



BREEAM Domestic Refurbishment Pre-assessment Report

Old Kings Head
Hampton Court Road
Hampton Wick
Kingston Upon Thames

29th July 2020

Prepared for:

Eastmont Holdings Ltd
c/o Nicholson House
41 Thames Street
Weybridge
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1.0 Site & Proposal

The development proposals consists of a project to convert a the former Kings Head public house into 4 x 2-bed flats and a commercial unit (Class A2) at ground floor.

The existing building is assumed to be of late Victorian era construction – rebuilt in the early 20th century.

Planning permission is sought under application reference DC//19/0357/FUL to:-

“Replacement French doors with balconies/ creation of roof terrace on first floor western and southern elevation, installation of 2 no. conservation style rooflights southern and western roof slopes to facilitate the conversion of public house with staff accommodation into 1x commercial unit in A2 Use and 4 no. 2 bed flats”

The client has requested for a report to be put together to demonstrate BREEAM Domestic Refurbishment ‘Excellent’ level can be achieved for the newly created flats.

For the purposes of this report the sections Ene 01-Ene 03 have been calculated on the proviso that the main building is of solid walled construction and generally very [poorly insulated.

It is expected that the project budget will have an allowance to be utilised in achieving improvements in overall energy efficiency for the dwellings and the associated improved sustainability credentials.

2.0 What is BREEAM Domestic Refurbishment?

Replacing Eco Homes in **July 2012**, the BREEAM Domestic Refurbishment scheme is used to assess the environmental life cycle impacts of refurbishment projects including existing dwelling undergoing refurbishment, extensions, domestic conversions and change of use projects in the UK only.

'Domestic Refurbishment' is classified under two categories:

1. Alterations to existing dwellings and extensions
2. Domestic conversions and change of use projects

BREEAM Domestic Refurbishment is a performance based assessment method and certification scheme for domestic buildings undergoing refurbishment. The primary aim of BREEAM Domestic Refurbishment is to improve the environmental performance of existing dwellings in a robust and cost-effective manner.

This is achieved through integration and use of the scheme by clients and their project teams at key stages in the refurbishment process. This enables the client, through personnel qualified and licensed under the BREEAM Domestic Refurbishment Scheme and the BRE Global certification process, to measure, evaluate and reflect the performance of their refurbishment project against best practice in an independent and robust manner.

This performance is quantified by a number of individual measures and associated criteria stretching across a range of environmental issues as described in **Appendix A**.

1.1 Advantages of Meeting the BREEAM standards

1. Reduced maintenance costs.
2. Reduced greenhouse gases.
3. Reduced impact on environment.
4. Provide affordable warmth.
5. Healthy and comfortable internal environment.
6. Improved sustainability credentials.
7. Increased level of occupant satisfaction.
8. Outperforms open market housing in terms of energy demand - increased sale-ability.
9. Demonstrates forward thinking and environmental awareness on the part of the Developers and Housing providers.

1.2 BREEAM Rating benchmarks

The BREEAM rating benchmarks for domestic refurbishment projects assessed using the 2014 version of BREEAM Domestic Refurbishment are as follows:

BREEAM Rating	% Score
Outstanding	>85
Excellent	>70
Very Good	>55
Good	>45
Pass	>30
Unclassified	<30

The BREEAM rating benchmark levels enable a client or other stakeholder to compare an individual building's performance with other BREEAM rated buildings and the typical sustainability performance of refurbished domestic buildings in the UK.

In this respect, each BREEAM rating level broadly represents performance equivalent to:

- **Outstanding:** Less than top 1% of UK domestic refurbishments (innovator)
- **Excellent:** Top 10% of UK domestic refurbishments (best practice)
- **Very Good:** Top 25% of UK domestic refurbishments (advanced good practice)
- **Good:** Top 50% of UK domestic refurbishments (intermediate good practice)
- **Pass:** Top 75% of UK domestic refurbishments (standard good practice)

3.0 Overall Score & BREEAM Performance

The proposed development should achieve **74.38%** which equates to an '**Excellent**' Rating

3.1 Detailed Breakdown

A detailed breakdown of the BREEAM categories, the recommendations to the developers and how the development will achieve the necessary credits for an 'Excellent' rating is attached in **Appendix A**. This also includes the evidence that will be needed to be provided at the formal design stage assessment design/post construction stage.

3.2 Pre-assessment Estimator – Results Summary

The BREEAM Domestic Refurbishment pre-assessment estimator is attached at **Appendix B** which includes the indications of the percentage contribution of each section to the overall score.

4.0 CONCLUSION

The Developer and Principle Contractor will be committed to achieving the required score with the above recommendations incorporated into the specification. Occupiers of the dwelling will enjoy reduced operating and life cycle costs due to the enhancement over and above current Building Regulations and built in features designed to reduce environmental impact and greenhouse gases. Overall the carbon footprint of the scheme will be minimised and all stakeholders involved stand to benefit as a result of the assessment and recommendations.

Report Prepared by:-

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BREEAM Ref – Neil Ingham NI03

Assessor



Date:

29th July 2020

Checked



Date:

29th July 2020

Appendix A

Project Performance Against Assessment Criteria

Old Kings Head
BREEAM Domestic Refurbishment

Target: Excellent 74.38

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Management

Reference	Description	Compliance Requirements	Assessment Criteria	Definite	Possible	Not Targeted	Max credits	Pre-assessment	Action/Responsible Person	Tracker
Man 1 - Home User Guide	Provision of Home User Guide to all units (3 credits)	Provide Home User Guides (HUGs) for each dwelling containing a minimum of the below: - User Guide Contents list - About BREEAM domestic refurbishment - Recommendations report on how homes can be improved in the future - Energy efficiency features and strategies information - Water use - Transport facilities - Materials and waste - Emergency information - Local amenities - Links and references	1	3			3	Provide a compliant HUG based on section details	Developer	
Man 2 - Responsible construction practices	Considerate Constructors (2 credits)	Option 1 - Where the principal contractor has used the Considerate Constructors Scheme (CCS), credits are awarded depending on CCS score (One credit 24 - 31.5, two credits 32 - 35.5) Option 2 - Where the principal contractor has used a compliant alternative scheme as detailed in CN4. Credits are awarded on the level of compliance with the alternative scheme	1 to 4	1	1		2	Achieve a minimum of 25 in the Considerate Constructors Scheme	Contractor	
Man 3 - Construction site impacts	Construction site impacts (1 credit)	Encourage refurbishment site impacts to be managed in an environmentally sound manner Large scale projects: Where there is evidence to demonstrate that 2 or more of the sections a-e in Appendix A: Man 03 are completed Small scale projects: Where there is evidence to demonstrate that 2 or more of the sections a-d in Checklist A-6 are completed	2	1			1	All site timber used is sourced in accordance with the UK Government's Timber Procurement Policy - PEFC/FSC certified and chain-of-custody Share predicted and collated data on the monitoring of energy, water and transport on site	Contractor	
Man 4 - Security	Secure Windows and Doors (1 credit)	One credit: Secure windows and doors - Where retained doors and accessible windows comply with the minimum security requirements as set out in CN6 - External doors and windows appropriately certified	1 to 4	1			2	Target 1 credit through use of good quality, secure windows and doors with working key locks and strong frames All glass should be a minimum of double glazed	Architect	
	Secured by Design (2 credits)	Two credits: Secure by design - Where the principles and guidance of Secured by Design Section 2 - Physical Security are complied with - A suitably qualified security such as Police Architectural Liaison Officer (ALO) or Crime Prevention Design advisor is consulted at the design stage and their recommendations are incorporated into the refurbishment specification		1			2	Suitably qualified security consultant (ALO or CPDA) to be consulted at design stage and recommendations are incorporated into design		
Man 5 - Protection and Enhancement of ecological features	Protection ecological features (1 credit)	1. Where a site survey is carried out by a member of the project team or a Suitably Qualified Ecologist (SQE) to determine the presence of ecological features. 2. Where protected species have been identified as present on site, the relevant Statutory Nature Conservation Organisation (SNCO) has been notified and protected species have been adequately protected 3. Where all existing features of ecological value (including any of those listed in CN1) on the refurbishment site potentially affected by the works, are maintained and adequately protected during refurbishment works.	1 to 3	1			1	eb7 to assess impact on biodiversity from before and after drawings	eb7	
Man 6 - Project management	Project Roles and responsibilities (1 credit)	Project roles and responsibilities: a. For smallscale projects: the project manager writes a project implementation plan and holds an initiation meeting to assign individual and shared responsibilities amongst the project team including all trades on site: b. For large scale projects, the project manager assigns individual and shared responsibilities across the key design and refurbishment stages	1 to 3	1			2	1. Provide list of stakeholders consulted 2. Agenda/minutes from the consultation meetings 3. Documentation demonstrating consultation feedback and subsequent actions	Developer	
	Handover and Aftercare (1 credit)	Handover and aftercare: - Handover meeting is arranged - Where 2 or more of items a-c have been committed to determine project success: - 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		1			2	Commitment to arranging handover meeting and aftercare support including site inspection with occupant interviews 3 months post occupation		
SECTION CREDIT SCORE				9.81818182	2.18181818	0	11			

Health & Wellbeing

Hea 1 - Daylighting	Maintaining good daylighting (1 credit)	First credit: Refurbished: The refurbishment results in a neutral impact on the dwellings daylighting levels in the kitchen, living room, dining room and study with "no" answered for all questions in Appendix A: Hea 01, parts 1 and 2 (for existing dwellings) or parts 3 and 4 (for change of use e.g. conversions). Extended: a. new spaces achieve minimum daylighting levels See Criteria CN1 b. the extension does not significantly reduce daylighting levels in the kitchen, living room, dining room or study of neighbouring properties. See CN4	1 to 3	1			2	Extended space created to have at least a neutral impact on existing spaces Daylight calcs might be required		
	Minimum daylighting (1 credit)	Second credit: The dwelling achieves minimum daylighting levels in the kitchen, living room, dining room and study See Criteria CN1				1	2	Issue not targeted		
Hea 2 - Sound insulation	Sound testing (Up to 4 credits)	Where sound testing has been carried out and where the dwelling meets or goes beyond Regulations, up to four credits may be awarded according to the sound insulation credit requirements as shown in Table - 13 and Table - 14. 2 credits: Part compliance 3 credits: 3dB higher than Part E	1	3		1	4	Appoint Suitably Qualified Acoustician to advise on sound insulation for dwellings Target 3dB improvement on Part E	Acoustician	

		4 credits: 5dB higher than Part E										
Hea 3 - Volatile Organic Compounds	Avoiding the use of VOCs (1 credit)	1. Where all decorative paints and varnishes used in the refurbishment have met the requirement in Table - 15. 2. Where at least five of the eight remaining product categories listed have met the testing requirements and emission levels for Volatile Organic Compound (VOC) emissions against the relevant standards identified in Table - 15. 3. Where five or fewer products are specified	1 to 3	1				1	Avoid use of products containing VOCs - To be inline with the the relevant standards	Contractor		
Hea 4 - Inclusive design	Minimum accessibility (1 credit)	One credit: An access expert or suitably qualified member of the design team (CN6) has completed section 1 of Checklist A8; Access Statement Template, accessibility template with evidence provided of the measures implemented in the refurbishment	1 and 2				1		Issue kept in reserve	Developer		
	Advanced accessibility (2 credits)	Two credits: An access expert or suitably qualified member of the design team (CN6) has completed sections 1 and 2 of Checklist A8; Access Statement Template with evidence provided of the measures implemented in the refurbishment					1		Issue not targeted			
Hea 5 - Ventilation (min standard - 1 credit)	Minimum Ventilation standards (1 credits) Advanced ventilation standards (1 credits)	One credit: 1. 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 2. A minimum level of extract ventilation is provided in all wet rooms (e.g. kitchen, utility and bathrooms), compliant with section 5, Building Regulations Approved Document Part F 2010. 3. 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. 4. The building is a historic building (CN4) and meets the requirements for Historic Buildings below. Two credits: 5. Ventilation is provided for the dwelling that meets the requirements of Section 5 of Building Regulations Part F in full 6. Where the building is a historic building and meets the requirements for Historic Buildings (CN4).	1 to 6	1	1		2	Ventilation design to meet requirements of Building Regulations Part F section 3.11-3.16 Minimum 1 credit must be obtained Whole house extract	M&E			
Hea 6 - Safety (min standard - 1 credit)	Fire and carbon monoxide detection and alarm systems (1 credit)	1. Where the dwelling is provided with a compliant fire detection and alarm system in accordance with relevant compliance notes 2-9 2. Where the dwelling is supplied with mains gas or where any other form of fossil fuel is used within the building (e.g. coal), a compliant carbon monoxide detector and alarm system is provided in accordance with relevant compliance notes 2-9 3. Where the project involves electrical re-wiring the power supply for the smoke alarm and compliant carbon monoxide alarm systems are derived from the dwellings main electricity supply in accordance with CN5. Please see CN9 for compliance where properties are undertaking electrical rewiring 4. Where the project does not involve electrical re-wiring the power supply for the smoke alarm and carbon monoxide alarm systems are derived from a battery supply	1 to 4	1			1	Requires installation of compliant mains fed fire detection system and carbon monoxide alarm	Contractor			
SECTION CREDIT SCORE				9.91666667	2.83333333	4.25	12					
Energy	Ene 1 - Improvement in Energy in Energy Efficiency Rating	Improving the dwellings Energy Efficiency Rating (up to 6 credits)	Where the refurbishment results in an improvement to the dwelling's Energy Efficiency Rating, in accordance with CN2.	1	3	3		6	Target 3 credits at pre-assessment stage - SAP outputs determine credits scored	eb7		
	Ene 2 - Energy Efficiency Rating Post Refurbishment (min. standard - 2.5 credits)	EER Post Refurbishment (Up to 4 credits)	Where as a result of refurbishment, the dwelling meets a minimum Energy Efficiency Rating, credits can be awarded	1	3	1		4	Target 3 credits at pre-assessment stage - SAP outputs determine credits scored Minimum 2.5 credits must be achieved for excellent	eb7		
	Ene 3 - Primary Energy Demand	Primary Energy Demand (up to 7 credits)	Primary Energy Demand Targets. Where as a result of refurbishment the dwelling meets the Primary Energy Demand targets, up to 7 credits may be awarded:	1	6	1		7	Target 6 credits at pre-assessment stage - SAP outputs determine credits scored	eb7		

Ene 4 - Renewable Technology	10% improvement (1 credit) 15% improvement (2 credits)	One credit: 1. Where at least 10% of the dwellings Primary Energy Demand per annum is supplied by low or zero carbon technologies AND 2. Where the dwelling has reduced energy demand prior to the specification of renewable technologies with a maximum Primary Energy Demand as follows: a. For detached, semi-detached, bungalows and end terraces: 250 kWh/m ² /year b. Mid terraces and flats: 220 kWh/m ² /year Two credits: 3. Where for mid to high rise flats at least 15% of each dwellings Primary Energy Demand per annum is supplied by low or zero carbon technologies 4. Where for dwellings other than mid to high rise flats at least 20% of each dwellings Primary Energy Demand per annum is supplied by low or zero carbon technologies AND 5. Where the dwelling has reduced energy demand prior to the specification of renewable technologies with a maximum Primary Energy Demand as follows: a. For detached, semi-detached, bungalows and end terraces: 250 kWh/m ² /year b. Mid terraces and flats: 220 kWh/m ² /year	1 to 2			2	2	Issue not targeted	
Ene 5 - Energy Labelled White Goods	Energy Labelled White Goods (2 credits)	One credit: 1. Fridges and freezers or fridge-freezers are recognised by the Energy Saving Trust Recommended labelling scheme, carrying the Energy Saving Trust Recommended Label OR 2. Where no white goods are provided to the dwelling(s) but the EU Energy Efficiency Labelling Scheme Information Leaflet is provided to each dwelling Second credit: 3. Washing machines and dishwashers are recognised by the Energy Saving Trust Recommended labelling scheme, carrying the Energy Saving Trust Recommended Label AND EITHER 4. Washer dryers and tumble dryers have a B rating under the EU Energy Efficiency Labelling Scheme (where a washer dryer is provided, it is not necessary to also provide a washing machine) OR 5. Where a washer dryer or tumble dryer is not provided, the EU Energy Efficiency Labelling Scheme Information Leaflet is provided to each dwelling	1 to 5	2			2	Target A+ fridge/freezers, washing machines from the EU Energy Efficiency Labelling Scheme B rating tumble dryers Include EU Labelling scheme certificates to be included in HUG	Developer
Ene 6 - Drying Space	Drying Space (1 credit)	1. An adequate, secure internal or external space with posts and footings, or fixings holding: a. 1-2 bedrooms: 4m+ of drying line b. 3+ bedrooms: 6m+ of drying line	1	1			1	Provide 4m+ drying lane space for each apartment - must be a permanent fixture If internal must be in a heated space with adequate, controlled ventilation in line with Building Regs Part F	Developer
Ene 7 - Lighting	External lighting (1 credit) Internal lighting (1 credit)	One credit: 1. Where Energy Efficient Space lighting (including lighting in communal areas) and Energy Efficient Security lighting is provided OR 2. Where Energy Efficient Space lighting (including lighting in communal areas) and no Security Lighting is provided One credit: 3. One credit is awarded where the energy required for internal lighting is minimised through the provision of a maximum average wattage across the total floor area of the dwelling of 9 watts/m ²	1 to 3	2			2	Target both credits by appropriate lighting design and product selection Maximum total wattage over floor area must not be greater than 9 watts/m ² for each apartment	M&E
Ene 8 - Energy Display Devices	Primary heating OR electrical consumption monitored (1 credit)	One credit: 1. Where current electricity consumption data is displayed to occupants by a compliant energy display device OR 2. Where current primary heating fuel consumption data is displayed to occupants by a compliant Energy Display Device.	1 to 4	1				Install electricity and primary heating fuel consumption Smart Meter in each flat - Data to be easily accessible to occupants	Contractor
	Primary heating AND electrical consumption monitored (2 credits)	Two credits: 3. Where current electricity AND primary heating fuel consumption data are displayed to occupants by a compliant correctly specified Energy Display Device. OR 4. Where electricity is the primary heating fuel and current electricity consumption data are displayed to occupants by a compliant Energy Display Device.		1					
Ene 9 - Cycle Storage	To supply adequate and secure cycle storage (Up to 2 credits)	One credit: 1. Where individual or communal compliant cycle storage is provided for the following number of cycles: a. Studios or 1 bedroom dwellings - storage for 1 cycle for every two dwellings b. 2 and 3 bedroom dwellings - storage for 1 cycle per dwelling c. 4 bedrooms and above - storage for 2 cycles per dwelling Two credits: 2. Where individual or communal compliant cycle storage is provided for the following number of cycles: a. Studios or 1 bedroom dwellings - storage for 1 cycle per dwelling b. 2 and 3 bedroom dwellings - storage for 2 cycles per dwelling c. 4 bedrooms and above - storage for 4 cycles per dwelling	1 and 2	2			2	Basement level storage noted on drawings	Developer
Ene 10 - Home Office	Home Office (1 credit)	Where sufficient space and services have been provided which allow the occupants to set up a home office in a suitable room with adequate ventilation. The following services must be provided in the suitable room intended as a home office: - Two double power sockets - Telephone point - Window (either of the width and height are to be no less than 450mm) - Adequate ventilation (see CN4) - openable window	1	1			1	Home office provision to be installed in a suitable room as below: - Two double power sockets - Telephone point - Window (either of the width and height are to be no less than 450mm) - Adequate ventilation - openable window	Contractor
SECTION CREDIT SCORE				32.6206897	7.4137931	2.965517241	29		

Water	Wat 1 - Water consumption (min. standard - 2 credits)	Internal water use (Up to 3 credits)	1. Where terminal fittings meet the equivalent terminal fitting consumption standards as detailed in Table - 22 and Table - 23 OR 2. Where the BREEAM Domestic Refurbishment Wat 01 calculator is used to determine the dwellings water consumption, credits may be awarded depending on the calculated whole house water consumption as detailed in Table - 22	1 or 2	2.5		0.5	3	Targeted 2.5 credits at pre-assessment stage through careful selection of sanitaryware No greater than 118 litres/person/day Minimum 2 credits required	Developer		
	Wat 2 - External water use	Rainwater collection system (1 credit)	1. Where a compliant rainwater collection system for external/internal irrigation use has been provided to dwellings. OR 2. Where dwellings have no individual or communal garden space	1 or 2	1			1	Water butt to be installed for irrigation use	Developer		
	Wat 3 - Water meter	Water meter (1 credit)	Where an appropriate water meter for measuring usage of mains potable water has been provided to dwelling	1		1		1	Issue left in reserve			
	SECTION CREDIT SCORE				7.7	2.2	1.1	5				
Materials	Mat 1 - Environmental Impacts of Materials	Environmental impact of materials (Up to 25 credits)	1. The BREEAM Domestic Refurbishment Mat 01 calculator is used to determine the number of credits awarded. Credits are awarded according to the impact of new materials according to their GreenGuide Rating and their impact on improving the thermal performance of the dwelling for the following elements: a. Roof b. External walls c. Internal walls (including separating walls) d. Upper and ground floors e. Windows 2. Up to a maximum of 25 credits can be awarded through achieving a combination of the credits available for each element	1 and 2	18		7	25	18 credits targeted at pre-assessment stage eb7 to undertake materials calculations	Developer/eb7		
	Mat 2 - Responsible sourcing of materials (min. standards - criterion 3 only)	Responsible sourcing of materials (Up to 12 credits)	1. Where the applicable new materials for refurbished building elements are assigned a responsible sourcing tier level using a points based system The number of credits achieved is determined as follows using the BREEAM Domestic Refurbishment Mat 02 calculator: 3. Where all new timber used in the project is sourced in accordance with the UK Government's Timber Procurement Policy, as detailed in CN3. a. Copies of Environmental Product Declarations b. A link/reference to the EPD's Product Category Rules c. Online GreenGuide calculator output d. Environmental Profile certificate(s) (or certificate number)	1 to 3	9	4		15	9 credits targeted at pre-assessment stage through careful selection of product suppliers Products selected to be BES 6001 or ISO 14001 certified Minimum standard - All timber used in the project is to be sourced in accordance with the UK Government's Timber Procurement Policy	Developer		
	Mat 3 - Insulation	Embodied impact (4 credits)	Pre-requisite Any new insulation specified for use within the following building elements must be assessed: 1. External walls 2. Ground floor 3. Roof 4. Building services	1 to 3	4			Y	8	8 credits targeted at pre-assessment stage through careful selection of products Products selected to be BES 6001 or ISO 14001 certified Insulation with an embodied impact of ≥ 2 All insulation to be BES 6001 or ISO 14001 certified	Developer	
			Responsible sourcing (4 credits)									
SECTION CREDIT SCORE				5.83333333	0.66666667	1.16666667	48					
Waste	Wst 1 - Household waste	Adequate recycling facilities (1 credit) Adequate composting facilities (1 credit)	One credit: can be awarded where the dwelling complies with one of the scenarios detailed in Table - 31 Second credit: Dwellings with significant external private space - all of the following are met: 2. Where a composting service or facility is provided for green/garden waste 3. Where a composting service or facility is provided for kitchen waste 4. Where an interior container is provided for kitchen composting waste of at least seven litres OR Dwellings without significant external private space - all of the following are met: 5. Where a composting service or facility is provided for kitchen waste 6. Where an interior container is provided for kitchen composting waste of at least seven litres	1 to 6	2			2	Provisions to be put in place for internal and external bin stores External bin store noted on drawings All waste and composting provisions are to be in line with Richmond waste collection policy	Developer		

Pollution	Wst 2 - Refurbishment Site Waste Management	Site Waste Management Plan (Up to 3 credits)	Projects up to £100k: three credits are awarded 1. Where waste generated through the refurbishment process is managed in accordance with Appendix A: Was 02 Projects up to £300k: three credits are awarded: 2. Where a compliant Level 1 Site Waste Management Plan (SWMP) is in place in accordance with CN3. Projects over £300k: up to three credits are available: First credit – management plan 3. Where a compliant Level 2 SWMP is in place in accordance with CN4 Second credit – good practice waste benchmarks 4. Where the first credit has been achieved 5. Where Non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the resource efficiency benchmark in accordance with CN7 6. Where the amount of waste generated against £100,000 of project value is recorded in the SWMP 7. Where a pre-refurbishment audit of the existing building is completed in accordance with CN10 8. Where the demolition is included as part of the refurbishment programme, then the audit should also cover demolition materials Third credit – best practice waste benchmarks 9. Where the first two credits have been achieved 10. Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the refurbishment & demolition waste diversion benchmarks in accordance with CN8	1 to 10	3			3	Pre-refurbishment audit to identify amounts re-usable and recyclable materials Provide compliant Level 1 SWMP Please provide cost of project Responsible person to sort demolition waste into key waste groups - see table 32 - and measure amount generated and diverted from landfill	Contractor	
	SECTION CREDIT SCORE				3	0	0	5			
	Pol 1 - Nitrogen Oxide Emissions	Low level NOx emissions (Up to 3 credits)	1. 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: a. One credit where the dry NOx emissions of space heating and hot water systems are ≤ 100 mg/kWh (NOx class 4 boiler). b. Two credits where the dry NOx emissions of space heating and hot water systems are ≤ 70 mg/kWh (NOx class 5 boiler). c. Three credits where the dry NOx emissions of space heating and hot water systems are ≤ 40 mg/kWh.	1	3			3	Target ≤40 mg/kWh NOx emissions Please provide boiler specs	Developer	
	Pol 2 - Surface Water Runoff	Neutral impact on run-off (1 credit) Reducing run-off (up to 2 credits)	One credit: Neutral impact on surface water Two credits: reducing run-off from site: basic Three credits: Reducing run-off from site: advanced	1 to 7	1		2	3	eb7 can confirm neutral impact on surface water run-off as no increase in building footprint	eb7	
Pol 3 - Flooding (min. standard - 2 credits)	Low flood risk (2 credits) Medium or high flood risk and resilience measures in place (2 credits)	Minimum standards 1. A minimum of two credits must be achieved for this issue at the Excellent and Outstanding levels Option 1 – Low flood risk 2. 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 3. 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. 4. 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; Pol 03 5. 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	1 to 5	2			2	Site is in Flood Zone 3 (high risk) - Flood risk assessment to be carried out in line with the relevant criteria and to recommend resilience measures.	Hydrologist		
SECTION CREDIT SCORE				4.5	0	1.5	8				
Innovation	SEE CRITERIA REQUIREMENTS ABOVE										
Man 02				0	0	0	1				
Man 05				0	0	1	1				
Man 06				0	0	1	1				
Hea 04				0	0	1	1				
Ene 02				0	0	1	2				
Ene 08				0	0	1	1				
Wat 01				0	0	1	1				
Wat 02				0	0	1	1				
Pol 02				0	0	1	1				
SECTION CREDIT SCORE (MAX 5)				0	0	8	10				

Summary

Management
 Health & Wellbeing
 Energy
 Water
 Materials
 Waste
 Pollution
 Innovation
Totals

Definite	Possible	Not Available	Max Credits Available
9.82	2.18	0.00	22.00
9.92	2.83	4.25	12.00
32.62	7.41	2.97	29.00
7.70	2.20	1.10	5.00
5.83	0.67	1.17	48.00
3.00	0.00	0.00	5.00
4.50	0.00	1.50	8.00
0.00	0.00	8.00	10.00
74.38	15.30	18.98	139

Target 70 Credits - Excellent



Appendix B

BREEAM Domestic Refurbishment – Results Summary

Building name	Old Kings Head
Indicative Building Score	74.38%
Indicative Building Rating	BREEAM Excellent

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%	9.82%
	Man 02	2	1		
	Man 03	1	1		
	Man 04	2	1		
	Man 05	1	1		
	Man 06	2	2		

Health and Wellbeing	Hea 01	2	1	17%	9.92%
	Hea 02	4	3		
	Hea 03	1	1		
	Hea 04	2	0		
	Hea 05	2	1		
	Hea 06	1	1		

Energy	Ene 01	6	3	43%	32.62%
	Ene 02	4	3		
	Ene 03	7	6		
	Ene 04	2	0		
	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	2.5	11%	7.70%
	Wat 02	1	1		
	Wat 03	1	0		

Materials	Mat 01	25	18	8%	5.83%
	Mat 02	15	9		
	Mat 03	8	8		

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

Pollution	Pol 01	3	3	6%	4.50%
	Pol 02	3	1		
	Pol 02	2	2		

Innovation	10	1	N/A		1.00%
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	Minimum Standards				
	Pass	Good	Very Good	Excellent	Outstanding
Ene 02	✓	✓	✓	✓	✗
Wat 01	✓	✓	✓	✓	✗
Hea 05	✓	✓	✓	✓	✓
Hea 06	✓	✓	✓	✓	✓
Pol 03	✓	✓	✓	✓	✓
Mat 02	✓	✓	✓	✓	✓

