



GWP-PS_FO.1435_BREEMDR_80GuilfordStreet_DT.R01

BREEAM Registration Ref:TBC
 Registered BREEAM Assessor: B. Rankin
 BREEAM Domestic Refurbishment 2012

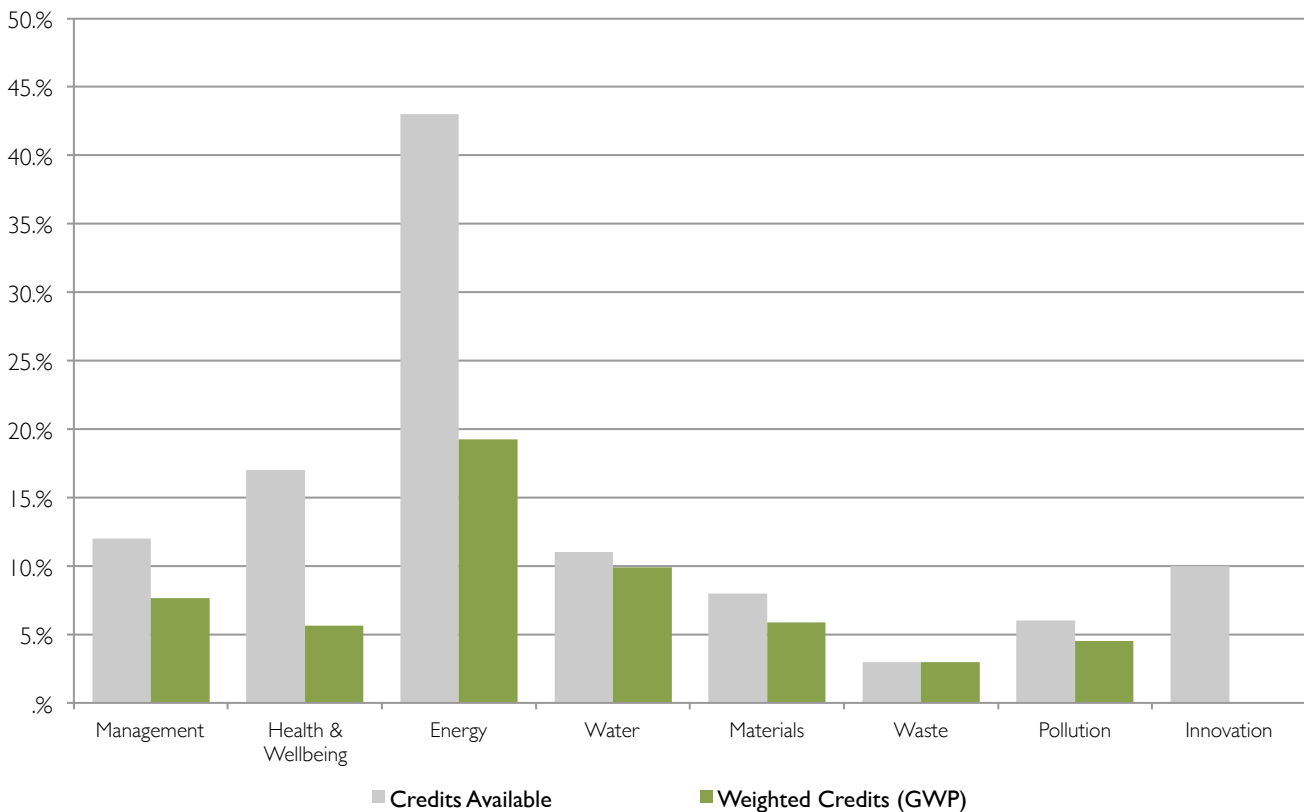
PASS 30%
 GOOD 45%
 VERY GOOD 55%
 EXCELLENT 70%
 OUTSTANDING 85%

5.0 BUILDING PERFORMANCE BY SECTION

Credit Section	Credits Available	GWP-PS Targeted Credits	Weighted Credits Available	Percentage Score per Section	Weighted Credits (GWP)
Management	11	7.00	12%	63.64%	7.64
Health & Wellbeing	12	4.00	17%	33.33%	5.67
Energy	29	13.00	43%	44.83%	19.28
Water	5	4.5	11%	90.00%	9.9%
Materials	45	33	8%	73.33%	5.87%
Waste	5	5	3%	100.00%	3%
Pollution	8	6	6%	75.00%	4.5%
Innovation	10	0	10%	0.00%	0%

55.85% Very Good'

6.0 ASSESSED BUILDING PERFORMANCE BY SECTION (COMPARATIVE)



XCO Rating **72.45%**
GWP-PS Rating **55.85%**

Credit Name	Available Credits	XCO Potential	GWP-PS Potential	Item	Compliance Notes	Credit Responsibility	At Risk?	XCO Targeted	GWP-PS Targeted		
MANAGEMENT	11	10	7	Weighting 0.120				10.91	7.64		
MAN1	3	3	3	Home User Guide To recognise and encourage the provision of guidance for the home owner / tenant so they can understand how to operate their home efficiently and effectively						Comments	
	3	3	3	Provision of a home users guide	Where a HUG containing the information listed in the 'User Guide Contents List' has been produced and supplied to all homes.	APM					
MAN2	2	2	0	Responsible Construction Practices To recognize and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.							
	2	2	0	Where the principal contractor uses the Considerate Constructors Scheme (CCS) or Checklist A-3	Credits are awarded depending on the CCS Code of Considerate Practice score achieved / Compliance with Checklist A-3						
MAN3	1	1	1	Construction Site Impacts To recognize and encourage construction sites managed in an environmentally sound manner in terms of resource use, energy consumption and pollution.							
	1	1	1	Where there is evidence to demonstrate that 2 or more of the sections a-d/e in Checklist A-6 are completed.		Contractor					
MAN4	2	2	0	Security To encourage domestic refurbishment projects where people feel safe and secure; where crime and disorder, or the fear of crime, does not undermine quality of life or community cohesion.							
	1	1	0	One Credit – secure windows and doors	Where retained external doors and accessible windows comply with the minimum security requirements as set out in CN6						
	1	1	0	Two Credits – Secured by design	Where the principles and guidance of Secured by Design Section 2 – Physical Security are complied with.						
MAN5	1	1	1	Protection and Enhancement of Ecological Features To protect existing ecological features from substantial damage during refurbishment and enhance the ecological value of a site.							
	1	1	1	Where a site survey is carried out by a member of the project team or a Suitably Qualified Ecologist to determine ecological features.		APM					
MAN6	2	1	2	Project Management To ensure delivery of a functional and sustainable refurbishment, designed and built in accordance with performance expectations.							
	1	1	1	Where all of the project team are involved in the project decision making		APM					
	1	0	1	Where a handover meeting is arranged		APM					
HEALTH & WELLBEING	12	4	4	Weighting 0.150				5.67	5.67		
HEA1	2	0	1	Daylighting To improve the quality of life in homes through the provision of good daylighting and to reduce the need for energy to light the home.						Comments	
	1	0	1	First credit—maintaining good daylighting		KDS					
	1	0	0	Second credit—minimum daylighting							
HEA2	4	2	2	Sound Insulation To ensure the provision of acceptable sound insulation standards and so minimise the likelihood of noise complaints.							
	1	1	1	No worse than the values determined pre-refurbishment		Acoustician					
	1	1	1	3dB higher than before refurbishment		Acoustician					
	1	0	0	5dB higher than before refurbishment							
	1	0	0	8dB higher than before refurbishment							

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HEA3	1	0	0	Volatile Organic Compounds To recognise and encourage a healthy internal environment through the specification of internal finishes and fittings with low emissions of volatile organic compounds (VOCs).								
	1	0	0	Where all decorative paints and varnishes used in the refurbishment have met the requirement in Table - 14.								
HEA4	2	0	0	Inclusive Design Adopting an inclusive design approach to optimise the accessibility of the home and its future adaptability to cope with changing needs of a household, such as old age, frailty, a short or long-term disability or a debilitating illness.								
	1	0	0	An access expert or suitably qualified member of the design team (CN6) has completed section 1 of Appendix A: Hea 04	The access statement demonstrates reasonable provision to provide accessibility to the dwelling covering section 1							
	1	0	0	An access expert or suitably qualified member of the design team (CN6) has completed sections 1 and 2 of Appendix A: Hea 04	The access statement demonstrates reasonable provision to provide accessibility to the dwelling covering sections 1 and 2							
HEA5	2	1	0	Ventilation To recognise and encourage a healthy internal environment through the provision of appropriate ventilation levels to provide fresh air and avoid problems associated with the build up of pollutants and humidity levels without excessive heat loss.								
	1	1	0	One credit—minimum ventilation requirements	A minimum level of background ventilation is provided							
	1	0	0	Two credits—advanced ventilation	Ventilation is provided for the dwelling that meets the requirements of Section 5 of Building Regulations Part F in full							
HEA6	1	1	1	Safety To reduce the risks to life, health and property resulting from fire and exposure to carbon monoxide.								
	1	1	1	One Credit—fire and carbon monoxide (CO) detection and alarm systems	Where a compliant fire detection and fire alarm system is provided in accordance with compliance notes 2-8.	KDS						
ENERGY	29	22.5	13	Weighting 0.190							33.36	19.28
ENE1	6	4	2	Improvement in Energy Efficiency Rating To recognise and encourage a reduction in CO2 emissions through improved energy efficiency of the dwelling and its services as a result of refurbishment.							Comments	
	6	4	2	Where the refurbishment results in an improvement to the dwellings Energy Efficiency Rating, in accordance with CN2.		KDS						
ENE2	4	3.5	1	Energy Efficiency Rating Post Refurbishment To encourage high levels of Energy Efficiency in the refurbished dwellings, thus reducing CO2 emissions, running costs and fuel poverty.								
	4	3.5	1	Where as a result of refurbishment, the dwelling meets a minimum Energy Efficiency Rating, credits can be awarded		KDS						
ENE3	7	7	1	Primary Energy Demand To encourage a reduction in the absolute total regulated energy demand of a dwelling as a result of refurbishment, thus saving CO2 emissions, running costs and reducing fuel poverty.								
	7	7	1	Where as a result of refurbishment the dwelling meets the Primary Energy Demand targets		KDS						
ENE4	2	0	0	Renewable Technologies To encourage local energy generation from renewable sources to supply a significant proportion of the dwellings energy demand and to encourage homes to reduce the total energy demand, prior to the specification of renewable technologies.								
	1	0	0	Where at least 10% of the dwellings Primary Energy Demand per annum is supplied by low or zero carbon technologies								
	1	0	0	Where for mid to high rise flats at least 15% of each dwellings Primary Energy Demand per annum is supplied								
ENE5	2	2	2	Energy Labelled White Goods To encourage the provision or purchase of energy efficient white goods, thus reducing the CO2 emissions from appliance use in the dwelling.								
	1	1	1	First credit – Fridges, freezers and fridge-freezers + EU Leaflets		APM						
	1	1	1	Second credit – washing machines, dishwashers, tumble dryers and washer dryers - EU Leaflets		APM						
ENE6	1	1	1	Drying Space To provide a reduced energy means of drying clothes and so encourage reductions in energy demands.								

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	1	1	1	An adequate, secure internal or external space with posts and footings, or fixings		KDS					
ENE7	2	2	2	Lighting To encourage the provision of energy efficient lighting, thus reducing CO2 emissions associated with the dwelling.							
	1	1	1	One credit – External lighting	Where Energy Efficient Space lighting (including lighting in communal areas) and Energy Efficient Security lighting is provided	KDS					
	1	1	1	One credit - Internal Lighting	The energy required for internal lighting is minimised through the provision of a maximum average wattage	KDS					
ENE8	2	2	2	Energy Display Devices To encourage the provision of accessible equipment to display energy consumption data to dwelling occupants, thereby encouraging them to reduce energy use.							
	1	1	1	Where current electricity consumption data is displayed to occupants by a compliant energy display devices		KDS / Contractor					
	1	1	1	AND primary heating fuel consumption data are displayed to occupants by a compliant correctly specified Energy Display Devices.		KDS / Contractor					
ENE9	2	1	1	Cycle Storage To encourage occupants to cycle by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys.							
	1	1	1	Where individual or communal compliant cycle storage is provided for the following number of cycles: <u>1</u> per dwelling		KDS / Contractor					
		0	0	Where individual or communal compliant cycle storage is provided for the following number of cycles:							
ENE10	1	0	1	Home Office To reduce the need to commute to work by ensuring residents have the necessary space and services to be able to work from home.							
	1	0	1	Where sufficient space and services have been provided which allow the occupants to set up a home office		KDS					
WATER	5	4.5	4.5	Weighting 0.060						9.90	9.90
WAT1	3	2.5	2.5	Internal Water Use To minimise the consumption of potable water in sanitary applications by encouraging the use of low water use fittings and water recycling systems.						Comments	
	3	2.5	2.5	Where terminal fittings meet the equivalent terminal fitting consumption standards as detailed in Table-20 or are calculated		APM					
WAT2	1	1	1	External Water Use To encourage the recycling of rainwater and reduce the amount of mains potable water used for external water uses.							
	1	1	1	Where a compliant rainwater collection system for external/internal irrigation use has been provided to dwellings		APM / KDS					
WAT3	1	1	1	Water meter Where an appropriate water meter for measuring usage of mains potable water has been provided to dwelling/s in accordance with CNI							
	1	1	1	Where an appropriate water meter for measuring usage of mains potable water has been provided		Contractor					
MATERIALS	45	33	33	Weighting 0.125						5.87	5.87
MAT1	25	18	18	Environmental Impact of Materials To encourage the retention and enhancement of existing elements and where new materials are required the use of materials with lower environmental impacts over their lifecycle whilst optimising the thermal performance of key building elements.						Comments	
	25	18	18	The BREEAM Domestic Refurbishment Mat1 calculator is used to determine the number of credits awarded.		KDS					
MAT2	12	7	7	Responsible Sourcing of Materials To recognise and encourage the reuse of materials and the specification of responsibly sourced materials for use where required in the refurbishment process.							
	12	7	7	Where the applicable new materials for refurbished building elements are assigned a responsible sourcing tier level		Contractor					

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MAT3	8	8	8	Insulation To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties and has been responsibly sourced.							
	Pre-requisite		Y	Any new insulation specified for use within the following building elements must be assessed:			Contractor				
	4	4	4	Embodied Impact		Where Green Guide ratings, required by the BREEAM Domestic Refurbishment Mat3 Insulation Calculator	Contractor				
	4	4	4	Responsible Sourcing		Where ≥ 80% of the new thermal insulation used in the building elements is responsibly sourced.	Contractor				
POLLUTION	8	5	6	Weighting 0.100						3.75	4.50
POL1	3	3	3	Nitrogen Oxide Emissions To reduce the emission of nitrogen oxides (NOx) into the atmosphere.						Comments	
	3	3	3	Up to 3 credits – Low NOx space heating and hot water systems			Contractor				
POL2	3	0	1	Surface Water Runoff To encourage domestic refurbishments to have a neutral impact upon site run-off and recognise refurbishments that adopt opportunity measures to reduce and delay the discharge of rainfall to the public sewers and watercourses.							
	1	0	1	First credit – neutral impact on surface water		Where any new hard standing areas are permeable, this must include all new pavements, driveways	APM				
	1	0	0	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					
	1	0	0	Third Credit – reducing run-off from site: advanced		An appropriately qualified professional should be used to design an appropriate drainage strategy for the site.					
POL3	2	2	2	Flooding To reward dwellings located in low flood risk areas and where dwellings are located in medium to high flood risk zones, to recognise where they are refurbished in accordance with a flood resilience/resistance strategy.							
	1	1	1	Option 1 – Low flood risk (2 credits)		Where a Flood Risk Assessment has been carried out the assessed dwellings are defined as having a low annual probability of flooding.	APM				
	1	1	1	Option 2 – Medium/High Flood Risk (1 credit)		Where a FRA has been carried out and the assessed dwellings are defined as having a medium or high annual probability of flooding.	APM				
WASTE	5	5	5	Weighting 0.075						3.00	3.00
WST1	2	2	2	Household Waste To recognise and encourage the provision of dedicated storage facilities for a dwellings recyclable or compostable waste streams, so that waste is diverted from landfill or incineration.						Comments	
	1	1	1	First credit – Recycling facilities		One credit can be awarded where the dwelling complies with one of the scenarios detailed in Table-31 below:	APM				
	1	1	1	Second credit – Composting Facilities		Dwellings with significant external private space - all of the following are met:					
WST2	3	3	3	Refurbishment Site Waste Management To promote resource efficiency via the effective management and reduction of waste related to the refurbishment process.							
	3	3	3	Projects up to £300k: three credits are awarded:		Where a compliant Level 1; Site Waste Management Plan See Criteria (SWMP) is in place in accordance with CN3.	Contractor				
INNOVATION	10	0	0	1/1% Weighting (Maximum 10)						0.00	0.00
INN1	2	0	0	Ene 2 Energy Efficiency Rating						Comments	
	1	0	0	Ene 8 Display Energy Devices							

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GWP Project Services

BREEAM Domestic Refurbishment - Pre-Assessment Tracker

Credit Name	Available Credits	XCO Potential	GWP-PS Potential	Item	Compliance Notes	Credit Responsibility	At Risk?	XCO Targeted	GWP-PS Targeted
	I	0	0	Wat 1 Internal Water Use					
	I	0	0	Was 2 Refurbishment Site Waste Management					
	I	0	0	Pol 2 Surface Water Run-off					
	I	0	0	Man 2 Responsible Construction Practices					
	I	0	0	Man 5 Protection and Enhancement of Ecological Value					
	I	0	0	Man 6 Project Management					
	I	0	0	Hea 4 Inclusive Design					

FOI435/002/DT/ek
08th August 2014

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Dear Sam,

RE: BREEAM Assessment, 80 Guilford Street, London

With respect to the BREEAM Energy credits for the above noted project, we note that the refurbishment and heritage nature of the development will significantly impact the opportunities available to the client in terms of energy efficiency.

Whilst Building fabric and services enhancements will undoubtedly lead to savings in carbon emissions in comparison to the pre-existing Victorian building - such as specification of highly efficient gas fired boilers for heating and hot water, and high levels of thermally efficient cavity insulation, the retention of single glazed windows and limited opportunity to introduce Low Carbon Technologies to an existing listed building will struggle to meet high levels of BREEAM compliance in the energy section.

At present, following analysis our qualified opinion is that 12 of the possible 29 credits available in the energy section could be realistically achieved – which equates to 41.3% overall.

We feel any advance of this overall section score would be onerous on the client's design and construction team and potentially be a false economy as equally important credits in other sections of BREEAM such as Management, Pollution and Waste could be overlooked in the challenge to achieve an excessive score within just 1 of the 9 sections of BREEAM overall.

Our expectations in the materials and water sections are more positive however and our analysis suggests credit scores of 60% in each section should be within the capabilities of the client, overall the BREEAM rating of 'Very Good' will be a challenge but our opinion is that it is achievable and our detailed analysis shows how this can be achieved even with the limitations in the Energy section.

We note the initial planning approval basis made no reference to BREEAM requirements in specific categories.

Should there be any queries of a technical nature in relation to BREEAM or the sustainability strategy, please don't hesitate.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'B. Rankin', written over a white background.

BARRY RANKIN
For and on behalf of GWP Project Services

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