



# BREEAM UK NEW CONSTRUCTION

2018 Pre-Assessment

PROJECT:

**KINGSMERE BICESTER**

PROJECT NUMBER:

**P2669**

DOCUMENT REF:

**P2669-BRE-R04**

DATE:

**24/08/2023**

REVISION:

**Rev 04**

% Score

**70.6%**

BREEAM Rating

**Excellent Rating**

Assessment Type

**Multi-residential**

*For a full fee breakdown refer to page 2.*

**KENT (HQ)**

Unit 3 Grove Dairy Farm Business Centre | Bobbing Hill | Bobbing | Sittingbourne | Kent | ME9 8NY

**LONDON**

One Bridge Wharf | 56 Caledonian Road | London | N1 9UU

# BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



## Scope

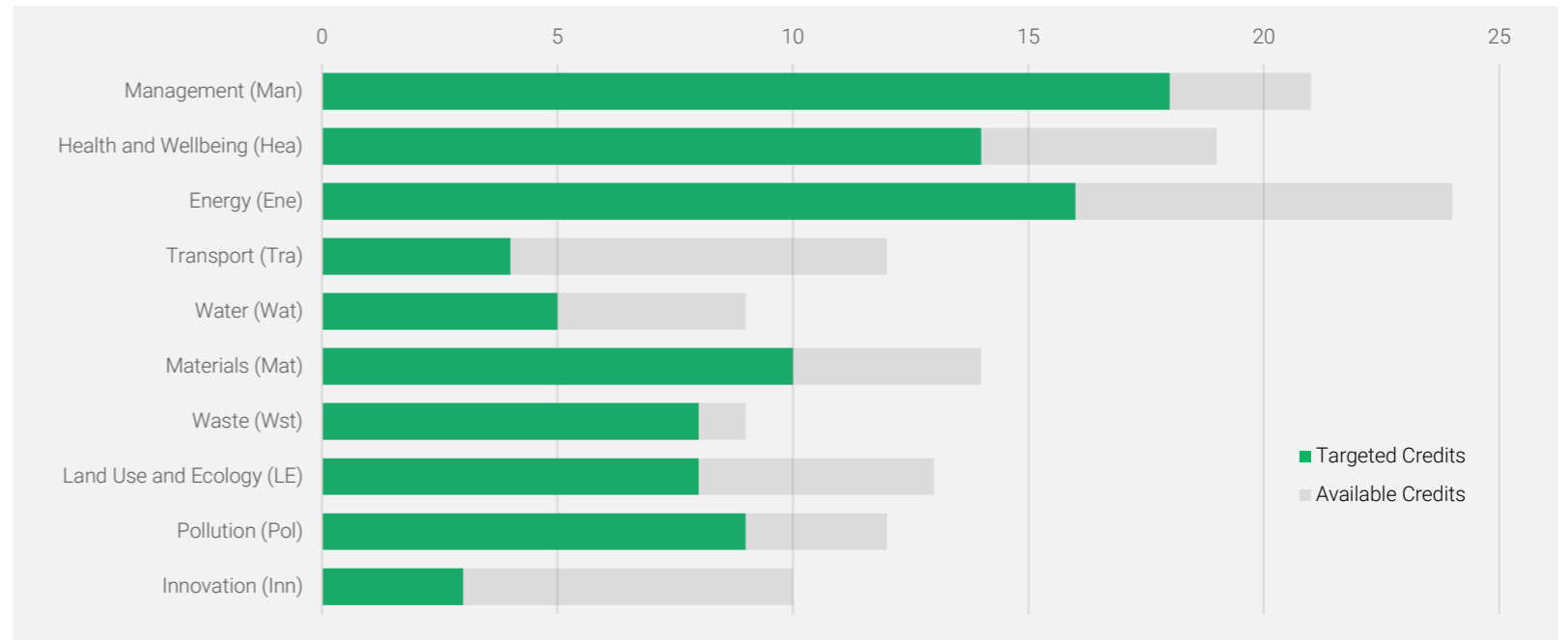
**Please note:** the final BREEAM score is confirmed by the BRE, **not** QuinnRoss Energy. The final score will be based on the quality of information provided by the whole team, **not** solely QuinnRoss Energy.

Scope of Assessment	
Project type	Multi-residential
Building type	Care home
Is the building designed to be untreated?	N
Heating system type	Y
Cooling system type	N
Are industrial-sized refrigeration and storage systems specified?	Y
Are building user lifts present?	Y
Are building user escalators or moving walks present?	N
Are laboratories present?	N
Are there any water demands present other than those assessed in Wat 01?	Y
Does the building have external areas within the boundary of the assessed development?	Y
Are there statutory requirements, or other issues outside of the control of the project, that impact the ability to provide outdoor space?	N
Are systems specified that contribute to the unregulated energy load?	Y
Are the post occupancy stage credits targeted in Ene 01?	N

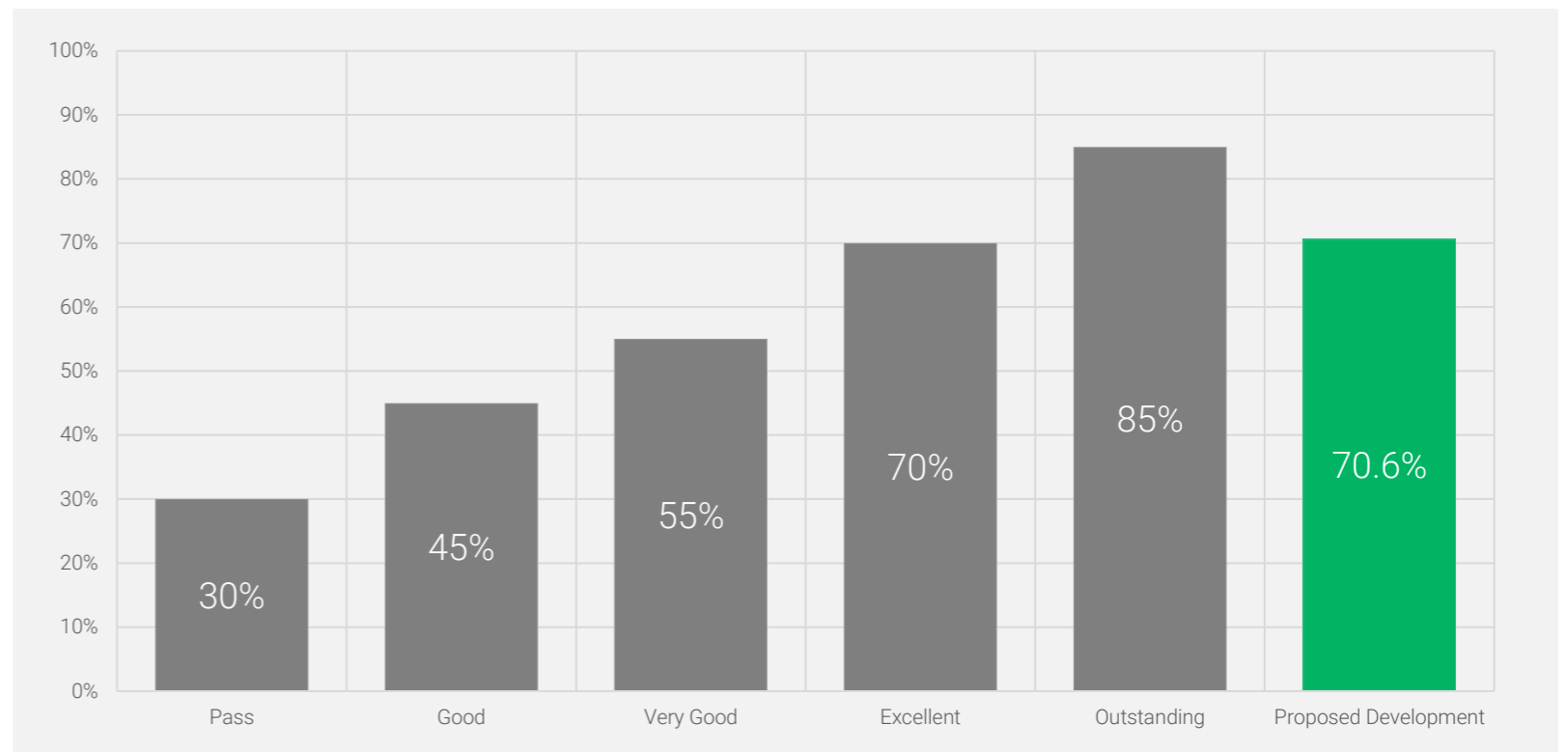
Sub-Section	Available Credits	Targeted Credits
Management (Man)	21	18
Health and Wellbeing (Hea)	19	14
Energy (Ene)	24	16
Transport (Tra)	12	4
Water (Wat)	9	5
Materials (Mat)	14	10
Waste (Wst)	9	8
Land Use and Ecology (LE)	13	8
Pollution (Pol)	12	9
Innovation (Inn)	10	3

BREEAM Rating	% Score
Pass	30%
Good	45%
Very Good	55%
Excellent	70%
Outstanding	85%
<b>Proposed Development</b>	<b>70.6%</b>

## Credit Distribution



## Score



The explanation and outline of how to achieve each credit is found below in the following sections:

**Please note:** The client/client's representative will be responsible for sourcing the "consultant" credits. QuinnRoss Energy can help sourcing fees for these if instructed but cannot confirm works and funds.

**Please note:** Red items are mandatory

### Management (Man)

Man 01: Project brief and design	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Stakeholder consultation (project delivery)	1	1	Roles, responsibilities and contributions for each phase of the project delivery have been clearly defined and inputs have influenced early design options	Early meeting minutes detailing design considerations Project responsibility matrix Stage/options reports Construction programme	RPS	Stage 4
Stakeholder consultation (third party)	1	1	Third party stakeholders have been consulted and their contributions and outcomes are documented and shown if they have influenced design	Consultation plan List of consultees Documented design changes that were influenced by consultation exercise	RPS	Concept stage
Sustainability Champion (design)	1	0	BREEAM AP is appointed to define the BREEAM target for the project	BREEAM AP appointment/ agreed targets	-	-
Sustainability Champion (monitoring progress)	1	0	BREEAM AP is appointed to monitor and oversee BREEAM target through the design	BREEAM AP appointment/ stage reports	-	-
Man 02: Life cycle cost and service life planning	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Elemental life cycle cost (LCC)	2	2	An elemental LCC analysis is carried out at RIBA stage 2. The LCC indicates future replacement costs and service life, maintenance and operation costs. It must show how it has influenced the design	LCC analysis	Consultant	Stage 2
Component level LLC Plan	1	1	A component level LCC plan is developed by the end of RIBA stage 4. It must show how it has influenced the design	LCC analysis	Consultant	Stage 2
Capital cost reporting	1	1	Capital cost for the building in pounds per square metre is reported	Confirmation letter showing £/m <sup>2</sup>	RPS	Stage 2
Man 03: Responsible construction practices	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Timber	0	0	All timber and timber-based products used on the project are to be legally harvested and traded timber	Contract clause/ written confirmation	Contractor	Prior to construction starting
Environmental Management	1	1	Principal contractor operates a certified EMS (ISO14001) Principal contractor implements best practice pollution prevention policies on-site. (PPG6)	Copy of the ISO14001 certificate, ensure contractor is registered with UKAS Signed copy of the PPG6 checklist (QuinnRoss can provide this document for contractors to fill in and sign)	Contractor	Prior to construction starting
Sustainability Champion (construction)	1	0	BREEAM AP is appoint to monitor and oversee BREEAM target through construction and has an active presence on site	BREEAM AP appointment/ stage reports - AP will require at least 5 site visits during construction site	-	-
Considerate construction	2	2	The site achieves a Considerate Constructors Scheme (CCS) score of at least 35 with at least a score of 7 in each of the 5 sections.	Written confirmation contractor is registered with CCS and copy of checklist to confirm score	Contractor	At project completion
Monitoring of construction-site-impacts	2	2	Responsibility is assigned to an individual to monitor, record and report energy, water and transport data resulting from on-site construction processes.	Written confirmation a single person has been assigned for monitoring purposes only	Contractor	At project completion
			Energy consumption is monitored and records in kWh (and where relevant litres of fuel used)	Amount of energy consumed by site activities in kWh		
			Water consumption is monitored and records in m <sup>3</sup>	Amount of potable water consumed by site activities in m <sup>3</sup>		
			Transport of materials to site is monitored (total distance (km), litres of fuel (l), material type)	Distance transport vehicles cover to deliver materials to site in km by material delivered Litres of fuel consumed by transport vehicles, based on the above		
			Transport of waste from site is monitored (total distance (km), litres of fuel (l))	Distance transport vehicles cover to remove/dump materials from site in km by material removed Litres of fuel consumed by transport vehicles, based on the above		

The explanation and outline of how to achieve each credit is found below in the following sections:



Management (Man) Continued

Man 04: Commissioning and handover	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Commissioning and testing schedule	1	1	A commissioning manager is appointed to monitor and programme commissioning in accordance with the relevant standards.	Commissioning schedule, outlining scope of commissioning works including timescales	Contractor	Prior to construction starting
				Project programme accounting for commissioning dates		Prior to construction starting
				Schedule must outline conformity with relevant build regs, BSRIA and CIBSE guidelines		At project completion
				Commissioning certificates		At project completion
Commissioning building services	1	1	For complex building services, a specialist commissioning manager is appointed	Commissioning schedule, outlining scope of commissioning works including timescales	Contractor	Prior to construction starting
				Project programme accounting for commissioning dates		Prior to construction starting
				Schedule must outline conformity with relevant build regs, BSRIA and CIBSE guidelines		At project completion
				Commissioning certificates		At project completion
Testing and inspecting building fabric	1	1	Perform a thermographic survey of the building and an air permeability test. Rectify any faults found from these tests prior to construction	Thermographic survey results	Consultant	At project completion
				Air permeability test certificate		
<b>Mandatory</b> - Handover	1	1	A building user guide is developed along with a training schedule prior to handover	Scope of building user guide & facilities management training schedule	Contractor	Prior to construction starting

Man 05: Aftercare	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Aftercare support	1	1	Have a meeting and training session with future tenant. Introduce BUG, aftercare support available and how the building is to be used.	Training programme for initiation meeting	RPS	Prior to construction starting
			Provide initial aftercare support for at least the first month	Written confirmation from client outlining who is providing this	RPS	
			Provide long-term aftercare support for the first 12 months	Copy of letter of appointment and contract to aftercare support consultant	RPS	
			Collect and monitor energy and water consumption for the first 12 months	Copy of letter of confirmation from aftercare support consultant their responsibilities	RPS	
Commissioning implementation	1	1	Perform commissioning activities for at least the first 12 months analysing plant usage, occupant interviews, review of internal temps and ventilation	Copy of letter of appointment and contract to aftercare support consultant	RPS	
Post occupancy evaluation (POE)	1	1	A POE consultant is appointed to monitor the building and its use one year after occupancy Consultant must be independent of the design of the building	Copy of letter of appointment and contract to aftercare support consultant	RPS	

The explanation and outline of how to achieve each credit is found below in the following sections:



## Health and Wellbeing (Hea)

Hea 01: Visual comfort	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Glare control	1	0	Identify areas vulnerable to glare and design anti-glare systems to mitigate	Glare modelling report	-	-
Daylighting	2	0	Daylight modelling is required to demonstrate good practice daylight factors are achieved	Daylight modelling report	-	-
View out	1	0	95% of the occupied rooms have a wall with a windows that provided a view out (window >20% of the surrounding wall area)	Marked up plans and elevations	-	-
Internal and external lighting levels, zoning and control	1	1	Internal and external lighting is designed in accordance with the reference standards. The lighting is zoned and control in the relevant areas. - zones of no more than four workplaces Internal and external lighting is designed in accordance with the reference standards. The lighting is zoned and control in the relevant areas. - zones of no more than four workplaces - workstations adjacent to windows are separately zoned	Specification/ M&E proforma confirming design standards  Internal and External lighting drawings	Cudd Bentley	Stage 4

Hea 02: Indoor air quality	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Indoor air quality (IAQ) plan	0	0	An indoor air quality plan is developed for when the building is occupied	Copy of the indoor air quality plan	Consultant	Stage 4
Ventilation	1	1	Ensure the building has been designed to minimise pollutants internally	Drawings showing how building has been designed to minimise pollutants Drawings showing vent pathways have minimised air-pollutants Drawings showing HVAC systems have incorporated suitable filtration Install demand controlled ventilation Supply & exhaust intakes and outtakes must be 10m apart horizontally	Cudd Bentley	Stage 4
Emissions from construction products	2	2	1 credit - 3 out of 5 products from table 5.11 meet the VOC's emissions criteria. 2 credits - all products from table 5.11 meet the VOC's emissions criteria	Manufacturer's testing certificates and results	Consultant	At project completion
Post-construction indoor air quality measurement	1	1	The formaldehyde concentration in indoor air is measured post construction and does not exceed 100 µg/ m³ averaged over 30 minutes The total volatile organic compound (TVOC) concentration in indoor air is measured post construction and does not exceed 500 µg/ m³ over 8 hours.	Consultant's report	Consultant	At project completion

Hea 04: Thermal comfort	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Thermal modelling	1	1	Dynamic thermal modelling is carried out to demonstrate operative temperatures are in accordance with the requirements.	Thermal modelling report	Consultant	Stage 4
Adaptability - for a project climate change scenario	1	1	The thermal modelling analysis is run against a future weather scenario	Thermal modelling report	Consultant	
Thermal zoning and Controls	1	1	The thermal modelling analysis has informed the temperature control strategy	Drawings showing the heating, cooling and ventilation strategy in accordance with the criteria.	Consultant	

Hea 05: Acoustic Performance	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Sound Insulation	2	2	Sound insulation between rooms complies with Section 7 of BS 8233:2014	Acoustic statement/report confirming compliance	Consultant	Recommendation report - Stage 4. Final testing at project completion
Indoor ambient noise levels	1	1	Indoor ambient noise levels comply with Section 7 of BS 8233:2015			
Room acoustics	1	1	Sound reverberation levels comply with Section 7 of BS 8233:2016			

The explanation and outline of how to achieve each credit is found below in the following sections:

### Health and Wellbeing (Hea) Continued

Hea 06: Safety and Security	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Security of site and building	1	1	Security specialist conducts a security needs assessment (At concept design Stage) Security specialist develops a list of recommendations Recommendations are implemented in the design	Security specialist report/statement in accordance with Drawings/ specification detailing how recommendations have been incorporated	Consultant	Concept stage
Hea 07: Safe and Healthy Surroundings	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Safe access	1	0	Criteria must be met for cycle paths, footpaths, drop-off areas, pedestrian crossings, signposting and access road lighting Criteria must be met for parking, waiting areas, turning areas and storage areas for delivery / goods vehicles	Design drawings (including a scaled site plan), AND/OR relevant sections of the specification highlighting all necessary compliant features and dimensions	-	-
Outside Space	1	1	There must be an "outside space" near to the site for building users to use	Drawings/site plan showing outside amenity	Corstorphine & Wright	Stage 4

### Energy (Ene)

Ene 01: Reduction of energy use and carbon emissions	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
<b>Mandatory &gt;4</b> - Energy performance	9	5	Calculate the Energy Performance Ratio (EPR). Compare the EPR achieved with the benchmarks in Table - 25 and award the corresponding number of BREEAM credits	Dynamic Simulation Modelling (DSM) output files	Consultant	Concept, update at stage 4, update at PC
Prediction of operational energy consumption	4	4	Hold a workshop focusing on operational energy and efficiency Undertake energy modelling to predict building's energy consumption and highlight risks to monitor during construction and commissioning	Meeting minutes / workshop outcomes report Energy modelling report	Consultant	Stage 4
Ene 02: Energy monitoring	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
<b>Mandatory</b> - Sub metering of major energy consuming systems	1	1	Install energy metering systems that can assign fuel to each end use	Spec's and drawings/schematics	Cudd Bentley	Stage 4
Sub metering of high energy load and tenancy areas	0	0	Install separate accessible sub-meters to each unit that have open communication protocol to enable future connection to an energy monitoring & management system	Spec's and drawings/schematics	-	-
Ene 03: External lighting	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
External lighting	1	1	Average luminous efficacy is not less than 60 luminaire lumens per circuit Watt External lighting includes for a timeclock, daylight sensor and presence detection (where appropriate)	External lighting schedule/ specification/calculations External lighting drawings External lighting datasheets	Cudd Bentley	Stage 4
Ene 04: Low carbon design	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Passive design	1	1	A passive design analysis is undertaken and the Hea 04 thermal comfort credit has been achieved	Energy report Evidence as required for Hea 04	Consultant	Concept stage
Free cooling	1	1	Implementation of free cooling solutions	Ventilation analysis using free cooling methods	Consultant	Concept stage
Low and zero carbon technologies	1	1	A low and zero carbon feasibility study has been undertaken	LZC Energy strategy Specification/drawings showing renewable tech	Consultant	Concept stage

The explanation and outline of how to achieve each credit is found below in the following sections:

Ene 05: Energy efficient cold storage	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Refrigeration energy consumption	1	1	Install a refrigeration system in accordance with the Code of Conduct for carbon reduction in the refrigeration retail sector, BS EN 378-2:2016 Install a refrigeration system that is included on the Enhanced Capital Allowance (ECA) Energy Technology Product List (ETPL) Commission the refrigeration plant	Manufacturer / product certification Commissioning certificate	Contractor Contractor	At project completion
Indirect Greenhouse gas emissions	1	0	Demonstrate a saving in greenhouse gas emissions from the installed refrigeration system	Report & calculations outlining reductions	-	-

Ene 06: Energy efficient transportation systems	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Energy consumption	1	1	An analysis of the transportation demand and usage patterns for the building, to determine the optimum number and size of lifts The energy consumption has been estimated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks, Part 2: Energy calculation and classification for lifts (elevators). Consider the use of regenerative drives, or justify why one is not beneficial (i.e. if the lift is not going to be high use/high speed).	Usage pattern analysis Energy Performance Certificate Usage and energy consumption analysis and calculations	Contractor	Stage 4
Energy efficient features	1	1	Lift can operate in a standby condition Lift display lighting is above 70 lm/W Lift uses VVVF controls Use a regenerative drive, if its proven to save energy	Confirmation from lift manufacturer Bulb tech details Confirmation and product details from lift manufacturer Confirmation and product details OR calculations showing minimal energy will be saved	Contractor	Stage 4

Ene 08: Energy efficient equipment	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Energy efficient assessment criteria	2	0	Identify the building's unregulated energy consuming loads, and estimate their yearly contribution to total unregulated energy consumption Demonstrate how the total annual unregulated energy consumption of the building can be reduced.	Report & calculations outlining reductions	-	-

## Transport (Tra)

Tra 01: Transport assessment and travel plan	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Travel plan	2	2	Develop a travel plan based on a site-specific travel assessment	Copy of travel plan	Consultant	Concept stage

Tra 02: Proximity to amenities	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Transport options implementation	10	2	AI is > 8.0	AI calculation	-	-
			Increase AI through negotiation with local bus, train and tram services with dedicated services for this building	Confirmation from local authority	-	-
			Provide a dedicated transport information system for inhabitants	Photograph of system on site	-	-
			10% of all car park spaces have electric vehicle charging stations	drawings and photographs of units on site	Corstorphine & Wright	Stage 4
			Set up car sharing group, promote with marketing provide priority parking spaces for car sharing vehicles	Confirmation from car share group and copies of marketing material	-	-
			Consult with local authorities on cycling and pedestrian routes. Agree how to improve it and implement on site	Proof of consultation with local authority, drawings and photos showing measures on site	-	-
			1 cycle space per 10 staff members	Drawings and photos showing spaces on site	Corstorphine & Wright	Stage 4
			Achieve cycle spaces outlined above, and at least two of the following: showers, changing facilities, lockers, drying spaces	Drawings and photos showing facilities on site	-	-
			At least three existing accessible amenities are present, see Table 7.6 on page 191	Map and photos showing amenities	-	-
Ensure one or more new amenities are available	Drawings and photos showing amenities	-	-			
Implement a transport improvement measure not outlined above	Robust evidence showing measure on site	-	-			



The explanation and outline of how to achieve each credit is found below in the following sections:



## Water (Wat)

Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
<b>Wat 01: Water consumption</b>					
<b>Mandatory &gt; 1 credit</b> - Water consumption	5	2	An assessment of the building's predicted water using components is undertaken using the Wat 01 calculator in line with Table 8.3	Component data sheet confirming inputs Wat 01 Calculator	Corstorphine & Wright Stage 4
<b>Wat 02: Water monitoring</b>					
<b>Mandatory</b> - Water monitoring & metering	1	1	Specification of a mains water meter on each supply, easily accessible meters and pulsed connection to a BMS	Water metering schematic/drawing Water meter datasheet	Cudd Bentley Stage 4
<b>Wat 03: Water leak detection and prevention</b>					
Leak detection system	1	1	A mains water leak detection system is installed	Specification/drawings	Cudd Bentley Stage 4
Flow control devices	1	1	Install flow control devices to all sanitary fittings	Specification/drawings/product data sheets	Cudd Bentley Stage 4
<b>Wat 04: Water efficient equipment</b>					
Water efficient equipment	1	0	Identify all water demands that are not listed under Wat 01. Identify systems or processes that can reduce the water demand from said water demands, and establish a reduction in the total water demand.	Report & calculations outlining reductions	- -

## Materials (Mat)

Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
<b>Mat 01: Environmental impacts from construction products - Building life cycle assessment (LCA)</b>					
Superstructure	7	5	Carry out an LCA on the superstructure at concept stage Carry out an LCA on the superstructure at design stage Optimise materials use at concept stage Optimise materials use at design stage	Mat 01 tool 4 no. Mat 01 tool options 3 no. Mat 01 tool options	QuinnRoss Energy Concept stage
Substructure and hard landscaping options	1	1	Substructure and hard landscaping material use optimisation at concept stage	6 no. Mat 01 tool options	
<b>Mat 02: Environmental impacts from construction products - Environmental Product Declarations (EPD)</b>					
Specification of products with a recognised EPD	1	0	Only specify building material products that achieve EPD points	EPD's from material manufacturers Mat 02 tool	- -
<b>Mat 03: responsible sourcing of construction materials</b>					
<b>Mandatory</b> - Timber	0	0	All timber and timber-based products used on the project is to be legally harvested and traded timber	Contract clause/ written confirmation	Contractor At project completion
Enabling sustainable procurement plan	1	1	Materials are sourced in accordance with a site specific sustainable procurement plan	Copy of the site specific sustainable procurement plan	Contractor Prior to construction starting
Measuring responsible sourcing	3	3	>10% (1 credit), >20% (2 credits), >30% (3 credit) of the responsible sourcing materials points have been achieved, through the specification of responsibly sourced materials.	Mat 03 proforma - confirming quantities and suppliers of the major building materials Mat 03 tool	Contractor At project completion



The explanation and outline of how to achieve each credit is found below in the following sections:



### Materials (Mat) Continued

Mat 05: Designing for durability and resilience	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Protecting vulnerable parts of the building from damage	1	1	Specification of suitable external and internal protection measures	Drawings/specification confirming measures included to protect the building e.g. Kick plates, corner protection, external kerbs and bollards etc.	Consultant	Stage 4
Protecting exposed parts from material degradation			Specification of measures to limit material degradation due to environmental factors	Drawings/specification confirming the inclusion of measures to limit material degradation effects (corrosion, swelling, fading, rotting melting abrasion etc.).		
Mat 06: Material efficiency	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Material efficiency (Criteria 1-2)	1	0	Opportunities have been identified, investigated and documented to optimise the use of materials throughout the building design, procurement and refurbishment.	Documented investigation at each RIBA stage	-	-

### Waste (Wst)

Wst 01: Construction waste management	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Pre-demolition audit	0	0	Complete a pre-demolition audit which outlines which materials from the demolition process can be re-used or recycled	Copy of pre-demolition audit	-	-
Construction resource efficiency	3	3	Resource Management Plan (RMP) has been developed	RMP	Contractor	Prior to construction starting, then updated at PC
			Construction waste m <sup>3</sup> or tonnes meets or is lower than targets set out in table 51	Waste volume calculations & confirmation		
Diversion of resources from landfill	1	1	Where over 70% (volume) of non-demolition and 80% of demolition waste (tonnage) is diverted from landfill	Waste volume calculations & confirmation	Contractor	
Wst 02: Recycled aggregates	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Recycled aggregates	1	0	A high percentage of aggregate is recycled or secondary aggregate	Calculations demonstrating the use of recycled aggregates with percentages	-	-
Wst 03: Operational waste	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Operational waste	1	1	Provision of a dedicated spaces for the segregation and storage of operational recyclable waste	Drawing indicating the location of the bin store provision Confirmation they are suitably sized and will have the necessary labelling in place Drawings indicating the location of storage and manufacturers literature detailing capacity	Corstorphine & Wright	Stage 4
Wst 04: Speculative finishes	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Speculative floor and ceiling finishes	0	0	Only install floor and ceiling finishes in a show area, OR	Drawings and photo of show area	-	-
			Only install floor and ceiling finishes in line with the tenants requirements, OR	Internal finishes' drawings, meeting minutes with tenant, signed contract showing finishes' will not be changed		
			Only install ceiling finishes, not floors, and ensure the tenant will not alter the ceilings OR	Internal finishes drawings, signed contract showing altering ceiling finishes' is not allowable		
			Don't install floor or ceiling finishes	Photos showing no finishes		
Wst 05: Adaptation to climate change	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Adaption to climate change - structural and fabric resilience	1	1	A climate change adaptation strategy appraisal for the structural and fabric resilience is undertaken	Climate change strategy appraisal	Consultant	Stage 4

The explanation and outline of how to achieve each credit is found below in the following sections:

### Waste (Wst) Continued

Wst 06: Design for disassembly and adaptability	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Recommendations	1	1	Conduct a study to explore the ease of disassembly and adaptation of different design scenarios	Marked up plans detailing adaptable measures	Consultant	Stage 4
Implementation	1	1	Achieve criteria 1-2 above Outline how recommendations have been adapted into the design Produce a building adaptability and disassembly guide	See above Marked up plans detailing adaptable measures Copy of building adaptability and disassembly guide		

### Land Use and Ecology (LE)

LE 01: Site selection	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Previously occupied land	1	0	At least 75% of the footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings	Site layout drawings detailing existing and proposed buildings	-	-
Contaminated land	1	0	Site investigation confirms land is contaminated, remediation is in line with contaminated land specialist's report	Report from contaminated land specialist and confirmation from client that report has been adhered to	-	-

LE 02: Identifying and understanding the risks and opportunities for the project	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Determining the ecological outcomes of the site	2	2	Ecologist surveys and evaluates site and raises recommendations in a site report	Copy of ecologist's report & GN40 completed	CSA	Concept stage

LE 03: Managing negative impact on ecology	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Identifying and understanding the risks and opportunities for the project	0	0	Achieve LE 02	See above	CSA	Concept stage
Planning, liaison, implementation and data	1	1	Roles and responsibilities are defined, site prep and works have been planned and project team and stakeholders have implemented solutions and measures	Meeting minutes with design team outlining ecologist's recommendations and discussions	RPS	Concept stage
Managing negative impacts of the project	2	2	Ecologist report outlines how construction can have no impact on ecology of site	Copy of ecologist's report confirming mitigating measures on & GN40 completed	CSA	Concept stage

LE 04: Change and enhancement of site ecology	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Identifying and understanding the risks and opportunities for the project	0	0	Achieve LE 03	See above	CSA	Concept stage
Liaison, implementation and data collection	1	1	Using data gathered, solutions and measures selected enhance ecological value	BREEAM CEEQUAL calculator completed and drawings showing areas	CSA	Concept stage
Enhancement of ecology	3	2	Ecologist report outlines how ecology has been enhanced in line GN.36	Copy of ecologist's report outlining enhancing solutions	CSA	Concept stage

LE 05: Long term ecology management and maintenance	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Roles and responsibilities, implementation, statutory obligations	0	0	Achieve LE 04	See above	CSA	Concept stage
Planning, liaison, data, monitoring and review management and maintenance	1	0	The project team liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, on solutions and measures implemented	Document / copy of contract showing responsibilities of management of ecology for next 5 years	RPS	Concept stage
Landscape and ecology management plan (or similar) development	1	0	Ecologist produces a landscape and ecology management plan to be handed over to facilities management	Copy of landscape management plan	CSA	Concept stage

The explanation and outline of how to achieve each credit is found below in the following sections:

### Pollution (Pol)

Pol 01: Impact of refrigerants	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Impact of refrigerants	3	3	No refrigerants on site	HVAC drawings	Cudd Bentley	Stage 4
OR	-	-	-	-	-	-
Prerequisite	0	0	All systems comply with BS EN 378:2017	Confirmation from manufacturer		
Impact of refrigerants	0	0	The direct effect life cycle CO <sub>2</sub> equivalent emissions (DELCO) of ≤ 100 CO <sub>2</sub> -eq/Kw	Air Conditioning schedule Datasheet for the AC system Pol 01 calculator	-	-
Leak detection system	0	0	A permanent automated refrigerant leak detection system is installed of continuously monitoring for leaks.	Schematics Manufacturer's literature Photo of it installed on site		
Pol 02: Local Air Quality	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Plant NOx emissions	2	2	NOx emissions for the heating and hot water are limited to <100mg/kWh	Heating schedule datasheet	Cudd Bentley	Stage 4
Pol 03: Surface water run-off	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Flood resilience	2	2	A qualified consultant performs a site specific Flood Risk Assessment (FRA) to confirm the probability of flooding is low	copy of FRA	Consultant	Stage 4
Surface water run-off	2	2	Calculations to demonstrate the run-off rates for the site meet the BREEAM criteria/ for one credit if there is no increase in impermeable area	Marked up site plan Pol 03 Proforma	-	-
Minimising watercourse pollution	1	1	No discharge from the site for rainfall up to 5mm and the provision of pollution interceptors were appropriate	Surface water run-off report Pol 03 Proforma Drainage drawing	-	-
Pol 04: Reduction of night time light pollution	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
External lighting	1	1	External lighting strategy complies with the necessary standards and the circuit has a timeclock	External lighting drawing Specification/ confirmation of necessary standards	Cudd Bentley	Stage 4
Pol 05: Reduction of noise pollution	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Noise pollution	1	1	A noise impact assessment is carried out in compliance with BS 7445 and noise pollution levels are restricted.	Noise impact assessment Commitment to under post completion but pre-occupancy testing	Consultant	Recommendation report - Stage 4. Final testing at project completion

### Innovation (Inn)

Inn 01: Innovation	Available Credits	Excellent Rating	Credit Requirements	Evidence Requirements	Typical Responsibility	Stage Due
Man 03: CCS	1	1	Achieve all items for vehicle movement, pollution management, tidiness, health & wellbeing, security processes, training and site monitoring	CCS intermittent site reports and final certificate confirming score	Contractor	At project completion
Mat 01: LCA	1	1	Perform life cycle assessment options for 3 no. noticeably different HVAC options	LCA options output uploaded to BREEAM projects at concept stage & summary report	QuinnRoss Energy	Concept stage