

PROPOSED DEVELOPMENT AT
KENTISH TOWN ROAD

BREEAM Domestic Refurbishment Pre-Assessment

Prepared by Prime Meridian Ltd
on behalf of Kenny Properties

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Assessment: BREEAM Domestic Refurbishment Pre-Assessment for Planning Application

1. Introduction

This report has been developed by Prime Meridian on behalf of Kenny Properties and relates to the proposed development at 218 – 228 Kentish Town Road, London in respect of achieving a BREEAM Domestic Refurbishment Rating of ‘Very Good’. The proposals are for a 100% residential scheme to include 4 new build apartments (Assessed under the Code for Sustainable Homes), and the conversion of 5 apartments to be assessed under the BREEAM Domestic Refurbishment Rating scheme.

The BREEAM Domestic Refurbishment 2012 scheme can be used to assess the environmental life cycle impacts of refurbishment projects including existing dwellings undergoing refurbishment, extensions, domestic conversions, and change of use projects in the UK. The primary aim of the BREEAM Domestic Refurbishment is to improve the environmental performance of dwellings in a robust and cost effective manner.

National, regional and local planning policy requires that any new residential development should be shown to be “sustainable”, and this is specifically addressed in The London Plan, Policy 4A3 : Sustainable design and construction. With the launch of the BREEAM Domestic Refurbishment Assessment methodology in 2012 to provide environmental and sustainability ratings for renovations and conversions, the assessment demonstrates the environmental credentials of the development.

The following summary includes key elements of the development contributing to achieving the BREEAM rating. The Conclusion section of this report will identify the achievable credits sought within the pre-application assessment to predict a final rating.

2. Summary

To ensure that the development is built to a high environmental standard, advice has been sought from an early stage of the development process providing opportunities to design the dwellings in terms of layout, spaces, materials, construction methods, fittings, appliances, etc. with sustainability in mind.

Key elements of the development which contribute to the desired environmental rating include:

- Significantly improving levels of insulation within the construction elements, good construction practice with regard to air tightness, and joinery with low U-Values, will not only assist to achieve the requirements of the assessment, but surpass the requirements, and provide dwellings with lower than expected carbon dioxide emissions.
- The installation of low energy appliances and light fittings.
- Through the careful selection of construction materials - employing the use of the Green Guide to Specification will ensure only those with the highest environmental credentials will be selected.
- The provision of a secure cycle store will be available to all dwellings assessed under the Code for Sustainable Homes and the BREEAM Domestic Refurbishment Rating Schemes.
- A full assessment of the consumption of potable water for each dwelling will be carried out to ensure a compliance of no more than 125l/person/day as set out in the current Building Regulations.

Whilst this is not an exhaustive list of requirements and design considerations for the development, the contributions detailed above will provide a significant contribution to achieving sustainable construction and sustainable homes.

3. Conclusions

The BREEAM Domestic Refurbishment Assessment covers seven categories of Sustainable Design, divided further into sub-categories as listed below. Each issue is a source of environmental impact which is assessed against a performance target and then awarded one or more credits. Each credit carries an individual percentage weighting to then deliver a number of points for each element. To achieve a 'Very Good' rating, the total number of percentage points required are equal to or greater than 55 Points.

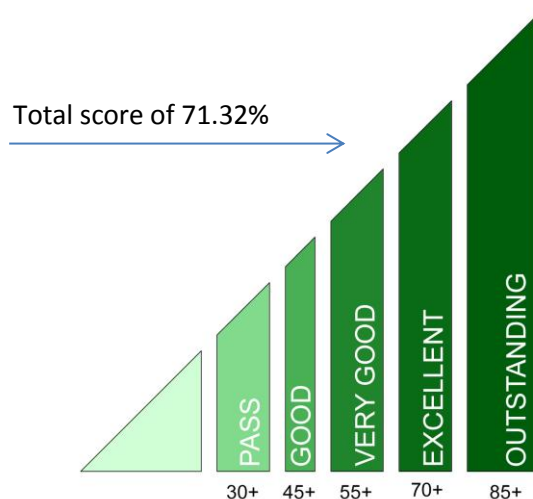
The Score predictions are as follows.

Man 1	Home Users Guide	3 credits	3.270%
Man 2	Responsible Construction Practices	2 credits	2.180%
Man 3	Construction Site Impacts	0 credits	0.000%
Man 4	Security	1 credits	1.090%
Man 5	Protection & Enhancement of Ecological Features	0 credits	0.000%
Man 6	Project Management	2 credits	2.180%
Hea 1	Daylighting	0 credits	0.000%
Hea 2	Sound Insulation	4 credits	5.670%
Hea 3	Volatile Organic Compounds	1 credit	1.420%
Hea 4	Inclusive Design	0 credits	0.000%
Hea 5	Ventilation	2 credits	2.830%
Hea 6	Safety	1 credit	1.420%
Ene 1	Improvement in Energy Efficiency Rating	3 credits	4.450%
Ene 2	Energy Efficiency Rating Post Refurbishment	2 credits	2.965%
Ene 3	Primary Energy Demand	4 credits	5.930%
Ene 4	Renewable Technologies	1 credit	1.480%
Ene 5	Energy Labelled White Goods	2 credits	2.965%
Ene 6	Drying Space	1 credit	1.480%
Ene 7	Lighting	1 credit	1.480%
Ene 8	Display Energy Devices	2 credits	2.965%
Ene 9	Cycle Storage	2 credits	2.965%

Ene 10	Home Office	1 credit	1.480%
Wat 1	Internal Water Use	1.5 credits	3.300%
Wat 2	External Water Use	1 credit	2.200%
Wat 3	Water Meter	1 credit	2.200%
Mat 1	Environmental Impact of Materials	15 credits	2.640%
Mat 2	Responsible Sourcing of Materials	6 credits	1.065%
Mat 3	Insulation	8 credits	1.420%
Pol 1	Nitrogen Oxide Emissions	2 credits	1.500%
Pol 2	Surface Water Run-Off	1 credit	0.750%
Pol 3	Flooding	2 credits	1.500%
Was 1	Household Waste	2 credit	1.200%
Was 2	Refurbishment Site Waste Management	3 credits	1.800%
Inn 1	Innovation	2 credits	2.000%

Total anticipated score: 71.32%

If the development is constructed and implemented as described within this report, a total score of 71.32% is achievable. In excess of 55.00%, a BREEAM Domestic Refurbishment Rating of “Very Good” will be awarded.



The total score exceeds the requirements of an ‘Excellent’ rating, though the mandatory water and energy credits achieve a ‘Very Good’. Therefore, a ‘Very Good’ rating can be awarded.

4. Detailed Review

The detailed review of the pre-assessment will cover all nine categories and subsequent sub-categories. All cases and elements have been assessed by a licenced BREEAM Domestic Refurbishment Assessor, with relevant scores applied as required for a formal design stage assessment.

Man 1 Home Users Guide	3 credits	3.270%
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Each home is to be provided with a home user guide in a format appropriate to the user. This will provide a guide to the occupants that contains necessary details about the every-day use of the home in a form that is easy to understand. The guide will also include additional information relating to the site and its surroundings, and is compiled in accordance with the BREEAM Domestic Refurbishment checklists.

Man 2 Responsible Construction Practices	2 credits	2.180%
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The principle contractor is to use the considerate constructors scheme with a score sought on the code of considerate practice in excess of 32, and achieving 2 credits.

Man 3 Construction Site Impacts	0 credit	0.000%
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Credit not sought.

Man 4 Security	1 credit	1.090%
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All external windows and doors are to comply with the minimum security requirements set out in CN6 compliance notes within the BREEAM Domestic Refurbishment technical guide.

Man 5 Protection & Enhancement of Ecological Features	0 credits	0.000%
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Credit not sought.

Man 6 Project Management	2 credits	2.180%
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The project management is to produce an implementation plan, and is to assign individual and shared roles and responsibilities in accordance with the compliance notes within the BREEAM Domestic Refurbishment technical guide amongst the project team including all trades on site.

A handover meeting to be arranged by the project management team with post occupancy inspections and aftercare included.

With the appointment of a BREEAM assessor prior to the RIBA stage C of the development, and the regular documentation and reporting of the progress of the assessment and development, an exemplar credit is sought.

Hea 1	Daylighting	0 credits	0.000%
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Credit not sought.

Hea 2	Sound Insulation	4 credits	5.670%
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Sound testing is to be carried out prior to and following the refurbishment. With the upgrading of party elements, the testing will confirm improvements above and beyond building regulation standards, and achieve 4 credits.

Hea 3	Volatile Organic Compounds	1 credit	1.420%
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Through the careful selection of materials and finishes, with guidance through compliance notes, the avoidance of the use of Volatile Organic Compounds will achieve 1 credit.

Hea 4	Inclusive Design	0 credits	0.000%
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No credits are sought for Inclusive Design.

Hea 5	Ventilation	2 credits	2.830%
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Ventilation is to be provided to each dwelling to comply with Building Regulations Part F Section 5 in full, and achieving 2 credits.

Hea 6	Safety	1 credit	1.420%
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Full Carbon monoxide and Fire Detection and Alarm systems are to be installed and certified. Following compliance notes within the BREEAM Domestic Refurbishment technical guide, 1 credit will be achieved.

Ene 1	Improvement in Energy Efficiency Rating	3 credits	4.450%
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Following initial discussions with the SAP energy Assessor, it is anticipated that an improvement of the Energy Efficiency Rating Score of at least 26 will achieve a minimum of 3 credits. Whilst it is likely to be higher, 3 credits are sought for the purpose of the pre-assessment, with further credits sought in the full assessment.

Ene 2	Energy Efficiency Rating Post Refurbishment	2 credits	2.965%
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As discussed with the SAP Assessor for Ene 1, a minimum Energy Efficiency Rating of 65 is sought and achieving a minimum of 2 credits, though a higher level may be possible following the full SAP calculation.

Ene 3	Primary Energy Demand	4 credits	5.930%
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As discussed with the SAP Assessor for Ene 1, Primary Energy Demand targets of less than 240kWh/m²/year are sought and achieving 4 credits.

Ene 4	Renewable Technologies	1 credit	1.480%
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The inclusion of a heating system utilizing a renewable energy source. - Systems considered include Gas central heating combined with a solar hot water system, Solar PV system, and air to water air source heat pump. A minimum of 10% of the dwellings Primary Energy Demand is to be provided via the renewable technology. This will achieve a minimum of 1 credit.

Ene 5	Energy Labelled White Goods	2 credits	2.965%
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All appliances installed are to be rated under the EU Energy Efficiency Labelling Scheme, and will achieve the minimum required levels as set out in the CSH. This includes the installation of A+ rated fridge freezers, A rated washing machines and dishwashers, and a B rated tumble dryer.

Ene 6	Drying Space	1 credit	1.480%
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Internal drying spaces are to be provided for each dwelling of suitable line length.

Ene 7	Lighting	1 credit	1.480%
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100% of internal lighting is to be provided via dedicated energy efficient light fittings. All external space and security lighting is to be installed in private and common areas with appropriate controls. All lighting to be provided with energy efficient fittings. Achieving 2 credits.

Ene 8	Display Energy Devices	2 credits	2.965%
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Devices to display electricity and primary heating fuel consumption are to be installed in each dwelling, achieving a maximum of 2 credits. An additional credit is awarded for installing devices with recordable capabilities.

Ene 9	Cycle Storage	2 credits	2.965%
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The cycle storage as indicated on the application drawing will provide secure and safe storage for 2 cycles per dwelling.

Ene 10	Home Office	1 credit	1.480%
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Sufficient space and services are to be installed in an appropriate location within each dwelling to allow occupants to set up a home office.

Wat 1	Internal Water Use	1.5 credits	3.300%
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Current building regulations require a maximum daily consumption of 125l per person. Through the selection of taps and showers with low flow rates, and low dual flush toilets, a consumption of less than 125l per person per day is achievable.

Wat 2	External Water Use	1 credit	2.200%
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Rainwater butts are to be provided within the communal external areas of the development.

Wat 3	Water Meter	1 credit	2.200%
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Each dwelling is to have a new water meter installed to meet the requirements set out in the compliance notes of the BREEAM Domestic Refurbishment technical guidance.

Mat 1	Environmental Impact of Materials	15 credits	2.640%
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BRE has published life cycle analysis of many common construction materials in the Green Guide to Specification. The Green Guide rates building construction elements from A+ to E, and applies to 5 major construction elements – floors, roofs, internal walls, external walls, and windows.

Initial calculations indicate a minimum of 15 credits are available, with the possibility of increasing when further construction drawings and specifications are created.

Mat 2	Responsible Sourcing of Materials	6 credits	1.065%
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A minimum of 6 credits are to be sought through considerate selection and monitoring of material use.

Mat 3	Insulation	8 credits	1.420%
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The embodied impact of all insulation material is to be assessed under the green guide, and calculated with the BREEAM Domestic Refurbishment Mat 3 Calculator tool to determine the available credits. Responsible sourcing of the insulants are to be assessed. The full 8 credits are sought for this element.

Pol 1	Nitrogen Oxide Emissions	2 credits	1.500%
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Nitrogen oxide emissions will be kept to a minimum with a Class 5 boiler or equivalent heating system, achieving 2 credits. Should an ASHP be installed, then all 3 credits can be awarded due to emitting 0mg/kWh NOx.

Pol 2	Surface Water Run-Off	1 credit	0.750%
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The surface water run-off from the building is to remain unaltered by the development, though cannot be improved due to the local infrastructure, therefore 1 credit is sought.

Pol 3	Flooding	2 credits	1.500%
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Viewing the flood risk map available on the Environment Agency website, we can confirm that the development is not within a flood risk zone. Further assessments are to be carried out by a suitably qualified professional to confirm that the development is at low risk of flooding.

Was 1	Household Waste	2 credit	1.200%
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Sufficient internal waste and recycling storage is to be provided for each dwelling. The provision of suitable recycling and waste storage will achieve the maximum of 2 credits. The local authority collection scheme is in place and will be utilized.

Was 2 Refurbishment Site Waste Management	3 credits	1.800%
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A site waste management plan is to be provided prior to commencement on site to ensure target benchmarks for efficiency are met, procedures and commitments are actioned, and all monitoring and measuring of waste is carried out.

Inn 1 Innovation	2 credits	2.000%
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The innovation credits are sought within categories Man 6 and Ene 8.

Man 6 - With the appointment of a BREEAM assessor prior to the RIBA stage C of the development, and the regular documentation and reporting of the progress of the assessment and development, an exemplar credit is sought.

Ene 8 – The compliant energy display devices are to have the capability of recording the consumption data, and awarding an exemplar credit.

BREEAM Domestic Refurbishment 2012 Pre-Assessment Estimator v0.5: Results Summary



Building name	
Indicative Building Score	71.32%
Indicative Building Rating	BREEAM Very Good

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.

	Issue	Credits Available	Indicative Credits Achieved	Weighting	Section Score
Management	Man 01	3	3	12%	8.73%
	Man 02	2	2		
	Man 03	1	0		
	Man 04	2	1		
	Man 05	1	0		
	Man 06	2	2		

Health and Wellbeing	Hea 01	2	0	17%	11.33%
	Hea 02	4	4		
	Hea 03	1	1		
	Hea 04	2	0		
	Hea 05	2	2		
	Hea 06	1	1		

Energy	Ene 01	6	3	43%	29.66%
	Ene 02	4	2		
	Ene 03	7	4		
	Ene 04	2	1		
	Ene 05	2	2		
	Ene 06	1	1		
	Ene 07	2	2		
	Ene 08	2	2		
	Ene 09	2	2		
	Ene 10	1	1		

Water	Wat 01	3	1.5	11%	7.70%
	Wat 02	1	1		
	Wat 03	1	1		

Materials	Mat 01	25	15	8%	5.16%
	Mat 02	12	6		
	Mat 03	8	8		

Waste	Was 01	2	2	3%	3.00%
	Was 02	3	3		

Pollution	Pol 01	3	2	6%	3.75%
	Pol 02	3	1		
	Pol 02	2	2		

Innovation	10	2	N/A		2.00%
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	Minimum Standards				
	Pass	Good	Very Good	Excellent	Outstanding
Ene 02	✓	✓	✓	✗	✗
Wat 01	✓	✓	✓	✗	✗
Hea 05	✓	✓	✓	✓	✓
Hea 06	✓	✓	✓	✓	✓
Pol 03	✓	✓	✓	✓	✓
Mat 02	✓	✓	✓	✓	✓

