.92	Assumptions Made
% of Section Credits Predicted: 88.00%		Credits	Level	
Contribution to Overall Score: 10.66 points		8 of 9 Credits	All Levels	
Eco 1 Ecological Value of Site	One credit is awarded for developing land of inherently low value. Select the appropriate option Credit not sought ○ OR Land has ecological value ○ OR Land has low/ insignificant ecological value* ◉ * Low ecological value is determined either a) by using Checklist Eco 1 across the whole development site; or b) where an suitably qualified ecologist is appointed and can confirm or c) produces an independent ecological report of the site, that the construction zone is of low/ insignificant value; AND the rest of the development site will remain undisturbed by the works.	1 of 1 Credits	-	The development site is anticipated to have a low ecological value.
Eco 2 Ecological Enhancement	A credit is awarded where there is a commitment to enhance the ecological value of the development site. Tick the appropriate boxes Will a *Suitably Qualified Ecologist* be appointed to recommend appropriate ecological features? ☑ AND Will all key recommendations be adopted? ☑ AND 30% of other recommendations be adopted? ☑	1 of 1 Credits	-	A suitably qualified ecologist will need to be appointed to recommend appropriate ecological features that will positively enhance the ecology of the site. The ecologist's key recommendations and 30% of additional recommendations must be adopted.
Eco 3 Protection of Ecological Features	A credit is awarded where there is a commitment to maintain and adequately protect features of ecological value. Type and protection of existing features Site with features of ecological value? ○ OR Site of low ecological value (as Eco 1)? ◉ AND All* existing features potentially affected by site works are maintained and adequately protected? ☐ *If a suitably qualified ecologist has confirmed that a feature can be removed due to insignificant ecological value or poor health conditions, as long all the rest have been protected, then this box can be ticked.	1 of 1 Credits	-	This credit can be achieved by default due to the low ecological value of the development site.

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

Appendix B – BREEAM Domestic Refurbishment Pre-Assessment

BREEAM Domestic Refurbishment 2012 Pre-Assessment Estimator v0.4

This assessment and indicative BREEAM rating is not a formal certified BREEAM assessment or rating and must not be communicated as such. The score presented is indicative of a dwelling's potential performance and is based on a simplified pre-formal BREEAM assessment and unverified commitments given at an early stage in the design process.

Building name	Cambridge House, Euston Road
Indicative building score (%)	71.61%
Indicative BREEAM rating	BREEAM Excellent
Indicative Minimum Standards level achieved	BREEAM Excellent

Management | Health & Wellbeing | Energy | Water | Materials | Waste | Pollution

INNOVATION

Section Weighting: 10% | Indicative Section Score 1.00%

Comments

MANAGEMENT

Section Weighting: 12% | Indicative Section Score 10.91%

Man 01 Home Users Guide

No. of BREEAM credits available	3	Available contribution to overall score	3.27%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where a Home Users Guide be provided to all dwellings, covering all issues set out in the 'Users Guide Contents list', three credits may be awarded

Indicative Credits Achieved
3

Comments

Provision of a home user guide is anticipated in all cases and therefore the credit is assumed to be achievable. The BREEAM guidance document contains full details of ther equired contents.

Man 02 Responsible Construction Practices

No. of BREEAM credits available	2	Available contribution to overall score	2.18%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Where a compliant considerate construction scheme will be used, credits are awarded depending the score achieved as outlined below:

Indicative Credits Achieved
1

Large Scale - project with more than 5 units

	One Credit	Two Credits
Considerate Constructors Scheme	Score of 24 - 31.5	Score of 32 - 35.5
Alternative Compliant Scheme	Compliance	Beyond Compliance

Small Scale - project with 5 units or fewer

	One Credit	Two Credits
Considerate Constructors Scheme	24 - 31.5	32 - 35.5
Alternative Compliant Scheme	Compliance	Beyond Compliance
Checklist A-4	50% of the optional items	80% of the optional items

Exemplary Credit

Considerate Constructors Scheme	Score of >36
Alternative Compliant Scheme	Exemplary Level Compliance
Checklist A-4*	All Items (Optional & Mandatory)

* Small Scale Project Only

Indicative Innovation Credits Achieved
0

Comments

The Contractor will need to comply with the required score of greater than 32 - 35.5 under Considerate Constructors or equivalent scheme. There may be a potential to gain the Innovation credit (>36) - to be confirmed by the contractor.

Man 03 Construction Site Impacts

No. of BREEAM credits available	1	Available contribution to overall score	1.09%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where evidence demonstrate that site impacts will be monitored, as detailed below:

Indicative Credits Achieved
1

Requirements

	One Credit
Large Scale	Where there is evidence to demonstrate that **2 or more** of the sections in **Checklist A-5** are completed
Small Scale	Where there is evidence to demonstrate that **2 or more** of the sections in **Checklist A-6** are completed

Sections of Checklist	
Large Scale - Checklist A-5	**Small Scale - Checklist A-6**
Monitor, report and set targets for CO2 production of energy use arising from site activities	Set objectives for reducing CO2 production from energy use arising from site activities
Monitor, report and set targets for water consumption arising from site activities	Set objectives for reducing water use arising from site activities
A main contractor with an environmental materials policy	Main contractor environmental materials statement
A main contractor that operates an Environmental Management System	80% of site timber is reclaimed, re-used or responsibly sourced
80% of site timber is reclaimed, re-used or responsibly sourced	

Same definition of small and large scale as in Man 02

Comments

Achievement of two of the above sections is anticipated to be achievable by the contractor.

Man 04 Security

No. of BREEAM credits available	2	Available contribution to overall score	2.18%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the following requirements will be met:

Indicative Credits Achieved
2

Requirements

One Credit Secure windows and doors	External doors and accessible windows meet minimum standards and appropriately certified
Two Credits Secured by design	Principles and guidance of Secured by Design Section 2 are complied with
	A suitably qualified security consultant is consulted at the design stage and their recommendations are incorporated into the refurbishment

Comments

Consultation with a security consultant usually an officer from the local police force must be undertaken at design stage and their recommendations included into the scheme where reasonable.

Man 05 Protection and Enhancement of Ecological Features

No. of BREEAM credits available	1	Available contribution to overall score	1.09%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Where the following requirements will be met:

Indicative Credits Achieved
1

Requirements

One Credit Protecting Ecological Features	Site survey carried out to determine presence of ecological features
	Statutory Nature Conservation Organisation notified of protected species
	Features of ecological value protected during refurbishment works

Requirements

		Indicative Innovation Credits Achieved
Exemplary Credit Ecological enhancement	A suitably qualified ecologist recommends features to enhance ecology of the site	1
	adopts all general ecological recommendations	
	adopts 30% of additional recommendations	

Comments

An ecologist should be appointed in time to be able to undertake a pre-development site survey, their recommendations should be incorporated into the scheme in order to be able to achieve the innovation credit.

Man 06 Project Management			
No. of BREEAM credits available	2	Available contribution to overall score	2.18%
No. of BREEAM innovation credits	2	Minimum Standards applicable	No

Assessment Criteria

Where the following requirements will be met:

Indicative Credits Achieved
2

	Requirements
One Credit Project Roles and Responsibilities	Where all of the project team are involved in the project decision making
	Small Scale - the project manager assigns individual and shared responsibilities amongst the project team including all trades on site
	Large Scale - the project manager assigns individual and shared responsibilities across the following key design and refurbishment stages: i. Planning and Building control notification ii. Design iii. Refurbishment iv. Commissioning and handover v. Occupation

Small Scale projects: five units or fewer or less than £100k

Large Scale projects: more than five units or more than £100k

	Requirements
One Credit Handover and Aftercare	Handover meeting arranged
	2 or more of the following committed to: - A site inspection within 3 months of occupation - Conduct post occupancy interviews with building occupants or a survey via phone or posted information within 3 months of occupation - Longer term after care e.g. a helpline, nominated individual or other appropriate system to support building users for at least the first 12 months of occupation

Exemplary Credits

Indicative Credits Achieved

	Requirements
One Exemplary Credit Early Design Input	Where A BREEAM Accredited Professional has been appointed to oversee key stages within the project. OR Where a BREEAM Domestic Refurbishment Assessor has been appointed at an early stage of the project, prior to the production of a refurbishment specification

	Requirements
One Exemplary Credit Thermographic Surveying and Airtightness Testing	Where Thermographic surveying and Airtightness testing have been carried out at both pre and post refurbishment stages Where an improved air tightness target has been set at design stage and testing demonstrates that this has been achieved post refurbishment

Comments

There are many specific requirements for achievement of this credit but if the guidance is followed carefully at early design stage and onwards the credits can be secured at an early stage. The credits taken are for the Project Roles and Responsibilities and Aftercare sections. An additional guidance note has been issued to the design team to ensure compliance.

HEALTH & WELLBEING

Section Weighting: 17% | Indicative Section Score: 9.92%

Hea 01 Daylighting

No. of BREEAM credits available	2	Available contribution to overall score	2.83%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the refurbishment results in a neutral impact on daylighting or where minimum daylighting standards are met, up to two credits may be awarded as follows:

Indicative Credits Achieved
1

For Existing Dwellings and Change of Use Projects

First Credit Maintaining Good Daylighting	The refurbishment results in a neutral impact on the dwellings daylighting levels in the kitchen, living room, dining room and study

Where the property is being extended

First Credit Maintaining Good Daylighting	New spaces achieve minimum daylighting levels
	The extension does not reduce daylighting levels in the kitchen, living room, dining room or study of neighbouring properties

For All Properties

Second Credit Minimum Daylighting	The dwelling achieves minimum daylighting levels in the kitchen, living room, dining room and study

Comments

Daylighting requirements can often be onerous in refurbishments, 1 credit is anticiapted to be achievable but calculations will need to be undertaken to confirm this and there may be found to be more credits achieved.

Hea 02 Sound Insulation

No. of BREEAM credits available	4	Available contribution to overall score	5.67%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

To ensure the provision of acceptable sound insulation standards and so minimise the likelihood of noise complaints.

Indicative Credits Achieved
2

Properties where sound testing has been carried out:

Up to Four Credits	Four credits awarded according to the improvement over building regulations. See table in additional information in Technical Manual

Properties where sound testing is not feasible and not required by the appointed Building Control body

Two Credits	Where existing separating walls and floors are designed to meet the requirements of Building Regulations with compliant construction details
Up to Four Credits	Where a Suitably Qualified Acoustician (SQA) provides recommendations for the specification of all existing separating walls and floors
	SQA confirms in their professional opinion that they have the potential to meet or exceed the sound insulation credit requirements
	Where these recommendations are implemented
	See table in additional information in Technical Manual

Historic Buildings

Up to Four Credits	Where the dwelling is a Historic Building and sound testing results demonstrate existing separating walls and floor meet the Historic Building credit requirements
	See table in additional information in Technical Manual

Detached Properties

Four Credits	By Default

Properties with separating walls or floors only between non habitable rooms OR Testing not required by building control body

Four Credits	By Default

Comments

The acoustic consultant will need to confirm the level of credits that are achievable therefore only one has been assumed at this stage.

Hea 03 Volatile Organic Compounds

No. of BREEAM credits available	1	Available contribution to overall score	1.42%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the refurbishment avoids the use of VOCs with new products meeting the following requirements:

Indicative Credits Achieved
1

One Credit Avoiding the use of VOCs	Where all decorative paints and varnishes used in the refurbishment have met the requirement listed in table 5.4 in the Technical Manual
	Where at least five of the eight remaining product categories listed in table 5.4 have met the testing requirements and emission levels for Volatile Organic Compound (VOC) emissions against the relevant standards identified within table 5.4 in the Technical Manual
	Where five or less products are specified within the refurbishment, all must meet the requirements in order to achieve this credit.

Comments

Selection of relevant materials should be made with consideration of the VOC content.

Hea 04 Inclusive Design

No. of BREEAM credits available	2	Available contribution to overall score	2.83%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Where an access statement has been carried out using Checklist A-8 of the Technical Manual to optimise the accessibility of the home as follows:

Indicative Credits Achieved
1

	Checklist A-8 of the Technical Manual	
	Section 1	Section 2
One Credit Minimum Accessibility	Completed with Evidence	
Two Credits Advanced Accessibility	Completed with Evidence	Completed with Evidence

Exemplary Performance

Indicative Innovation Credits Achieved

One Credit	Where an access expert suitably qualified member of the design team has completed sections 1, 2 and 3 of Checklist A-8, access statement template with evidence provided of the measures implemented in the refurbishment

Comments

An additional guidance note has been issued to the design team to ensure compliance is achieved.

Hea 05 Ventilation

No. of BREEAM credits available	2	Available contribution to overall score	2.83%
No. of BREEAM innovation credits	0	Minimum Standards applicable	Yes

Assessment Criteria

Where the dwelling meets the following ventilation requirements:

Indicative Credits Achieved
1

One Credit Minimum Ventilation Requirements	A minimum level of background ventilation is provided (with trickle ventilators or other means of ventilation) for all habitable rooms, kitchens, utility rooms and bathrooms compliant with section 7, Building Regulations Approved Document Part F, 2010
	A minimum level of extract ventilation is provided in all wet rooms (e.g. kitchen, utility and bath-rooms), compliant with section 5, Building Regulations Approved Document Part F 2010.
	A minimum level of purge ventilation is provided in all habitable rooms and wet rooms, compliant with section 7, Building Regulations Approved Document Part F, 2010. It is an historic building and meets historic building requirements in CN4 of the technical manual

Two Credits Advanced Requirements	Ventilation is provided for the dwelling that meets the requirements of Section 5 of Building Regulations Part F in full
	Where the building is a historic building and meets the requirements for Historic Buildings in compliance note 4 of the technical manual

Comments

Compliance with the minimum standard is anticipated at this stage.

Hea 06 Safety			
No. of BREEAM credits available	1	Available contribution to overall score	1.42%
No. of BREEAM innovation credits	0	Minimum Standards applicable	Yes

Assessment Criteria

Where a fire and carbon monoxide (CO) detection and alarm system is specified as follows:

Indicative Credits Achieved
1

One Credit Fire and Carbon Monoxide (CO) Detection and Alarm Systems	Carbon Monoxide detector installed if dwelling is supplied with mains gas or other fossil fuel
	Where a compliant fire detection and fire alarm system is provided
	Mains supplied fire detection and alarm system if project involves re-wiring
	Battery operated fire detection and alarm system if no re-wiring is to take place

Comments

Compliance with this credit is anticipated.

ENERGY

Section Weighting: 43% | Indicative Section Score 31.88%

Ene 01 Improvement in Energy Efficiency Rating			
No. of BREEAM credits available	6	Available contribution to overall score	8.90%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the following targets are met for the improvement in Energy Efficiency Rating achieved as a result of refurbishment:

Indicative Credits Achieved
2.5

Improvement in EER	Credits
≥ 5	0.5
≥ 9	1
≥ 13	1.5
≥ 17	2
≥ 21	2.5
≥ 26	3
≥ 31	3.5
≥ 36	4
≥ 42	4.5
≥ 48	5
≥ 54	5.5
≥ 60	6

Comments

2 credits have been assumed at this stage. Full calculations will be required to confirm this, it may be possible that further credits are achievable.

Ene 02 Energy Efficiency Rating Post Refurbishment			
No. of BREEAM credits available	4	Available contribution to overall score	5.93%
No. of BREEAM innovation credits	2	Minimum Standards applicable	Yes

Assessment Criteria

Where the following Energy Efficiency Rating benchmarks will be met as a result of refurbishment:

Indicative Credits Achieved
4

EER post refurbishment	Credits	Minimum requirements
≥50	0.5	'Pass' level EER of 50
≥55	1	'Good' level EER of 58
≥60	1.5	
≥65	2	'Very Good level' EER of 65
≥70	2.5	'Excellent' level EER of 70
≥75	3	
≥80	3.5	'Outstanding' level EER of 81
≥85	4	

Exemplary	Credits
≥90	1
≥100	2

Indicative Innovation Credits Achieved

Comments

We have currently assumed the minimum standard for achievement of Very Good.

Ene 03 Primary energy demand

No. of BREEAM credits available	7	Available contribution to overall score	10.38%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the following Primary Energy Demand benchmarks will be met as a result of refurbishment:

Indicative Credits Achieved
7

Primary Energy Demand Post Refurbishment (kWh/m^2/year)	Credits
≤ 400	0.5
≤ 370	1
≤ 340	1.5
≤ 320	2
≤ 300	2.5
≤ 280	3
≤ 260	3.5
≤ 240	4
≤ 220	4.5
≤ 200	5
≤ 180	5.5
≤ 160	6
≤ 140	6.5
≤ 120	7

Comments

The minimum number of credits available have been assumed at this stage, once the final calculations are completed additional credits may be achievable.

Ene 04 Renewable Technologies

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the dwelling will meet the following % contribution from renewables and primary energy demand targets as a result of refurbishment

Indicative Credits Achieved
0

Dwelling Type	Primary Energy Demand	Percentage from Renewables	
		1 Credit	2 Credits
Detached	≤ 250 kWh/m^2/year	≥10%	≥20%
Semi-Detached		≥10%	≥20%
Bungalow		≥10%	≥20%
End of Terrace		≥10%	≥20%
Mid Terrace	≤ 220 kWh/m^2/year	≥10%	≥20%
Low Rise Flat		≥10%	≥20%
Mid Rise Flat		≥10%	≥15%
High Rise Flat		≥10%	≥15%

Comments

No credits have been assumed at this stage.

Ene 05 Energy Labelled White Goods

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where Energy Efficiency White goods are to be provided as follows:

Indicative Credits Achieved
2

First Credit

Appliance	Appliance provided	Appliance not to be provided
Fridges, Freezers and Fridge-Freezers	Energy Saving Trust Recommended appliances specified	EU Energy Efficiency Labelling Scheme Information Leaflet provided to all dwellings

Second Credit

Appliance	Appliance provided	Appliance not to be provided
Washing Machines and Dishwashers	Energy Saving Trust Recommended appliances specified	Second credit not achieved
Washer-Dryers and Tumble Dryers	Appliances specified with B Rating under EU Energy Efficiency Labelling Scheme	EU Energy Efficiency Labelling Scheme Information Leaflet provided to all dwellings

Comments

Compliant white goods are anticipated to be provided for each dwelling.

Ene 06 Drying Space

No. of BREEAM credits available	1	Available contribution to overall score	1.48%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where adequate, secure internal or external space with posts and footings or fixings is provided with the following:

Indicative Credits Achieved
1

1 Credit

Number of bedrooms	Drying line required
1-2	4m+
3+	6m+

Comments

Compliant drying space is anticipated to be provided in all dwellings, most commonly as a fixed retractable line above the bath.

Ene 07 Lighting

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where energy efficient internal and external lighting is provided as follows:

Indicative Credits Achieved
2

External Lighting - 1 Credit

Energy Efficient Space Lighting and Energy Efficient Security Lighting OR
Where Energy Efficient Space Lighting is provided ONLY

Internal Lighting - 1 Credit

Maximum average wattage across the total floor area of the dwelling of 9 watts/m2

Comments

Both credits are anticipated to be achievable.

Ene 08 Display Energy Devices

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Where consumption data is displayed to occupants by a compliant energy display device

Indicative Credits Achieved
2

Electricity usage data displayed	Primary Heating Fuel	
	Electricity	Other
Electricity usage data displayed	2 credits awarded	1 credit awarded
Primary Heating Fuel usage data displayed	N/A	1 credit awarded
Electricity & Primary Heating Fuel usage displayed	N/A	2 credits awarded

Exemplary Credits

		Indicative Innovation Credits Achieved
One credit Recording consumption data	Where any compliant Energy Display Device is capable of recording consumption data	

Comments

Compliant devices are anticipated to be provided.

Ene 09 Cycle Storage

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where individual or communal compliant cycle storage is provided as follows:

Indicative Credits Achieved
1

Dwelling Size	One Credit	Two Credits
Studios/ 1 bedroom	1 per two dwellings	1 per dwelling
2-3 bedrooms	1 per dwelling	2 per dwelling
4 bedrooms	2 per dwelling	4 per dwelling

Comments

Cycle storage compliant fpr two credits is anticipated to be feasible. Architect to confirm space allowance.

Ene 10 Home Office

No. of BREEAM credits available	1	Available contribution to overall score	1.48%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where sufficient space and services will be provided to allow occupants to set up a home office in a suitable room with adequate ventilation

Indicative Credits Achieved
0

Comments

This credit can be difficult to achieve in all units and therefore is not anticipated at this stage.

WATER

Section Weighting: 11% | Indicative Section Score 8.80%

Wat 01 Internal Water Use

No. of BREEAM credits available	3	Available contribution to overall score	6.60%
No. of BREEAM innovation credits	1	Minimum Standards applicable	Yes

Assessment Criteria

Where the dwellings water consumption meets the following consumption benchmarks, or where terminal fittings meet the following water consumption standards:

Indicative Credits Achieved
2

Calculated Water Consumption (litres/person/day)	Equivalent terminal fitting standards	Minimum Standard	Credits
>150	Typical baseline performance	N/A	0
140-150	All showers specified to 'Good' **OR** All taps and WC's to 'Good' **OR** Kitchen fittings specified to 'Excellent'	N/A	0.5
129-139	All showers specified to 'Excellent' **OR** All showers and bathroom taps to 'Good'	BREEAM Very Good	1
118-128	All bathroom and WC room fittings specified to 'Good' **OR** All bathroom fittings specified to 'Excellent'	N/A	1.5
107-117	All Bathroom and WC room fittings specified to 'Excellent' **OR** All Bathroom fittings Specified to 'Excellent' and WC room fitting specified to 'Good' **OR** All Bathroom fittings, kitchen and utility sittings specified to 'Good'	BREEAM Excellent	2
96-106	All kitchen, bathroom, utility room and WC room fittings specified to 'Good' **OR** All bathrooms, kitchens and utility rooms specified to 'Excellent'	N/A	2.5
<95	All bathroom fittings specified to 'Excellent' and WC room, kitchen and utility room fittings specified to 'Good'	BREEAM Outstanding	3

NOTE: 'Good' fittings are equivalent to good practice fittings with "Excellent" fittings equivalent to best practice fittings (see the technical manual for full details.

Exemplary Credit	If the water consumption is less than 80l/person/day

Indicative Innovation Credits Achieved

Comments

The minimum standard is anticipated at this stage, once final appliance specification is known this can be confirmed.
In order to achieve a Very Good rating one of the following two specifications will be necessary
Good refers to the following - showers <8l/min, taps 4.5l/min OR
Excellent refers to the following - showers 6l/min
All other appliances can be baseline - WC 6l, basin taps 12l/min, bath 200l, kitchen tap 12l/min

Wat 02 External Water Use

No. of BREEAM credits available	1	Available contribution to overall score	2.20%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the following requirements will be met:

Indicative Credits Achieved
1

Requirements:

One Credit	Where a compliant rainwater collection system for external/internal irrigation use has been provided to dwellings. **OR** Where dwellings have no individual or communal garden space.

Comments

The dwellings which have access to a terrace will need to be provided with 100l rainwater storage butt. In the following cases the credit can be awarded as there will only be minimal demand for external water use or no feasible location for a compliant rainwater collection system: a) dwellings with no individual or communal garden space; b) dwellings only have balconies provided; c) the existing down pipe is not in individual or communal garden space and it is unfeasible to relocate the down pipe; or d) there is no down pipe on the dwelling or no access to a down pipe and it is not feasible to relocation the down pipe.

Wat 03 Water Meter			
No. of BREEAM credits available	1	Available contribution to overall score	2.20%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where an appropriate water meter for measuring usage of mains potable water meter has been provided to dwelling(s), one credit may be awarded

Indicative Credits Achieved
1

Comments

A compliant water meter should be provided.

MATERIALS

Section Weighting: 8% | Indicative Section Score 3.56%

Mat 01 Environmental Impact of Materials			
No. of BREEAM credits available	25	Available contribution to overall score	4.44%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Up to 25 credits can be awarded, with credits calculated using the Mat 01 calculator tool. The table below shows the maximum number of credits available for each element:

Indicative Credits Achieved
10

Elements	Green Guide Rating credits available	Thermal performance credits available*
Roof	5	3
External walls	5	3.8
Internal walls (including separating walls)	5	-
Upper and Ground Floor	5	1.2
Windows	5	2

The full 25 credits represents all of the elements containing refurbished or existing materials that meet the Green Guide Rating of A+(6)

GG Rating	Points for existing / refurbished elements	Points for new elements
A+ (6)	5	
A+ (5)	4.6	
A+ (4)	4.2	
A+ (3)	3.8	
A+ (2)	3.4	
A+	3	3
A	2	2
B	1	1
C	0.5	0.5
D	0.25	0.25
E	0	0

Where the full 25 credits cannot be achieved the score can be 'topped up' with thermal performance credits. The full number of thermal performance credits for each element can be achieved when achieving the minimum U-values shown below.

Elements	Minimum U-Value (W/m2K)
Roof	0.11
External walls	0.15
Internal walls (including separating walls)	-
Upper and Ground Floor	0.15
Windows	1.4

Comments

Specification of all materials should be made with consideration of the green guide rating it will achieve. Once a proposed specification is known please issue for review to confirm available credits.

Mat 02 Responsible Sourcing of Materials

No. of BREEAM credits available	12	Available contribution to overall score	2.13%
No. of BREEAM innovation credits	0	Minimum Standards applicable	Yes

Assessment Criteria

Where new materials are responsibly sourced, up to 12 credits may be awarded where 80% of new materials for an element are responsibly sourced. The credits achieved are dependent on % of point achieved which is based upon the responsible sourcing tier level of each material sourced as detailed below:

Indicative Credits Achieved
6

Table 1

Tier level	Points
1	4
2	3.5
3	3
4	2.5
5	2
6	1.5
7	1
8	0

Table 2

BREEAM credits	% of available points achieved
12	≥54%
10	≥45%
8	≥36%
6	≥ 27%
4	≥ 18%
2	≥ 9%

Will all new timber used in the project be sourced in accordance with the UK Government's Timber Procurement Policy
Yes

Comments

Responsible sourcing only applies to the newly specified elements and therefore their suppliers should be checked to ensure that they have the required environmental certifications.

Mat 03 Insulation

No. of BREEAM credits available	8	Available contribution to overall score	1.42%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where any new insulation specified for use within external walls, ground floor, roof and buildings services meet the following requirements:

Indicative Credits Achieved
4

	Requirements
4 Credits	Where the Insulation Index for new insulation used in the buildings is ≥2
	Where Green Guide ratings are determined using the Green Guide to specification tool

	Requirements
4 Credits	Where ≥ 80% of the new thermal insulation used in the building elements is responsibly sourced.

Comments

The requirements for 4 credits are anticipated to be achievable at this stage.

WASTE	Section Weighting: 3%	Indicative Section Score	1.80%

Was 01 Household Waste			
No. of BREEAM credits available	2	Available contribution to overall score	1.20%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where compliant recycling and composting facilities are provided, up to two credits may be awarded as follows

Indicative Credits Achieved
1

First Credit - Recycling Facilities	
Scenario	**Internal recycling storage requirements**
Compliant collection scheme in place	3 internal recycling containers provided where recycling is not sorted post collection
	1 internal recycling container provided where recycling is sorted post collection
	Minimum 30 litre total capacity, no single container less than 7 litre capacity
	Dedicated position in accordance with compliance note 1
No compliant collection scheme in place No adequate external storage	3 internal recycling containers provided
	Minimum 60 litre total capacity
	Dedicated position in accordance with compliance note 1
No compliant collection scheme in place Adequate external storage provided	3 internal recycling containers provided
	Minimum 30 litre total capacity, no single container smaller than 7 litre capacity
	Dedicated position in accordance with compliance note 1

Second credit - Composting facilities	
With external space	**Without external space**
Where a composting service or facility is provided for green/garden waste	Where a composting service or facility is provided for kitchen waste
Where a composting service or facility is provided for kitchen waste	Where an interior container is provided for kitchen composting waste of at least
Where an interior container is provided for kitchen composting waste of at least 7 litres	

Comments

Compliant internal and external facilities are anticipated to be feasible within the scheme. Compliance note 1 states that the position must be in a dedicated, unobtrusive location in a cupboard in the kitchen, close to the non-recyclable waste and the containers must be a fixture of the dwelling in addition to the non-recyclable provision.

Was 02 Refurbishment Site Waste Management			
No. of BREEAM credits available	3	Available contribution to overall score	1.80%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Up to three credits are available depending on the site waste management plan to be implemented as follows

Indicative Credits Achieved
2

Projects up to £100k

		Indicative Innovation Credits Achieved
Three Credits	Where waste generated through the refurbishment process is managed in accordance with Checklist A-9	
Exemplary Credit	Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place	

Projects up to £300k

Three Credits	Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place
Exemplary Credit	Where a compliant Level 2; Site Waste Management Plan (SWMP) is in place
	Non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the resource efficiency benchmark
	The percentage of non-hazardous construction waste and demolition waste generated by the project has been diverted from landfill and meets or exceeds the refurbishment & demolition waste diversion benchmarks

Projects over £300k

First Credit Management Plan	Where a compliant Level 2; Site Waste Management Plan (SWMP) is in place
Second Credit Good Practice Waste Benchmarks	First credit achieved
	Non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the resource efficiency benchmark
	Amount of waste generated against £100,000 of project value is recorded in the SWMP
	Pre-refurbishment audit of the existing building is completed
	If demolition is included as part of the refurbishment programme, then the audit should also cover demolition materials
Third Credit Best Practice Waste Benchmarks	Where the first two credits have been achieved achieved
	Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the refurbishment & demolition waste diversion benchmarks
Exemplary Credit	Where non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the *exemplary level resource efficiency benchmark*
	Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the exemplary level diversion benchmarks

Comments

A compliant site waste management plan should be prepared to comply with the requirements.

POLLUTION

Section Weighting: 6% | Indicative Section Score 3.75%

Pol 01 NOx Emissions

No. of BREEAM credits available	3	Available contribution to overall score	2.25%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Credits are awarded on the basis of NOx emissions arising from the operation of space heating and hot water systems for each refurbished dwelling as follows:

Indicative Credits Achieved
2

	Dry NOx Emissions
One Credit	≤100 mg/kWh (NOx class 4 boiler)
Two Credits	≤70 mg/kWh (NOx class 5 boiler)
Three Credits	≤40 mg/kWh

Comments

The plant specification will be made with consideration of the required maximum NOx emissions.

Pol 02 Surface Water Runoff

No. of BREEAM credits available	3	Available contribution to overall score	2.25%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Where impacts of the refurbishment on surface water runoff are neutralised or where runoff is reduced as a result of refurbishment, up to three credits can be awarded as follows:

Indicative Credits Achieved
1

	Requirements
First Credit Neutral Impact on Surface Water	New hard standing areas must be permeable
	If building on to previously permeable area additional run-off must be managed on site
	Calculations should be carried out by an appropriately qualified professional

	Requirements
Second Credit Reducing Run-Off From Site: Basic	Where all run-off from the roof for rainfall depths up to 5 mm, have been managed on site using source control methods
	Include runoff from all existing and new parts of the roof.
	An appropriately qualified professional should be used to design an appropriate drainage strategy for the site

	Requirements
Third Credit Reducing Run-Off From Site: Advanced	Where run-off as a result of the refurbishment is managed on site using source control
	An appropriately qualified professional should be used to design an appropriate drainage strategy for the site.
	The peak rate of run-off as a result of the refurbishment for the 1 in 100 year event has been reduced by 75% from the existing site.
	The total volume of run-off discharged into the watercourses and sewers as a result of the refurbishment, for a 1 in 100 year event of 6 hour duration has been reduced by 75%.
	An allowance for climate change must be included for all of the above calculations, in accordance with current best practice (PPS25, 2010).

	Requirements	Indicative Credits Achieved
Exemplary Credit	Where all run-off from the developed site is managed on site using source control	
	The peak rate of run-off as a result of the refurbishment for the 1 in 1 year event is reduced to zero.	
	The peak rate of run-off as a result of the refurbishment for the 1 in 100 year event is reduced to zero.	
	There is no volume of run-off discharged into the watercourses and sewers as a result of the refurbishment, for a 1 in 100 year event of 6 hour duration.	
	An allowance for climate change must be included for all of the above calculations, in accordance with current best practice (PPS25, 2010).	

Comments

It may be possible to achieve additional credits but the first credit has been taken at this stage.

Pol 03 Flooding			
No. of BREEAM credits available	2	Available contribution to overall score	1.50%
No. of BREEAM innovation credits	0	Minimum Standards applicable	Yes

Assessment Criteria

Indicative Credits Achieved
2

Where the dwelling is located in a low flood risk zone, or where in a medium to high flood risk zone and a flood resilience/resistance strategy has been implemented, up to two credits can be awarded as follows:

Minimum Standards	A minimum of two credits must be achieved for this issue at the Excellent and Outstanding levels

Option 1 - Low Flood Risk

Two Credits	Where a Flood Risk Assessment (FRA) has been carried out and the assessed dwellings are defined as having a low annual probability of flooding.

Option 2 - Medium / High Flood Risk

Two Credits	Where a Flood Risk Assessment (FRA) has been carried out and the assessed dwellings are defined as having a medium or high annual probability of flooding.
	Two credits are awarded where as a result of the dwellings floor level or measures to keep water away the dwelling is defined as achieving avoidance from flooding by following Checklist A-10; Decision Strategy Flow Chart.
	Where avoidance is not possible, two credits are achieved where a full flood resilience/resistance strategy is implemented for the dwellings in accordance with recommendations made by a Suitably Qualified Building Professional

Comments

A Flood Risk Assessment will need to be prepared for the site.

Appendix C – BREEAM Retail Pre-Assessment

BREEAM 2011 New Construction Pre-Assessment Estimator

This assessment and indicative BREEAM rating is not a formal certified BREEAM assessment or rating and must not be communicated as such. The score presented is indicative of a buildings potential performance and is based on a simplified pre-formal BREEAM assessment and unverified commitments given at an early stage in the design process.

Building name	373-375 Euston Road
Indicative building score (%)	63.05%
Indicative BREEAM rating	Pre-Assessment result indicates potential for BREEAM Very Good rating
Indicative minimum standards level achieved	Pre-Assessment result indicates the minimum standards for Very Good level

MANAGEMENT	***Section Weighting***	**12.00%**	***Indicative Section Score***	**8.18%**

Man01 Sustainable Procurement

No. of BREEAM credits available	8	Available contribution to overall score	4.36%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will roles, responsibilities and a training schedule be defined in accordance with BREEAM?	Yes	1	1	N/A
Will a BREEAM AP be appointed at RIBA stage A/B and performance targets contractually agreed?	No	1	0	N/A
Will a BREEAM AP be appointed to monitor and report progress during RIBA stage B-E ?	No	1	0	N/A
Willa BREEAM AP be appointed to monitor and report progress during RIBA stage F-L?	No	1	0	N/A
Will a thermographic survey be conducted and any defects uncovered remedied?	No	1	0	Option 1
Will compliant commissioning of building services be carried out?	Yes	1	1	Option 1
Will compliant seasonal commissioning of building services be carried out?	Yes	1	1	Option 1
Will water/energy consumption data be recorded and aftercare support provided for 12 months?	Yes	1	1	Option 1
Will water/energy consumption be recorded/reported for 3 years post construction?	Yes	1	1	Option 1

Total indicative BREEAM credits achieved	4
Total indicative contribution to overall building score	2.18%
Total indicative BREEAM innovation credits achieved	1
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where the client, building occupier, design team and contractor are involved from RIBA stage B in contributing to the decision making process for the project. Meetings must be held to identify and define roles and responsibilities and a schedule of training identified for all relevant building occupiers/premises manager. ONE CREDIT- Where an appropriate project team member has been appointed to monitor pre-commissioning, commissioning and re-commissioning. ONE CREDIT - Where seasonal commissioning responsibilities will be completed over a minimum 12 month period. ONE CREDIT - Where the main contractor accounts for a thermographic survey within the project budget and programme of works. Once construction is complete a thermographic survey of the building fabric is undertaken in accordance with the appropriate standard and by a professional holding a valid Level 2 certificate in thermography (as defined by the UKTA website http://www.ukta.org.ONE CREDIT - Where there is a mechanism to collect the energy and water consumption data for at least 12 months after occupation, compare this with what was expected and analyse any discrepancies with a view of adjusting systems if they are not operating as expected/designed. INNOVATION CREDIT - Where there is a commitment or contract for the facilities manager or equivalent to record/report water/energy consumption at quarterly intervals for the first 3 years after occupation.

Man02 Responsible Construction Practices

No. of BREEAM credits available	2	Available contribution to overall score	1.09%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Pre-Assessment question/criteria		Shell & Core option?
Which considerate construction scheme will be used or required to be used by the principal contractor?	Considerate Constructors Scheme	
For the required scheme, what will be the target performance level set for the site/contractor?	A CCS score between 32 and 35.5.	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	1.09%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

TWO CREDITS - Where a Considerate Constructors Scheme score between 32 and 35.5 has been achieved.

Man03 Construction Site Impacts

No. of BREEAM credits available	5	Available contribution to overall score	2.73%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will site energy consumption be metered/monitored?	Yes	1	1	N/A
Will site water consumption be metered/monitored?	Yes	1	1	N/A
Will the transport of construction materials and waste to/from site be measured/monitored?	Yes	1	1	N/A
Will timber be sourced in accordance with the Government's Timber Procurement Policy?	Yes	1	1	N/A
Will/does the principal contractor operate a compliant Environmental Management System?	Yes	1	1	N/A
Will the principal contractor adopt best practice pollution prevention policies & procedures?	Yes			

Total indicative BREEAM credits achieved	5
Total indicative contribution to overall building score	2.73%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

BREEAM 2011 New Construction Pre-Assessment Estimator

THREE CREDITS - Where the responsibility has been assigned to an individual for monitoring, recording and reporting ENERGY, WATER and TRANSPORT consumption data resulting from all construction processes. ONE CREDIT- Where all site timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy. ONE CREDIT - Where the principle contractor for the project operates an Environmental Management System covering their main operations. They must also operate best practice pollution prevention policies and procedures on site, demonstrated through compliance with the items in the Environmental Checklist section 2.2.5 Preventing Pollution in the England and Wales Environment Agency's 'Building a Better Environment, a guide for developers'. The BREEAM requirements for this credit will need to be written into the preliminaries. Useful Website(s): The Strategic Forum for Construction 2012 (www.strategicforum.org.uk), BRE's SMARTWaste Plan (www.smartwaste.co.uk).

Man04 Stakeholder Participation

No. of BREEAM credits available	4	Available contribution to overall score	2.18%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will an appropriate level of consultation activities be undertaken?	Yes	1	1	N/A
Will an access statement be developed and appropriate building user facilities provided?	Yes	1	1	N/A
Will building user guides and relevant user information be provided?	Yes	1	1	Option 1
Will a post occupancy evaluation assessment be undertaken and information disseminated?	Yes	1	1	Option 1

Total indicative BREEAM credits achieved	4
Total indicative contribution to overall building score	2.18%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where during the preparation of the brief, all relevant parties and relevant bodies are identified and consulted with by the design team. A consultation plan must be prepared which includes a timescale and methods of consultation for all parties. ONE CREDIT - Where the building is designed to be fit for purpose, appropriate and accessible by all potential users. A access statement must be developed in line with the CABE publication Design & Access Statements, How to write, read and use them, based on the principles of inclusive design. ONE CREDIT - Where Building User Guides are provided and are appropriate to all users of the building. ONE CREDIT - Where the client makes a commitment to carry out a Post Occupancy Evaluation (POE) one year after building occupation, to gain building performance feedback. Useful Website(s): The National Register of Access Consultants (www.nrac.org.uk).

Man05 Life cycle cost and service life planning

No. of BREEAM credits available	3	Available contribution to overall score	1.64%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will a feasibility stage Life Cycle Cost (LCC) analysis be commissioned and completed?	No	1	0	N/A
Will a strategic and system level LCC be commissioned and completed?	No	1	0	N/A
Will a technical design LCC to be commissioned and completed?	No	1	0	N/A

Total indicative BREEAM credits achieved	0
Total indicative contribution to overall building score	0.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

No credits have been sought for this issue

HEALTH & WELLBEING — *Section Weighting* 15.00% — *Indicative Section Score* 8.00%

Hea01 Visual Comfort

No. of BREEAM credits available	4	Available contribution to overall score	4.00%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will all fluorescent lamps be fitted with high frequency ballasts?	Yes	N/A	N/A	Option 1
Will all relevant building areas be designed to achieve the appropriate daylight factor(s)?	No	2		N/A
Will the design provide adequate glare control and view out for building users?	No	1	0	N/A
Will internal/external lighting be specified in accordance with the relevant CIBSE Guides/British Standards?	Yes	1	1	N/A
Will all relevant building areas be designed to achieve exemplary level daylight factor(s)?	No	1	0	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.00%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

PRE-REQUISITE - Where all fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. ONE CREDIT- Where 1) illuminance (lux) levels in all internal relevant building areas of the building are specified in accordance with the CIBSE Code for Lighting 2009 and any other relevant industry standard. For areas where computer screens are regularly used, the lighting design must comply with CIBSE Lighting Guide 7 sections 3.3, 4.6, 4.7, 4.8 and 4.9. AND where 2) illuminance levels for lighting in all external areas within the construction zone are specified in accordance with BS5489 1:2003+A2:2008 lighting of roads and public amenity areas. ONE CREDIT - Glare control - Where the potential for disabling glare has been designed out of all relevant building areas either through building layout and/or building design. View out - where all positions within relevant building areas are within 7m of a wall which has a window or permanent opening that provides an adequate view out. The window/opening must be 20% of the surrounding wall area. Where the room is greater than the 7m requirement, compliance is only possible where the percentage of window/opening is the same as or greater than the values in table 1.0 of BS 8206.

BREEAM 2011 New Construction Pre-Assessment Estimator

Hea02 Indoor Air Quality

No. of BREEAM credits available	4	Available contribution to overall score	4.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will an air quality plan be produced?	No	1	0	N/A
Will the building be designed to minimise sources of internal air pollution?	No			
Will the relevant products be specified to meet the VOC testing and emission levels required?	No	1	0	N/A
Will formaldehyde and total VOC levels be measured post construction?	No	1	0	N/A
Will the building be designed to, or have the potential to provide, natural ventilation?	No	1	0	N/A

Total indicative BREEAM credits achieved	0
Total indicative contribution to overall building score	0.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

No credits have been sought for HEA 02 Indoor Air Quality.

Hea03 Thermal Comfort

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will thermal modelling of the design be carried out?	Yes	1	1	N/A
Will the modelling inform the development of a thermal zoning and control strategy?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where thermal modelling has been carried out using software in accordance with CIBSE AM11 (48) Building Energy and Environmental Modelling. ONE CREDIT - Where the criterion for the above credit has been received AND where the thermal modelling analysis has informed the temperature control strategy for the building and its users.

Hea04 Water Quality

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will all water systems be designed to comply with the relevant HSE Approved Code of Practice and Guidance?	Yes			N/A
Where humidification is to be provided, will a failsafe humidification system be specified?	Yes	1	1	N/A
Will a wholesome supply of accessible, clean and fresh drinking water be supplied for building users?	Yes			N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where all water systems in the building are designed in compliance with the measures outlined in the Health and Safety Executive's "Legionnaires' disease - The control of legionella bacteria in water systems", Approved Code of Practice and Guidance, 2000(54) and, where relevant, other industry/sector best practice guidance. AND where humidification is required, a failsafe humidification system is provided, AND where a wholesome supply of accessible, clean and fresh drinking water is supplied.

Hea05 Acoustic Performance

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will/has a suitably qualified acoustician be appointed to provide appropriate design advice?	Yes			
Will the building meet the relevant acoustic performance standards and testing requirements?	Yes	2	2	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%

BREEAM 2011 New Construction Pre-Assessment Estimator

Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

PRE-REQUISITE - Where a suitably qualified acoustician is appointed by the client at pre-bid/briefing stage of the project to provide early design advice. A suitably qualified acoustician is an individual who holds a recognised acoustic qualification and membership of an appropriate professional body, the primary professional body for acoustics in the UK is the Institute of Acoustics. TWO CREDITS (Building Type Dependent) - Where indoor ambient noise levels comply with the "good practice" criteria levels of BS8233:1999. Where the room types below are present, the appropriate requirements for sound insulation must also be achieved. 1) Education space (teaching and lecture spaces) - Achieve the airborne and impact sound insulation criteria in Health Technical Memorandum 08-01. 2) Medical treatment rooms - Achieve the airborne and impact sound insulation criteria in Health Technical Memorandum 08-01 3) Acoustically sensitive rooms - The sound insulation between acoustically sensitive rooms and other occupied areas must comply with section 7.6.3.1 of BS8233, as follows, Dw + LAeq,T>75. 4) Rooms/areas used for speech or performance, including public speaking - Achieve reverberation times compliant with Table 8 of BS8233 1999. In addition, if relevant to assessed building; classrooms, seminar rooms and lecture theatres achieve reverberation times compliant with Table 1.5 of BB93.

Hea06 Safety and Security

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Where external site areas are present, will safe access be designed for pedestrians and cyclists?	Yes	1	1	N/A
Will a suitably qualified security consultant be appointed and security considerations accounted for?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

TWO CREDITS - Where the project ream have accounted for security considerations in the new building design and site layout through consultation with a suitably qualified security consultant. Consultation with the suitably qualified security consultant must occur during or prior to the concept design stage (RIBA stage C) or equivalent. The final design must embody the recommendations/solutions of the suitably qualified security consultant and by built to conform with either: a) the principles and guidance of Secured by Design (SbD) and/or Safer Parking (SP) Scheme, Or where SbD/SP is of less relevance to the building type/operation: b) a site specific security risk and threat assessment and subsequent security strategy and recommendations for security measures (as developed/recommended by the suitably qualified security consultant).

ENERGY	***Section Weighting***	**19.00%**		***Indicative Section Score***	**9.88%**

Ene01 Reduction of CO_2 Emissions

No. of BREEAM credits available	15	Available contribution to overall score	11.40%
No. of BREEAM innovation credits available	5	Minimum standards applicable	Yes

How do you wish to assess the number of BREEAM credits achieved for this issue?	Define a target number of BREEAM credits achieved		
Select the target number of BREEAM credits for the Ene01 issue	5	BREEAM Innovation credits	

2

NC

Total indicative BREEAM credits achieved	5
Total indicative contribution to overall building score	3.80%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Very Good level

Comments/notes:

BREEAM credits 1-5 require a performance improvement progressively better than the Target Emission Rate (TER) required for Building Regulations approval. BREEAM credits 6-9 is equired for BREEAM Excellent and requires a CO2 parameter for Energy Performance Ratio for New Construction calculation 0f 0.22. This is equivalent to a 25% improvement on the TER. BREEAM credits 10-14 is required for BREEAM Outstanding and requires a CO2 parameter for the Energy Performance Ratio for New Construction calculation of 0.30. This is equivalent to a 40% improvement on the TER. BREEAM 15 credits requires a CO2 parameter for the Energy Performance Ratio for New Construction calculation of 0.38. This is equivalent to a 100% improvement on the TER i.e. zero net CO2 emissions.

Ene02 Energy Monitoring

No. of BREEAM credits available	2	Available contribution to overall score	1.52%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

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Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will a BMS or sub-meters be specified to monitor energy use from major building services systems?	Yes	1	1	N/A
Will a BMS or sub-meters be specified to monitor energy use by tenant/building function areas?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	1.52%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where major energy consuming systems (space heating, domestic hot water, humidification, cooling, fans, lighting, small power etc) are monitored using either a Building Energy Management System (BEMS) or separate accessible energy sub-meters with a pulsed output to enable future connections to a BEMS, AND where the end energy consuming use is identifiable to the building user through labelling or data outputs. ONE CREDIT - Where an accessible BEMS or accessible sub-meters are provided covering the energy supply to all tenanted, or in the case of single occupancy buildings, relevant function areas or departments within the building/unit.

Ene03 External Lighting

No. of BREEAM credits available	1	Available contribution to overall score	0.76%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will external light fittings and controls be specified in accordance with the BREEAM criteria?	Yes	1	1	Option 1

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.76%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where all external light fittings for the building, access ways and pathways have a luminous efficacy of at least 50 lamp lumens/circuit Watt when the lamp has a colour rendering index (Ra) greater than or equal to 60 OR 60 lamp Lumens/circuit Watt when the lamp has a colour rendering index (Ra) less than 60. Where all external light fittings to car parking areas, associated roads and floodlighting has a luminous efficacy of at least 70 lamp Lumens/circuit Watt when the lamp has a colour rendering index (Ra) greater than or equal to 60 OR 80 lamp Lumens/ circuit Watts when the lamp has a colour rendering index (Ra) less than 60. All external light fittings for signs and uplighting have a luminous efficacy of at least 60 lamp lumens/circuit Watt when the lamp wattage is greater than or equal to 25W OR 50 lamp lumens/circuit Watt when the lamp wattage is less than 25W. External light fittings must be controlled through a time switch, or daylight sensor, to prevent operation during daylight hours. Daylight sensor override on a manually switched lighting circuit is acceptable.

Ene04 Low and Zero Carbon Technology

No. of BREEAM credits available	5	Available contribution to overall score	3.80%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Compliant LZC feasibility study to be undertaken	Yes	2	1	N/A
What will be the intended scope of the feasibility study?	Operational stage carbon savings/emissions			
Target percentage net reduction in operational stage CO2 emissions	30.00%	2	2	Option 1
Please confirm the intended energy source of the Low and/or zero carbon system?	Mains gas via compliant CHP plant			
Building is cooled mechanically, not utilising 'free' cooling	No	1	0	N/A

Total indicative BREEAM credits achieved	3
Total indicative contribution to overall building score	2.28%
Total indicative BREEAM innovation credits achieved	1
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where a feasibility study has been carried out by an energy specialist to establish the most appropriate local low or zero carbon (LZC) energy source for the building/development. POTENTIAL CREDITS - Where a local LZC energy technology has been installed in line with the recommendations of the feasibility study and this method of supply results in a reduction in regulated CO2 emissions.

Ene05 Energy Efficient Cold Storage

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?

Total indicative BREEAM credits achieved	N/A
Total indicative contribution to overall building score	N/A
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

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Ene06 Energy Efficient Transportation Systems

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?

Total indicative BREEAM credits achieved	N/A
Total indicative contribution to overall building score	N/A
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

Ene07 Energy Efficient Laboratory Systems

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will fume cupboards and/or other containment devices be specified				
Will the laboratory meet BREEAM's Best Practice Energy Practices in Laboratories criteria (table 6-2)?				
Will the laboratory meet criteria item b) of table 6-2: Fan power?				
Will the laboratory criteria item c) of table 6-2: Fume cupboard volume flow rates?				
Will the lab meet criteria item d) of table 6-2: Grouping / isolation of high filtration/ventilation activities?				
Will the laboratory meet criteria item e) of table 6-2: Energy recovery - heat?				
Will the laboratory meet criteria item f) of table 6-2: Energy recovery - cooling?				
Will the laboratory meet criteria item g) of table 6-2: Grouping of cooling loads?				
Will the laboratory meet criteria item h) of table 6-2: Free cooling?				
Will the laboratory meet criteria item i) of table 6-2: Load responsiveness?				
Will the laboratory meet criteria item j) of table 6-2: Cleanrooms?				
Will the laboratory meet criteria item k) of table 6-2: Diversity?				
Will the laboratory meet criteria item l) of table 6-2: Room air-change rates?				

Total indicative BREEAM credits achieved	N/A
Total indicative contribution to overall building score	N/A
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

Ene08 Energy Efficient Equipment

No. of BREEAM credits available	2	Available contribution to overall score	1.52%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Present	Significant majority contributor
Which of the following will be present and likely to be a/the major contributor to 'unregulated' energy use:		
Small power/plug in equipment?	Yes	Yes
Swimming pool?	No	
Communal laundry?	No	
Data centre?	No	
IT-intensive operation areas?	No	
Residential areas?	No	
Healthcare?	No	
Kitchen and catering facilities?	No	

	Indicative compliance?	Credits available	Indicative credits achieved	Shell & Core option?
Will the significant majority contributor(s) to 'unregulated' energy use (above) meet the BREEAM criteria?	Yes	2	2	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	1.52%
Total indicative BREEAM innovation credits achieved	N/A

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Indicative minimum standard(s) level	N/A

Comments/notes:

TWO CREDITS - Where the following equipment complies with the corresponding criterion. Small power, plug in equipment - The following equipment EITHER qualifies for an Enhanced Capital Allowance Scheme claim (i.e. Is on the Energy Technology Product List, ETPL) OR has been awarded an Energy Star rating OR has been procured in accordance with the Government Buying Standards OR are identified as products with at least a 'green tick' standard on the Buying Solutions website (1. office equipment, 2. domestic scale white goods and other small powered equipment, 3. supplementary electric heating).

Ene09 Drying Space

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?

Total indicative BREEAM credits achieved	N/A
Total indicative contribution to overall building score	N/A
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

TRANSPORT	***Section Weighting***	**8.00%**	***Indicative Section Score*** **8.00%**

Tra01 Public Transport Accessibility

No. of BREEAM credits available	5	Available contribution to overall score	4.44%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria

What is the building type category (for the purpose of Tra01 issue assessment)?	Retail
What is the degree of public transport provision for the building's location?	Excellent provision of public transport, i.e. large urban/metropolitan city centre
Building's indicative Accessibility Index	18
Does the building have a dedicated bus service?	

Total indicative BREEAM credits achieved	5
Total indicative contribution to overall building score	4.44%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

FIVE CREDITS (Building Type Dependent) - The Accessibility Index is determined by entering the following information in to the BREEAM TRA 01 Calculator: a) the distance (m) from the main building entrance to each compliant public transport node, b) the public transport type(s) serving the compliant node e.g. bus or rail, c) the average operating hours of the building for a typical day. Useful Website(s): The London Plan (http://www.london.gov.uk/thelondonplan/maps-diagrams/map-2a-03.jsp).

Tra02 Proximity to Amenities

No. of BREEAM credits available	1	Available contribution to overall score	0.89%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will the building be in close proximity of and accessible to applicable amenities?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.89%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where the building is located within close proximity (500m) and accessible to ALL of the following amenities: Grocery shop or food outlet, post box, cash machine.

Tra03 Cyclist facilities

No. of BREEAM credits available	2	Available contribution to overall score	1.78%

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No. of BREEAM innovation credits available	0	Minimum standards applicable	No

What is the building type category (for the purpose of Tra03 issue assessment)?	Retail – Individual retail unit

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will cycle storage spaces be provided?	Yes	2	2	Option 1: N/A
Will cyclist facilities be provided?	Yes			Option 1: N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	1.78%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

Retail staff will have access to the cycle storage and shower and locker facilities.

Tra04 Maximum Car Parking Capacity

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Building type category (for the purpose of Tra04 issue)?	
Buildings indicative Accessibility Index (sourced from issue Tra01)	

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will the building meet BREEAM's maximum parking capacity criteria for this building type/Accessibility Index?				

Total indicative BREEAM credits achieved	N/A
Total indicative contribution to overall building score	N/A
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

Tra05 Travel Plan

No. of BREEAM credits available	1	Available contribution to overall score	0.89%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will a transport plan based on site specific travel survey/assessment be developed?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.89%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

WATER

Section Weighting **6.00%** ***Indicative Section Score*** **3.33%**

Wat01 Water Consumption

No. of BREEAM credits available	5	Available contribution to overall score	3.33%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

		Shell & Core option?
Select the level that corresponds closely to the target or likely water component specification?	Level 3 - Three credits	N/A

Total indicative BREEAM credits achieved	3
Total indicative contribution to overall building score	2.00%
Total indicative BREEAM innovation credits achieved	0

BREEAM 2011 New Construction Pre-Assessment Estimator

Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

THREE CREDITS - Where an assessment of the efficiency of the building's domestic water consuming components has been undertaken using the BREEAM WAT 01 Calculator. The water consumption (litres/person/day) for the assessed building is compared against a notional baseline performance and BREEAM credit awarded. To obtain the three credits a 40% improvement will be required. It is assumed that low flow taps; dual flush toilets etc will be specified. This credit also required the addition of a greywater/rainwater system which 25% of WC/urinal flushing demand is met using recycled non potable water. Useful Website(s): The Green Book Live (www.greenbooklive.com).

Wat02 Water Monitoring

No. of BREEAM credits available	1	Available contribution to overall score	0.67%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will there be a water meter on the mains water supply to the building(s)?	Yes	1	1	N/A
Will metering/monitoring equipment be specified on the water supply to any relevant plant/building areas?	Yes			
Will all specified water meters have a pulsed output?	Yes			
If the site/building has an existing BMS connection, will all pulsed meters be connected to the BMS?	Yes			

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.67%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where a water meter has been specified on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source. If the water consuming plant or building areas, consume 10% or more of the building's total water demand, they will need to be fitted with sub meters or have water monitoring equipment integral to the plant or area. If there is an existing BMS, managed by the same occupier/owner, the pulsed water meter(s) for the new building must be connected to the existing BMS.

Wat03 Water Leak Detection and Prevention

No. of BREEAM credits available	2	Available contribution to overall score	1.33%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will a mains water leak detection system be installed on the building's mains water supply?	No	1	0	N/A
Will flow control devices be installed in each sanitary area/facility?	No	1	0	N/A

Total indicative BREEAM credits achieved	0
Total indicative contribution to overall building score	0.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

No credits have been targeted for this issue.

Wat04 Water Efficient Equipment

No. of BREEAM credits available	1	Available contribution to overall score	0.67%
No. of BREEAM innovation credits available	No	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will water efficient irrigation methods and/or vehicle wash systems (if relevant) be installed?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.67%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where irrigation method specified for internal or external planting and/or landscaping, it complies with ANY ONE of the following: a) Drip feed subsurface irrigation that incorporates soil moisture sensors; b) Reclaimed water from a rainwater or greywater system; c) External landscaping and planting that relies solely on precipitation, during all seasons of the year; d) All planing specified is restricted to species that thrive in hot and dry conditions; e) Where no dedicated, mains-suppled irrigation systems (including pop-up sprinklers and hoses) are specified and planting will rely solely on manual watering by building occupier or landlord.

MATERIALS — *Section Weighting* 12.50% — *Indicative Section Score* 7.29%

Mat01 Life Cycle Impacts

No. of BREEAM credits available	5	Available contribution to overall score	5.21%

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No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Pre-Assessment question/criteria

How do you wish to assess the number of BREEAM credits achieved for this issue?	Define a target number of BREEAM credits to be achieved		
Select the number of BREEAM credits being targeted for the Mat01 issue	2	BREEAM Innovation credits	

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.08%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	N/A

Comments/notes:

TWO CREDITS (Building Type Dependent) - these credits are awarded by BREEAM on the basis of the building's quantified environmental life cycling impact through assessment of the main building elements. The calculation procedure is determined by the number of BREEAM credits achieved as a result of each element's Green Guide rating (www.thegreenguide.org.uk). The Green Guide users an A+ to E rating system, whereby the rating relates to the relative life cycle performance of a specification in comparison with other types of specifications available for a particular building element type e.g. external wall. Three steps are undertaken to translate the performance of all the separate individual elemental specifications and their Green Guide ratings into an overall building performance score for life cycle impact, against which BREEAM credits can be awarded. Each of these steps is undertaken using the BREEAM Mat 01 calculator and the information collected by the BREEAM assessor. STEP 1: Translating the Green Guide rating into points, STEP 2: Weighting the performance of individual specifications within an elemental category, STEP 3: Weighting the performance of individual elements relative to all elements assessed. This building type requires that all the main building elements are assessed - External walls, windows, roof, upper floor slab, internal walls and floor finishes/coverings. Useful Website(s): The Green Guide (www.thegreenguide.org.uk), Green Book Live (www.greenbooklive.com).

Mat02 Hard Landscaping and Boundary Protection

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will ≥80% of all external hard landscaping and boundary protection achieve a Green Guide A or A+ rating?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.04%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

This credit is targeted through careful specification of hard landscaping to have low embodies energy.

Mat03 Responsible Sourcing

No. of BREEAM credits available	3	Available contribution to overall score	3.13%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Pre-Assessment question/criteria

How do you wish to assess the number of BREEAM credits achieved for this issue?	Define a target number of BREEAM credits		
Select the number of BREEAM credits being targeted for the Mat03 issue	1	BREEAM Innovation credits	0
Will all timber used on the project be sourced in accordance with the UK Govt's Timber Procurement Policy?	Yes		

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.04%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT - Where each of the applicable specified materials comprising the main building elements are assigned a responsible sourcing tier level and points awarded as per the BREEAM Mat 03 calculator. The tier rank is determined based on the rigour of responsible sourcing demonstrated by the supplier(s)/manufacturer(s) of that material/element (through responsible souring certification schemes). To achieve points for any given building element, at least 80% of the materials that make-up that element must be responsibly sources i.e. classified in tier 1-7. Responsible sourcing certification schemes include: BRE Global, BES6001 Product certification; BRE Global, BES6001 Standard certification; Canadian Standards Association's (CSA) Chain of Custody Scheme; Environmental Management System (EMA)(certified); Forest Stewardship Council (FSC); Green Dragon Environmental Standard; Recycled materials; Re-used materials; Malaysian Timber Certification Council (MTCC); Programme for the Endorsement of Forest Certification (PEFC); Sustainable Forestry Initiative (SFI); Societe Geneale de Surveillance's (SGS) 'Timber Legality and Traceability' scheme; and Rainforest Alliance's 'Verification of Legal Origin and Compliance' scheme (supersedes SmartWood Verified). Useful Website(s): CPET (Central point of expertise for timber procurement) (www.cpet.org.uk), The Green Book Live (www.greenbooklive.com), Green Dragon Environmental Standard (www.greendragonems.com), WRAP (www.wrap.org.uk).

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Mat04 Insulation

No. of BREEAM credits available	2	Available contribution to overall score	2.08%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Is the building targeting an insulating index of 2 or more?	Yes	1	1	N/A
Will the building's insulating materials be responsibly sourced?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.08%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

PRE-REQUISITE - Where any new insulation specified for use within the following building elements is assessed: a) external walls, b) ground floor, c) roof, d) building services. ONE CREDIT - Where the green guide rating for the thermal insulation materials has been determined. Green Guide ratings for thermal insulation can be found at: www.thegreenguide.org.uk. The Insulation Index for the building insulation must be the same or greater than 2. The Insulation Index is calculated using the BREEAM Mat 04 calculator. ONE CREDIT- Where at least 80% by volume of the thermal insulation used in the building elements identified in Item 1 must be responsible sourced i.e. each insulation product must be certified in accordance with either tier levels 1, 2, 3, 4, 5 or 6. Useful Website(s): The Green Guide (www.thegreenguide.org.uk).

Mat05 Designing for Robustness

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will suitable durability/protection measures be specified and installed to vulnerable areas of the building?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.04%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where areas of the building have been identified (both internal and external) where vehicular, trolley and pedestrian movement occur. The design must incorporate suitable durability and protection measures or design features/solutions to prevent damage to the vulnerable parts of the building.

WASTE — *Section Weighting* 7.50% — *Indicative Section Score* 3.75%

Wst01 Construction Waste Management

No. of BREEAM credits available	4	Available contribution to overall score	5.00%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Pre-Assessment question/criteria

How do you wish to assess the number of BREEAM credits achieved for this issue?	Define a target number of BREEAM credits to be achieved		
Select the number of BREEAM credits being targeted for the Wst01 issue	2	BREEAM Innovation credits	

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.50%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

TWO CREDITS - Where non-hazardous construction waste (excluding demolition and excavation waste) generated by the building's design and construction meets or exceeds the following resource efficiency benchmarks: 7.5m3/6.5 tonnes of waste generated per 100m2 (gross internal floor area).

Wst02 Recycled Aggregates

No. of BREEAM credits available	1	Available contribution to overall score	1.25%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Pre-Assessment question/criteria

How do you wish to assess the number of BREEAM credits achieved for this issue?	Define a target number of BREEAM credits to be achieved		
Select the number of BREEAM credits being targeted for the Wst02 issue	0	BREEAM Innovation credits	

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Total indicative BREEAM credits achieved	0
Total indicative contribution to overall building score	0.00%
Total indicative BREEAM innovation credits achieved	0
Indicative minimum standard(s) level	N/A

Comments/notes:

No credits have been targeted for this issue.

Wst03 Operational Waste

No. of BREEAM credits available	1	Available contribution to overall score	1.25%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will appropriate facilities for the storage of operational recyclable waste volumes be provided?	Yes	1	1	N/A
If relevant, will a static waste compactor(s) or baler(s) be specified/installed?	N/A			N/A
If relevant, will a vessel for composting suitable organic waste be specified/installed?	N/A			N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.25%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

ONE CREDIT- One credit is achievable where there is a dedicated space(s) to cater for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. The dedicated space(s) must be: a) Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams; b) Accessible to building occupants/facilities operators for the deposit of materials and collections by waste management contractors; c) Of a capacity appropriate to the building type, size, number of units (if relevant) and predated volumes of waste that will arise from daily/weekly operational activities and occupancy rates. Where the consistent generation in volume of the appropriate operation waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operations, the following facilities are provided as part of its waste management strategy: a) Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space; b) Vessel(s) for composting suitable organic waste resulting from the building's daily operation and use OR adequate space(s) for storing segregated food waste and compostable organic materials prior to collection and delivery to an alternative composting facility; c) Where organic waste is to be stored/composted on site, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes.

Wst04 Speculative Floor and Ceiling Finishes

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?

Total indicative BREEAM credits achieved	N/A
Total indicative contribution to overall building score	N/A
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

LAND USE & ECOLOGY	***Section Weighting***	**10.00%**	***Indicative Section Score***	**8.00%**

LE01 Site Selection

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will at least 75% of the proposed development's footprint be located on previously been developed land?	Yes	1	1	N/A
Is the site deemed to be significantly contaminated?	No	1	0	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.00%

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Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where at least 75% of the footprint of the proposed development is on an area of land which has, in the last 50 years, been developed for use by either industrial, commercial or domestic purposes. POTENTIAL CREDIT (one credit) - Where the site is deemed to be significantly contaminated as confirmed by a contaminated land specialist's site investigation, risk assessment and appraisal, which has identified: a) The degree of contamination; b) The contaminant sources/types; c) The options for remediating sources of pollution which present an unacceptable risk to the site. The client or principal contractor confirms that remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan.

LE02 Ecological Value of Site and Protection of Ecological Features

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Can the land within the construction zone be defined as 'land of low ecological value'?	Yes	1	1	N/A
Will all features of ecological value surrounding the construction zone/site boundary be protected?	Yes			N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	1.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT (TBC) - It is currently assumed that the land has no ecological value - this will need to be confirmed by a suitably qualified ecologist (SQE). A suitably qualified ecologist is an individual achieving all the following items can be considered to be "suitably qualified" for the purposes of compliance with BREEAM: 1) Holds a degree or equivalent qualification (e.g. N/SVQ Level 5) in ecology or a related subject; 2) Is a practising ecologist, with a minimum of three years relevant experience (within the last five years). Such experience must clearly demonstrate a practical understanding of factors affected ecology in relation to construction and the built environment; including, acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures. Examples of relevant experience are@ ecological impact assessments; Phase 1 and 2 habitat surveys and habitat restoration; 3) Is covered by a professional code of conduct and subject to peer review. Full members of the following organisations, who meet the above criteria, are deemed suitably qualified ecologists for the purposed of BREEAM: 1) Chartered Institution of Water and Environmental Management (CIWEM); 2) Institute of Ecology and Environmental Management (IEEM); 3) Institute of Environmental Management and Assessment (IEMA); 4) Landscape Institute (LI).

LE03 Mitigating Ecological Impact

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Pre-Assessment question/criteria	
What is the likely change in ecological value (plant species richness) as a result of the sites development?	No negative change or improvement in plant species richness

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	Pre-Assessment result indicates the minimum standards for Outstanding level

Comments/notes:

TWO CREDITS - Where the change in ecological value of the site is equal to or greater than zero i.e. no negative change. Either of the following methods can be used to achieve this credit: a) where the following information has been determined and entered into the BREEAM LE 03/LE 04 calculator - i) the broad habitat type(s) that define the landscape of the assessed site in its existing pre-developed state and proposed state; ii) area (m2) of the existing and proposed broad habitat types. OR b) where a suitably qualified ecologist (SQE) has been appointed and, based on their site survey they confirm the following and either the assessor or ecologist inputs this data in to the BREEAM LE 03/LE 04 calculator - i) the broad habitat types that define the landscape of the assessed site in its existing pre-developed state and proposed state; ii) area (m2) of the existing and proposed broad habitat plot types; iii) average total taxon (species) richness within each habitat type.

LE04 Enhancing Site Ecology

No. of BREEAM credits available	3	Available contribution to overall score	3.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will a suitably qualified ecologist be appointed to report on enhancing and protecting site ecology?	Yes	3	2	N/A
Will the suitably qualified ecologists general recommendations be implemented?	Yes			
What is the targeted/intended improvement in ecological value as a result of enhancement actions?	Small improvement in plant species richness			

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

TWO CREDITS - Where a suitably qualified ecologist (SQE) has been appointed to report on enhancing and protecting the ecology of the site and: a) the SQE provides an Ecology report with appropriate recommendations for protection and enhancement of the site's ecology, b) where the report is based on a site visit/survey by the SQE. The general recommendations of the Ecology report for enhancement and protection of site ecology have been, or will be, implementation. And where the recommendations of the Ecology Report for enhancement and protection of site ecology have been implemented, and the suitably qualified ecologist confirms that this will result in an increase in ecological value of the site up to (but not including) 6 plant species.

LE05 Long Term Impact on Biodiversity

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

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Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will the building meet BREEAM's mandatory criteria for this BREEAM issue?	Yes	2	2	N/A
Will a Biodiversity Champion be appointed to monitor/minimise impacts of site activities on biodiversity?	Yes			
Will the contractor provide training for the site workforce on how to protect ecology during the project?	Yes			
Will the contractor record actions to protect biodiversity and monitor their effectiveness during construction?	Yes			
Will a new ecologically valuable habitat, appropriate to the local area, be created?	No			
Where flora/fauna habitats exist on site, will the contractor programme site works to minimise disturbance?	Yes			

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

MANDATORY - A suitably qualified ecologist (SQE) must be appointed prior to commencement of activities on site. TWO CREDITS - Where there is a commitment to achieve the mandatory criteria and appropraite number of additional criteria as listen within the Technical Guide. Where the suitably qualified ecologist confirms that some of the additional criteria are not applicable to the assessed development, credits can still be awarded based on the table within the Technical Guidance.

POLLUTION — *Section Weighting* 10.00% — *Indicative Section Score* 4.62%

Pol01 Impact of Refrigerants

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will refrigerant containing systems be installed in the assessed building?	Yes	2	0	N/A
Is the Global Warming Potential of the specified refrigerant(s) likely to be 10 or less?	No			
What is the target range Direct Effect Life Cycle CO_2eq. emissions for the system?	>1000	*kgCO2eq/kW coolth capacity*		
Will a refrigerant leak detection and containment system be specified/installed?	No	1	0	N/A

Total indicative BREEAM credits achieved	0
Total indicative contribution to overall building score	0.00%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where systems using refrigerants are contained in a moderately air tight enclosure, and an automated permanent refrigerant leak detection system is installed covering high-risk parts of the plant OR where a refrigerant leakage/charge loss detection system is specified. TWO CREDITS - Where the systems using refrigerants have a Direct Effect Life Cycle CO2 equivalent emissions of (DELC CO2e) of 101-1000kgCO2e/kW cooling capacity. Useful Website(s): The United Nations Environment Programme (UNEP) HCFC Help Centre (http://www.unep.org/ozonaction/Topics/HCFCHelpCentre/tabid/6426/Default.aspx).

Pol02 NO_x Emissions

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response		Shell & Core option?
Please enter the target/maximum NO_x emission level for space heating/cooling system	70.00	*mg/kWh*	N/A

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	1.54%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

TWO CREDITS (Building Type Dependent) - Where the plant installed to meet the building's delivered heating and cooling demand has, under normal operating conditions, a dry NOx emission level of 70 mg/kWh.

Pol03 Surface Water Run off

No. of BREEAM credits available	5	Available contribution to overall score	3.85%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
What is the actual/likely annual probability of flooding for the assessed site?	Low	2	2	N/A
Will a compliant Flood Risk Assessment be undertaken?	Yes			N/A
Will the site meet the BREEAM criteria for peak rate surface water run off?	No	1	0	N/A
Will the site meet the criteria for surface water run off volume, attenuation and/or limiting discharge?	No	1	0	N/A
Will the site be designed to minimise watercourse pollution in accordance with the BREEAM criteria?	No	1	0	N/A

Total indicative BREEAM credits achieved	2

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Total indicative contribution to overall building score	1.54%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

TWO CREDITS - Where the assessed development is situated in a flood zone that is defined as having a low annual probability of flooding. And where a site specific Flood Risk Assessment (FRA) confirms that there is a low risk of flooding from all sources.

Pol04 Reduction of Night Time Light Pollution

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will the external lighting be designed to reduce light pollution?	Yes	1	1	N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.77%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where an external lighting strategy has been designed in compliance with Table 1 (and its accompanying notes) of the ILE Guidance notes for the reduction of obtrusive light, 2005. All external lighting (except for safety and security lighting) can be automatically switched off between 2300hrs and 0700hrs. Useful Website(s): ILE Reduction of Obtrusive Light (www.ile.org.uk).

Pol05 Noise Attenuation

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Pre-Assessment question/criteria	Response	Credits available	Indicative credits achieved	Shell & Core option?
Will there be, or is there noise-sensitive areas/buildings within 800m radius of the development?	Yes	1	1	
Will a noise impact assessment be completed and, if applicable, noise attenuation measures specified?	Yes			N/A

Total indicative BREEAM credits achieved	1
Total indicative contribution to overall building score	0.77%
Total indicative BREEAM innovation credits achieved	N/A
Indicative minimum standard(s) level	N/A

Comments/notes:

ONE CREDIT - Where there are or will be noise-sensitive areas or buildings within 800m radius of the assessed development a noise impact assessment in compliance with BS 7445:1991 is carried out and the following noise levels measured/determined: a) Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar, b) The rating noise level resulting from the new noise-source. The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (0700hrs to 2300hrs) and +3dB at night (2300hrs to 0700hrs) compared to the background noise level. Where the nose source(s) from the proposed site/building is greater than these figures measures must be installed to attenuate the noise at its source to a level where it will comply.

INNOVATION — *Section Weighting* 10.00% — *Indicative Section Score* 2.00%

Inn01 Innovation

No. of BREEAM innovation credits available	10	Available contribution to overall score	10.00%
		Minimum standards applicable	No

Pre-Assessment question/criteria	Exemplary level achieved	Credits available	Indicative credits achieved
Man01 Sustainable Procurement	Yes	1	1
Man02 Responsible Construction Practices	No	1	0
Hea01 Visual Comfort	No	1	0
Ene01 Reduction of CO2 Emissions	No	5	0
Ene04 Low and Zero Carbon Technology	Yes	1	1
Ene05 Energy Efficient Cold Storage	N/A	N/A	N/A
Wat01 Water Consumption	No	1	0
Mat01 Life Cycle Impacts	No	1	0
Mat03 Responsible Sourcing of Materials	No	1	0
Wst01 Construction Waste Management	No	1	0
Wst02 Recycled Aggregates	No	1	0

Total indicative BREEAM credits achieved	2
Total indicative contribution to overall building score	2.00%
Indicative minimum standard(s) level	N/A

Comments/notes:

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Awarding 'credits' for innovation enables clients and design teams to boost their building's BREEAM performance and, in addition, helps to support the market for new innovative technologies, and design or construction practices. An additional 1% can be added to a building's overall score for each 'innovation credit' achieved. The maximum number of 'innovation credits' that can be awarded for any one building is 10; therefore the maximum available additional score for 'innovation' is 10%. Innovation credits can be awarded regardless of the building's final BREEAM rating i.e. they are awardable at any BREEAM rating level. One innovation credits have been sought for this development - MAN01 Sustainable Procurement.