



## 1 Wadham Gardens, London

**BREEAM Domestic Refurbishment** 

Based on the BREEAM Domestic Refurbishment 2014 Design Stage Criteria (Issue 2.0)

Revision P1, 16 November 2015 - Planning Issue

**BRE Reference Number: TBC** 

## 1 Wadham Gardens, London

## **BREEAM Domestic Refurbishment Pre-Assessment Summary Sheet**

Revision P1, 16 November 2015- Planning Issue

Based on the BREEAM Domestic Refurbishment 2014 Technical Manual version 2.0 published 30/04/2015.

MINIMUM RATING REQUIRED: Very Good. This equates to a score of 55% and requires the achievement of certain mandatory credits.

Note that the scores shown are target scores only at this stage; gaining these scores in the final BREEAM assessment will depend on the project team submitting sufficient evidence to the BREEAM Assessor to show that the full credit requirements have been met (as outlined in the BREEAM Domestic Refurbishment Technical Manual).

**Baseline Target** 

This column shows the minimum credits which could be targeted to achieve a Very Good rating. This column gives a score of 55.44% which is a BREEAM rating of Very Good.

		CRED	ITS			
Credit		Credits Available Baseline Target		Summary of Requirements (refer to the BREEAM Domestic Refurbishment Technical Manual for the full credit requirements)	Comments/ Actions	
MANAG	EMENT					
Man 01	Home Users Guide	3	1 7	Inree credits awarded where a Home User Guide has been produced and supplied to all nomes. Refer to the	A Home Users Guide will be produced to achieve these credits.	
IVIGIT 01	Trome Osers Guide	)	3	BREEAM Technical Manual which details the contents that must be provided.	Three of three credits targeted.	
Man 02	Responsible Construction Practices	2		Where the principal contractor has used an independently assessed 'compliant' organisational, local or national considerate construction scheme. One credit awarded where a CCS score of 25-34 is achieved with 5 in each section. The second credit is awarded where the score is between 35-39 with 7 in each section.	The Contractor will be required to register the site with the Considerate Constructors Scheme and to achieve a score of at least 35 with 7 in each section to gain two credits.	
				An additional innovation credit is available - see below.	Two of two credits targeted.	
Man 03	Construction Site Impacts	1	1		The Contractor will be required to implement at least two of the relevant procedures to enable this credit to be achieved.	
				of timber, main contractor has an environmental materials statement, main contractor has an EMS	Credit targeted.	

Man 04	Security	2	1	One credit is awarded where all retained external doors and windows comply with certain minimum security requirements and new external doors and windows are certified to PAS 24:2007 and BS 7950:1997 respectively or LPS1175 Issue 7 Security Rating 1. Refer to the BREEAM Technical Manual for details of the minimum security requirements.  Two credits are awarded where Section 2 - Physical Security from 'Secured by Design New Homes' is complied with and an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at design stage and their recommendations are incorporated into the refurbishment specification (note an actual Secured by Design certificate is not required).	Existing doors and windows meet the minimum security requirements and any new external doors and windows will be specified to comply with relevant standards.  One of two credits targeted.
Man 05	Protection and Enhancement of Ecological Features	1	1	the relevant Statutory Nature Conservation Organisation must be notified and the species adequately protected. All existing features of ecological value (including trees, hedges, ponds, watercourses, wetland areas, Protected Species, Local Priority UK BAP species, roosting opportunities for bats and birds, heathland and heather) on the refurbishment site are maintained and adequately protected during refurbishment works.	An arboriculturalist has carried out a survey, and the proposals do not include removal of any trees. The Contractor will be required to ensure that any protection measures required are implemented in full.  Credit targeted.
Man 06	Project Management	2	2	One credit is awarded where all of the project team are involved in the project decision making and individual and shared roles and responsibilities are assigned as follows:  - small scale projects: PM produces a project implementation plan and holds a meeting to assign individual and shared responsibilities including all trades on site.  - large scale projects: PM assigns individual and shared responsibilities across the key design and refurbishment stages.  One credit is awarded where a handover meeting is arranged and there is a commitment to undertake at least 2 of the following: site inspection within 3 months of occupation; post occupancy interviews/survey with occupants within 3 months; longer term aftercare for at least 12 months after occupation.  Two additional innovation credits are available - see below.	Both credits are targeted at this stage.
Sub-Total		11	10	One management credit equals 1.09%	
Weighted	-	12.0	10.90	One management creat equals 1.05/0	
HEALTH	AND WELLBEING			<b>_</b>	<del> </del>
Hea 01	Daylighting	2	1		As the basement extension only includes bedrooms and bathrooms, these do not need to comply with the criteria.  Daylighting levels to all other relevant spaces should meet the requirements based on current layouts.  One of two credits targeted.
				Refer to the Technical Manual for details of the minimum daylighting criteria.	

Hea 02	Sound Insulation	4		Credits awarded where it is demonstrated that the requirements of National Regulations are met or exceeded as follows:  2 credits - compliance; 3 credits - airborne sound insulation values are at least 3dB higher; 4 credits - airborne sound insulation values are at least 5dB higher.  Pre-completion testing by a Suitably Qualified Acoustician may be required to demonstrate compliance in some instances, and credits may be achievable by default in certain instances - see BREEAM Technical Manual for details.	Two credits are targeted at this stage based on compliance with Building Regulations being achieved.  Two of four credits targeted.
Hea 03	Volatile Organic Compounds	1	1	Credit awarded where all decorative paints and varnishes meet the requirements in Table 14. In addition, at least five of the remaining eight categories meet the testing requirements and emission levels for VOC emissions against the relevant standards.	All relevant materials will procured in line with the requirements of this credit.  Credit targeted.
Hea 04	Inclusive Design	2	0	Up to two credits are awarded where an access expert or suitably qualified member of the team has completed sections 1 and 2 of Checklist A8; Access Statement Template and inclusivity measures are implemented in the refurbishment. The statement must demonstrate that reasonable provision for accessibility to the dwelling has been made.  An additional innovation credit is available - see below.	Due to the restrictions of the existing building layout and design it will not be possible to achieve either of these credits.  Credits not targeted.
Hea 05	Ventilation	2	1	One credit awarded where the dwelling meets the following standards: minimum level of background ventilation for all habitable rooms, kitchens, utility rooms and bathrooms; minimum level of extract ventilation with heat recovery in wet rooms which comply with Building Regulations Part F; minimum level of purge ventilation in habitable rooms and wet rooms.  Two credits are awarded for full compliance with the requirements of Section 5 of the Building Regulations Part F.  Mandatory minimum: One credit for Pass, Good, Very Good, Excellent and Outstanding.	The first credit will be achieved based on compliance with Building Regulations for extract and purge ventilation.  One of two credits targeted.
Hea 06	Safety	1	1	One credit awarded where a compliant fire and carbon monoxide detector and alarm system is provided in dwellings that use gas or other fossil fuels. These should be derived from the main electricity supply to the dwelling where the project involves electrical re-wiring. If not, the alarms should be powered from a battery supply.  Mandatory minimum: One credit for Pass, Good, Very Good, Excellent and Outstanding.	A compliant system will be installed to achieve this mandatory credit.  Credit targeted.
Sub-Total		12	6		
Weighted	Weighted Sub-Total 17.0 8.50 One health and wellbeing credit equals 1.42%				

ENERGY					
FNEUT	Improvement in Energy Efficiency Rating	6	0	Up to six credits are awarded on a sliding scale depending on the improvement in the Energy Efficiency Rating (EER), over the pre-refurbishment EER as determined from the EPC or full SAP calculations. Refer to the BREEAM Technical Manual for details of the levels of improvement needed to achieve a certain number of credits.	
Ene 02	Energy Efficiency Rating Post Refurbishment	4		Up to four credits are awarded where, as a result of the refurbishment, the dwelling meets a minimum Energy Efficiency Rating. Refer to the BREEAM Technical Manual for details of the EER levels required to achieve a certain number of credits.  Mandatory minimum: 0.5 credits for Pass, 1 credits for Good, 2 credits for Very Good, 2.5 credits for Excellent and	The mandatory minimum EER for a Very Good rating of at least 65 will be achieved post refurbishment, although opportunities to improve this will be sought as the design progresses.
Ene 03	Primary Energy Demand	7	3	3.5 credits for Outstanding.  Up to seven credits are awarded where, as a result of the refurbishment, the dwelling meets the Primary Energy Demand targets (kWh/m²/year). Refer to the BREEAM Technical Manual for details of Post Refurbishment Primary Energy Demand required to achieve a certain number of credits.	SAP calculations will need to be undertaken to confirm how many credits can be achieved, and a conservative estimate of 3 credits is currently targeted.  Three of seven credits targeted.
Ene 04	Renewable Technologies	2		One credit awarded where at least 10% of the dwellings Primary Energy Demand per annum is supplied by low or zero carbon technologies and where the dwelling has reduced energy demand prior to the specification of LZC technologies with a Primary Energy Demand of 250kWh/m²/year for detached, semi-detached, bungalows and end terraces or 220kWh/m²/year for mid terraces and flats.  Two credits where at least 20% of the Primary Energy Demand per annum is supplied by LZC technologies (15% for mid/high rise flats) in addition to reductions in energy demand.	Given site size restrictions and the location within a Conservation area, there is limited scope for the specification of LZCs to enable these credits to be achieved.  Credits not targeted.
Ene 05	Energy Labelled White Goods	2	2	One credit is awarded if fridges, freezers and fridge/freezers with an A+ rating or better under the EU Energy Efficiency Labelling Scheme are specified  OR where no white goods are provided information on the EU Energy Efficiency Labelling Scheme is provided to each dwelling.  One credit is awarded where washing machines have an A++ rating or better and dishwashers have an A+ rating or better under the EU Energy Efficiency Labelling Scheme EITHER washer dryers and tumble dryers have an A rating or better under the EU Energy Efficiency Labelling Scheme  OR if no washer dryer or tumble dryer is provided, information on the EU Energy Efficiency Labelling Scheme is provided to each dwelling.	Two credits will be achieved via the provision of energy efficient equipment.  Two of two credits targeted.
Ene 06	Drying Space	1	1	One credit is awarded where secure drying space is provided in a compliant external or internal space. Drying equipment must be capable of holding 4m+ of drying line for one/two bed dwellings, or 6m+ of drying line for three+ bed dwellings.	Each apartment will be provided with a drying line either internally or externally depending on the availability of a compliant space.  Credit targeted.

				One credit is awarded where all space lighting, including lighting in common areas, and security lighting is provided	
				by energy efficient fittings or where energy efficient space lighting is provided but no security lighting.	New LED lighting is to be installed throughout so at least one credit
Ene 07	Lighting	2	1		will be achievable.
				One credit is awarded where the energy required for internal lighting is minimised through the provision of a	One of two credits targeted.
				maximum average wattage across the total floor area of the dwelling of 9W/m <sup>2</sup> .	One of two credits targeted.
i				One credit is awarded where either current electricity or primary heating fuel consumption data is displayed to	A fully compliant device will be installed to each apartment to
				occupants by a compliant energy display device.	achieve these two credits as well as the exemplary level criteria, in
Ene 08	Energy Display Devices	2	2	Two credits are awarded where both electricity and primary heating fuel consumption data are displayed.	addition to the credit available for a water use display device.
				An additional innovation credit is available - see below.	Two of two credits targeted.
				One credit is awarded where compliant cycle storage is provided as follows:	
				- Studios/one bedroom dwellings - 1 cycle per 2 dwellings	Pasad on current plans there is limited notantial to provide internal
				- Two/three bedroom dwellings - 1 cycle per dwelling	Based on current plans there is limited potential to provide internal storage for all apartments, although communal storage for 6 cycles
				- Four+ bedroom dwellings - 2 cycles per dwelling	can be provided in a shed externally. Site restrictions prevent
Ene 09	Cycle Storage	2	1	Two credits are awarded where the following is provided:	provision of 12 storage spaces to achieve the second credit.
				- Studios/one bedroom dwellings - 1 cycle per dwelling - Two/three bedroom dwellings - 2 cycles per dwelling	
				- Four+ bedroom dwellings - 4 cycles per dwelling	One of two credits targeted.
				Refer to the Technical Manual for details of compliant cycle storage.	
					Although the majority of apartments have sufficient space to
					accommodate a home office area in an appropriate room,
Fno 10	Home Office	1	0	One credit is awarded where sufficient space and services are provided (including a minimum wall length of 1.8m) to allow for a desk and filing cabinet or bookshelf to be installed by the occupant. The location must have 2 double	apartment 4 may not, although a query will be raised with the BRE
Life 10	nome office	1	U	power sockets, telephone point, a window and adequate ventilation.	to determine if this can be located in the dining area.
					Credit not targeted pending BRE query response.
Sub-Total	<u> </u> 	29	12		
Weighted	d Sub-Total	43.0	17.79	One energy credit equals 1.48%	
WATER					
		T		Up to three credits are awarded depending on the water usage predicted using the BREEAM Domestic	
				Up to three credits are awarded depending on the water usage predicted using the BREEAM Domestic Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller	
				Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.	At least one credit will be achieved and specification options will be
Wat 01	Internal Water Use	3	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.	At least one credit will be achieved and specification options will be explored to determine if this could be increased.
Wat 01	Internal Water Use	3	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.	explored to determine if this could be increased.
Wat 01	Internal Water Use	3	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.	·
Wat 01	Internal Water Use	3	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.	explored to determine if this could be increased.
				Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such	explored to determine if this could be increased.  One of three credits targeted.
	Internal Water Use  External Water Use	3	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by	explored to determine if this could be increased.  One of three credits targeted.  Water butts will be installed to those apartments with an external
				Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such	explored to determine if this could be increased.  One of three credits targeted.  Water butts will be installed to those apartments with an external
				Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by	One of three credits targeted.  Water butts will be installed to those apartments with an external garden area to achieve this credit.  Credit targeted.
Wat 02	External Water Use	1	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by default if no individual or communal garden spaces are specified or if only balconies are provided.  One credit is awarded where an appropriate water meter for measuring usage of mains potable water is provided to dwellings. The meter should have a visible display of consumption, be a permanent feature in a visible location,	One of three credits targeted.  Water butts will be installed to those apartments with an external garden area to achieve this credit.  Credit targeted.
Wat 02				Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by default if no individual or communal garden spaces are specified or if only balconies are provided.  One credit is awarded where an appropriate water meter for measuring usage of mains potable water is provided to dwellings. The meter should have a visible display of consumption, be a permanent feature in a visible location, capable of recording and displaying historic water use and current consumption either instantaneously or at half	One of three credits targeted.  Water butts will be installed to those apartments with an external garden area to achieve this credit.  Credit targeted.  A compliant water meter display device will be installed to achieve this and all credits under Ene 08.
Wat 02	External Water Use	1	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by default if no individual or communal garden spaces are specified or if only balconies are provided.  One credit is awarded where an appropriate water meter for measuring usage of mains potable water is provided to dwellings. The meter should have a visible display of consumption, be a permanent feature in a visible location, capable of recording and displaying historic water use and current consumption either instantaneously or at half	One of three credits targeted.  Water butts will be installed to those apartments with an external garden area to achieve this credit.  Credit targeted.  A compliant water meter display device will be installed to achieve
Wat 02 Wat 03 Sub-Total	External Water Use  Water meter	1	1	Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.  An additional innovation credit is available - see below.  Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.  One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by default if no individual or communal garden spaces are specified or if only balconies are provided.  One credit is awarded where an appropriate water meter for measuring usage of mains potable water is provided to dwellings. The meter should have a visible display of consumption, be a permanent feature in a visible location, capable of recording and displaying historic water use and current consumption either instantaneously or at half	One of three credits targeted.  Water butts will be installed to those apartments with an external garden area to achieve this credit.  Credit targeted.  A compliant water meter display device will be installed to achieve this and all credits under Ene 08.

Assessment of this credit is based bot	
Mat 01  Environmental Impact of Materials  Description of Materials specified, their Green Guide ratings and, if required, their thermal performance. Credits are determined via the BREEAM Domestic Refurbishment Mat 1 existing and newly specified materials achieve additional credits.	nd new materials, and at this pending a full appraisal of
Ten of twenty-five credits targeted at	t this stage.
Pre-Requisite 0 Y MANDATORY FOR ALL RATINGS: Pre-requisite - All timber used on the project is 'Legally harvested and traded timber' All new timber will be responsibly sou	rced.
For three credits: Where the principal contractor sources materials in accordance with a documented sustainainable procurement plan or: Where the principal contractor is a 'micro-enterprise' Parts 1,2 &3 of Checklist A9 are  Sustainable procurement plan  3  3  For two credits: Where the principal contractor is a 'micro-enterprise' Parts 1 & 2 of Checklist A9 are addressed  The Contractor will be required to develop procurement plan for the project or contractor is a 'micro-enterprise' Parts 1 & 2 of Checklist A9 are addressed  Three of three credits targeted.	-
Mat 02  Responsible Sourcing of Materials- Basic Building Elements  Materials- Basic Building Elements  Mandatory minimum: Criterion 3 for Pass, Good, Very Good, Excellent and Outstanding.  Up to twelve credits are awarded where the applicable new materials used in the refurbishment building elements (It is likely that a reasonable level of creating in the special content of the special	orocuring from smaller stimate has been made I this pending further
Pre-requisite: any new insulation specified for use within the following building elements must be assessed: external walls, ground floor, roof and building services.  Full credits are targeted for the specific insulation products.  Domestic Refurbishment Mat 3 calculator.  Four credits are awarded where the Insulation Index for the new insulation is 2 as calculated by the BREEAM  Eight of eight credits targeted.	ication of compliant
Four credits are awarded where 80% of the new thermal insulation is responsibly sourced.  Sub-Total  48 27 27 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	
Sub-Total 48 27 Weighted Sub-Total 8.0 4.50 One materials credit equals 0.17%	

WASTE					
Was 01	Household Waste	2	2	<ul> <li>three internal recycling containers are provided, with a minimum total capacity of 60 litres, but there is no compliant collection scheme in place and insufficient external storage.</li> <li>three internal recycling containers are provided, with a minimum total capacity of 30 litres and no individual bin</li> </ul>	Both credits are targeted as LBC provide doorstep collections for recyclables and green/kitchen waste. Appropriate internal waste storage will be provided to support this.  Two of two credits targeted.
Was 02	Refurbishment Site Waste Management	3	2	Three credits are awarded where the waste generated through the refurbishment process is managed in accordance with checklist A-9 of the BREEAM Technical Manual for projects up to a value of £100k, or for projects over £100k, the implementation of a compliant SWMP.  An additional innovation credit is available - see below.	Given the scale of the project the Contractor will be required to implement a compliant site waste management plan. A predemolition/pre-refurbishment audit will be undertaken to determine whether there are further opportunities to re-use or recycle materials/fittings from the demolition/strip-out either on or off-site.  Two of three credits targeted.
Sub-Total		5	4		
Weighted		3.0	2.40	One waste credit equals 0.6%	

POLLUTI	ON				
Pol 01	Nitrogen Oxide Emissions	3	2	One credit is awarded where the dry NOx emissions of the space heating and hot water systems are less then 100mg/kWh (NOx class 4 boiler). Two credits if less than 70mg/kWh (NOx class 5 boiler). Three credits if less than 40mg/kWh.	Space and hot water heating will be provided via gas boilers to achieve at least 2 credits.  Two of three credits targeted.
Pol 02	Surface Water Runoff	3	1	One credit is awarded where new hardstanding areas are permeable, any additional run-off for rainfall depths up to 5mm are maintained on site using SuDS and calculations are undertaken by an appropriately qualified professional to demonstrate this.  One credit is awarded where calculations demonstrate that all run-off from the roof for rainfall up to 5mm is managed on site using source control methods.  One credit is awarded where an appropriately qualified professional is appointed to design an appropriate drainage strategy for the site and where run-off as a result of refurbishment is managed on site using source control methods.	The first credit will be achieved as there will be no increase to impermeable areas. Site restrictions make it unlikely that any SUDs measures can be incorporated to achieve additional credits.  One of three credits targeted.
Pol 03	Flooding	2	2	An additional innovation credit is available - see below.  Two credits awarded where a Flood Risk Assessment (FRA) has been carried out and the area is defined as having a low annual probability of flooding.  Two credits can be awarded where an FRA has been carried out and the area is defined as having a medium or high annual probability of flooding and measures are specified to keep water away from the dwelling or where a full flood resilience/resistance strategy is implemented with recommendations made by a suitably qualified building professional.  Mandatory minimum: Two credits for Excellent and Outstanding.	The EA flood map confirms that the site is in an area at low risk of tidal and fluvial flooding, although a short flood risk assessment from a specialist will be produced to confirm that there is no risk of flooding from all other sources.  Two of two credits targeted.
Sub-Total		8	5		
Weighted		6.0	3.75	One pollution credit equals 0.75%	
Man 02	Responsible Construction Practices	m of 10 cre	odits are	One credit is awarded where there is a commitment to comply with the Considerate Constructors Scheme (CCS), with a score of at least 40 and 7 in each section.	This credit is not targeted at this stage as it can be particularly challenging to achieve a higher score. However, this may be achievable at post construction stage depending on the Contractor's final CCS score.  Credit not targeted at this stage.
Man 05	Protection and Enhancement of Ecological Features	1	0	Credit awarded where a suitably qualified ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site and where the developer adopts all general ecological recommendations and 30% of additional recommendations.	This credit is not targeted at this stage. It would require the appointment of an ecologist, which would seem inappropriate for a site with limited opportunities for ecological enhancement.  Credit not targeted
Man 06	Project Management	2	0	One credit awarded where a BREEAM Accredited Professional (AP) has been appointed at an early stage of the project, prior to the production of a refurbishment specification and to oversee key stages within the project.  One credit awarded where thermographic surveying and airtightness testing have been carried out at both pre and post refurbishment stages and an improved air tightness target has been set at design stage and testing demonstrates that this has been achieved post refurbishment.	The BREEAM assessor Georgie James is a BREEAM AP, however as she has not been appointed at an early enough stage for these credits cannot be achieved. Thermograhic testing is not considered appropriate given the scope of the refurbishment.  Credits not targeted.

Hea 04	Inclusive Design	1	0	Credit awarded where an access expert or suitably qualified member of the team has completed sections 1, 2 and 3 of Checklist A8; Access Statement Template and inclusivity measures are implemented in the refurbishment. The statement must demonstrate that reasonable provision for accessibility to the dwelling has been made.	This credit is not considered to be achievable so is not targeted.  Credit not targeted	
Fne ()2	Energy Efficiency Rating Post Refurbishment	2		One credit awarded where the assessed dwellings achieve a post-refurbishment EER of >90, equivalent to an Energy Performance Certificate band A. Two credits awarded where the assessed dwelling achieves a post-refurbishment EER of >100.	This credit is not considered to be achievable (based on the current assumptions an EER of 65).  Credit not targeted.	
Ene 08	Energy Display Devices	1	1	Credit awarded where any specified Energy Display Devices are capable of recording consumption data.	This credit will be targeted.  Credit targeted.	
Wat 01	Internal Water Use	1	()	Credit awarded where the Wat 1 calculations demonstrate that the whole house consumption is less than 80 litres per person per day.	This credit is not considered to be achievable so is not targeted.  Credit not targeted.	
Was 02	Refurbishment Site Waste Management	1	()	Credit awarded where the non-hazardous waste produced does not exceed 17.32m <sup>3</sup> /8.78 tonnes per £100k of project value and 85% of non-hazardous demolition waste by volume is diverted from landfill.	This credit is not targeted at this stage, although has the potential to be targeted by the Contractor if it is considered to be feasible.  Credit not targeted.	
Pol 02	Surface Water Runoff	1		Credit awarded where an appropriately qualified professional has been appointed to provide calculations and design a drainage strategy that ensures that 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 and the 1 in 100 year event is reduced to zero, including an allowance for climate change. In addition, there is no volume of run-off discharged into watercourses and sewers for a 1 in 100 year event of 6 hour duration, allowing for climate change.	This credit is not targeted as site restrictions give limited scope for attenuation measures to be incorporated.  Credit not targeted.	
Extra	Innovation	10	0	Up to ten credits are awarded where a successful application is made to the BRE to have a particular product or technique used in the refurbishment process recognised as innovative. One credit is awarded per successful application.	These credits are not targeted as there will be no appropriate innovations utilised on the project.  Credit not targeted.	
Sub-Total		10	1	One Innovation credit = 1%. A maximum of 10% can be awarded in this section.	vation credit = 1%. A maximum of 10% can be awarded in this section.	

TOTALS	Score (%)
Baseline Target	55.44

Total required for Pass	30
Total required for Good	45
Total required for Very Good	55
Total required for Excellent	70
Total required for Outstanding	85
Mandatory criteria met?	Υ

Project Team
Client: Marcus Cooper Group
Architect: Hub Architects (Mauro Fernandez)
BREEAM AP & Assessor: Method Consulting (Georgie James)
Arboriculuralist: Landmark Trees (Adam Hollis)

Meeting record: 11/11/2015

Completed by: GAJ Date: 16/11/2015 **Checked by:** GAJ Date: 16/11/2015

© Method Consulting LLP