

**BREEAM Bespoke 2011 New Construction Assessment Report: Building and Project Details**

**General information**

**BESPOKE**

BRE Assessment reference no.	BREEAM-0048-6498
Client name	WTI
Building end user/occupier	
Assessor name	Martyn Macefield
Assessor organisation	SLR Consulting

**Building details**

Building name	Deeside Energy from Waste Facility
Building address	Deeside Industrial Estate
County	Flintshire
Post code	
Country	Wales
Building type (main description)	Other
Building floor area (GIA) m <sup>2</sup>	5500
Building floor area (NIFA) m <sup>2</sup>	5000
BREEAM scheme	New Construction
BREEAM version	2011 (SD5073)
BREEAM 2011 technical manual issue number	SD5073 Issue 3.2
Project type	New Construction (fully fitted)
Assessment stage	Design (interim)
Location type	
Climatic zone	Temperate
Building services - heating system type	Wet system
Building services - cooling system type	Air-conditioning
Building services - domestic hot water system type	
Building service - controls	
If applicable, does this industrial building have a heated or cooled operational area?	Option not applicable to building type
Commercial/industrial refrigeration and storage systems	No
Internal or external planting and/or soft landscaping	Yes
Building user transportation systems (lifts and/or escalators)	Yes
Laboratory function/area and size category	No laboratory
Laboratory containment level	No laboratory
Fume cupboard(s) and/or other containment devices	No
Vehicle Wash System	No
If applicable, will this healthcare building house inpatients?	Option not applicable to building type
If applicable, does this industrial building have an office area?	Option not applicable to building type
If applicable, does this building contain areas requiring SAP assessment?	Option not applicable to building type
If SAP used, what proportion of the building's total floor area (GIA) does it apply to?	Option not applicable to building type

**Project team details**

Developer	
Principal contractor	
Architect	
Project management	
Building services	
BREEAM Accredited Professional	
Other project team member 1	
Other project team member 2	
Other project team member 3	
Other project team member 4	

**BREEAM assessor declaration of assessment accuracy and quality**

I, Martyn Macefield, a qualified BREEAM assessor working on behalf of SLR Consulting confirm that the content of this report is to the best of my knowledge a true and accurate reflection of the performance of the above named building, as measured against the assessment criteria and reporting requirements of the BREEAM Scheme Document (SD5073). Furthermore, I confirm that this assessment and the information on which it is based has been checked and verified in accordance with BRE Global Ltd's UKAS accredited BREEAM operating procedures for BREEAM assessments and assessors, as described in the technical scheme document (SD5073) and associated BREEAM operational documents.

BREEAM Assessor Signature

Date

**Disclaimer**

This report is made on behalf of SLR Consulting. By receiving the report and acting on it, the client - or any third party relying on it - accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

**Copyright**

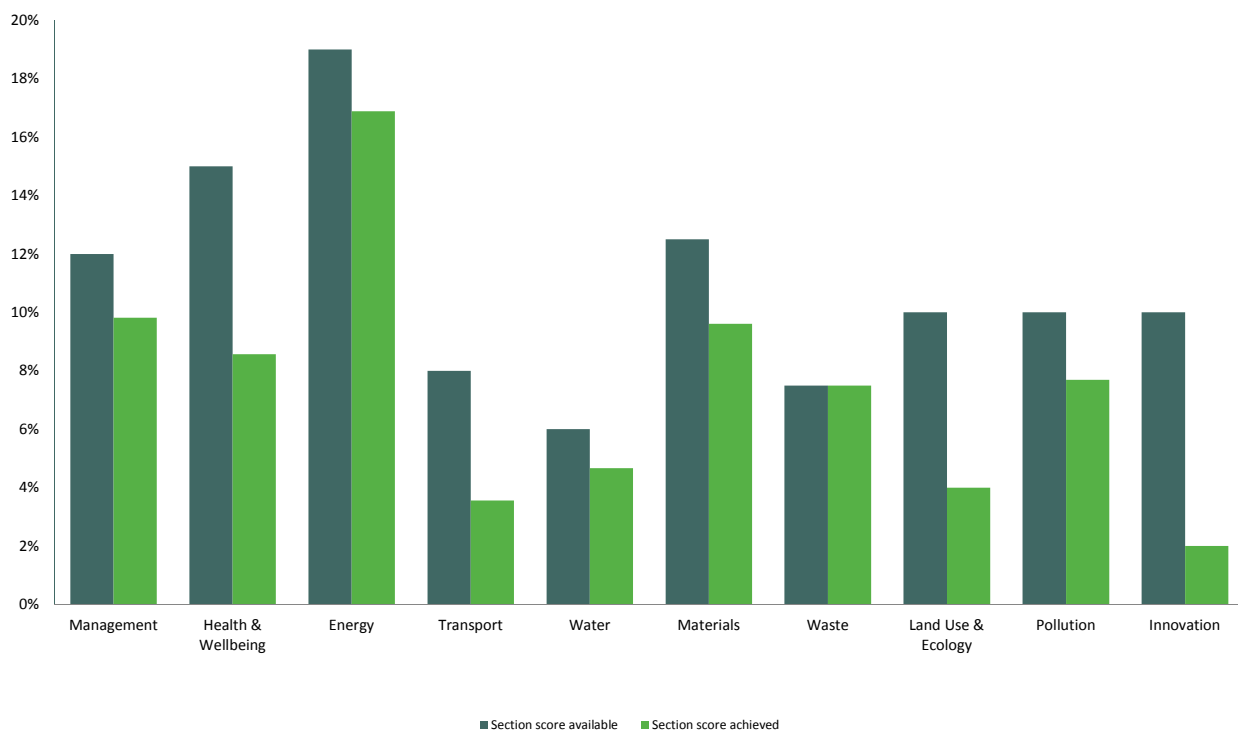
Copyright exists on the BREEAM logo and this may not be used or reproduced for any purpose without the prior written consent of the BRE Global Ltd. The BREEAM name and logo are registered trademarks of the Building Research Establishment Limited.

BREEAM Bespoke 2011 New Construction Assessment Report: Rating & Key Performance Indicators

Overall Building Performance

Building name	Deeside Energy from Waste Facility
BREEAM rating	Excellent
Total Score	74.31%
Min. standards level achieved	Outstanding level

Building Performance by Environment Section



Environmental Section	No. credits available	No. credits Achieved	% credits achieved	Section Weighting	Section Score
Management	22	18	81.82%	12.0%	9.82%
Health & Wellbeing	14	8	57.14%	15.0%	8.57%
Energy	27	24	88.89%	19.0%	16.89%
Transport	9	4	44.44%	8.0%	3.56%
Water	9	7	77.78%	6.0%	4.67%
Materials	13	10	76.92%	12.5%	9.62%
Waste	6	6	100.00%	7.5%	7.50%
Land Use & Ecology	10	4	40.00%	10.0%	4.00%
Pollution	13	10	76.92%	10.0%	7.69%
Innovation	10	2	20.00%	10.0%	2.00%

## Building Performance by Key Environmental Performance Indicator

Energy (consumption/production)	Life cycle stage	Measurement	Intensity	Units	Total	Units
Building operation <sup>[1]</sup>	Use	Modelled	84.06	kWh/m <sup>2</sup> /yr	462330	kWh/yr
Energy production <sup>[2]</sup>	Use	Modelled	INA	kWh/m <sup>2</sup> /yr	INA	kWh/yr
Construction process <sup>[3]</sup>	INA	INA	INA	INA	INA	INA
Transport <sup>[4]</sup>	INA	INA	INA	INA	INA	INA

Greenhouse Gas Emissions						
Building operation <sup>[1]</sup>	Use	Modelled	2.30	kgCO <sub>2</sub> eq/m <sup>2</sup> /yr	12,650	kgCO <sub>2</sub> eq/yr
Embodied <sup>[5]</sup>	Cradle-to-grave	Measured	INA	kgCO <sub>2</sub> eq/m <sup>2</sup>	INA	kgCO <sub>2</sub> eq
Proportion of applicable main building elements that data reported covers						INA
Construction process <sup>[3]</sup>	INA	INA	INA	INA	INA	INA
Transport <sup>[4]</sup>	INA	INA	INA	INA	INA	INA
Direct GHG emissions - Refrigerants <sup>[6]</sup>	Use	Modelled	INA	KgCO <sub>2</sub> eq/kW <sub>coolth</sub>	INA	KgCO <sub>2</sub> eq

Emissions to outdoor air, soil and water						
Nitrogen Oxides (NO <sub>x</sub> ) <sup>[7]</sup>	Use	Measured	0.00	mg/kWh	INA	kg/yr

Use of freshwater resource						
Building operation <sup>[8]</sup>	Use	Modelled	INA	m <sup>3</sup> /person/yr	INA	m <sup>3</sup> /yr
Construction process <sup>[9]</sup>	INA	INA	INA	INA	INA	INA

Construction waste and recovery						
Construction waste <sup>[10]</sup>	Construction	Target	3.20	tonnes/100m <sup>2</sup>	17,600	tonnes
Construction waste diverted from landfill <sup>[10]</sup>	Construction	Target	95.00%	%	16,720	tonnes
Demolition waste diverted from landfill <sup>[11]</sup>	-	-	-	-	-	-
Demolition waste to disposal <sup>[11]</sup>	-	-	-	-	-	-
Material for re-use <sup>[12]</sup>	Construction	Target	INA	tonnes/100m <sup>2</sup>	INA	tonnes
Material for recycling <sup>[12]</sup>	Construction	Target	INA	tonnes/100m <sup>2</sup>	INA	tonnes
Material for energy recovery <sup>[12]</sup>	Construction	Target	INA	tonnes/100m <sup>2</sup>	INA	tonnes
Hazardous waste to disposal <sup>[12]</sup>	Construction	Target	INA	tonnes/100m <sup>2</sup>	INA	tonnes

Sourcing of materials						
Materials responsibly sourced <sup>[13]</sup>	Construction	Measured	25.00%	%	-	-

Thermal comfort						
Time out of range of reference temperature <sup>[14]</sup>	Use	Modelled	INA	%	INA	INA

Indoor Air Quality						
Formaldehyde concentration level <sup>[15]</sup>	INA	INA	-	INA	INA	INA
Total volatile organic compound concentration <sup>[15]</sup>	INA	INA	INA	INA	INA	INA

### Notes

- 1 Modelled using approved software compliant with the UK's National Calculation Method which in turn is compliant with Article 3 of The Energy Performance of Buildings Directive (EPBD) 2002/91/EC. Modelling includes building energy consumption resulting from the specification of a 'controlled', 'fixed building service' (as defined in Approved Document L2A, 2010).
- 2 The reported impact includes technologies that produce energy (on-site and/or near-site) as defined by Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.
- 3 The reported impact includes energy consumption from construction plant, equipment and site accommodation. This KPI is not assessed/reported at the design stage of assessment/certification.
- 4 The reported impact covers transport of the construction materials that make-up the main building elements and ground works and landscaping materials (from the factory gate to the site) and construction waste (from the construction gate to waste disposal processing / recovery centre gate). Main building elements are defined in the BREEAM 2011 New Construction Technical Guide (SD5073). This KPI is not assessed/reported at the design stage of assessment/certification.
- 5 The reported impact covers the construction materials that make-up the main building elements (over a 60 year study period). Main building elements are defined in the BREEAM 2011 New Construction Technical Guide (SD5073). The data is quantified using BRE's Environmental Profiles Methodology. The Environmental Profiles Methodology has been peer reviewed to comply with BS ISO 14040 and represents the Product Category Rules for BRE Global's environmental labelling scheme (EPD - ISO 14025, Type III) for construction products and elements
- 6 The reported impact is for a 10 year study period. The calculation of the Direct Effect Life Cycle CQeq emissions used by BREEAM is based on the Total Equivalent Warming Impact (TEWI) calculation method for new stationary refrigeration and air conditioning systems, as described in Annex B of BS EN 378-1:2008.
- 7 The reported impact covers emissions from either one or a combination of space heating, cooling and hot water heating (refer to Pol02 Assessment Issue for scope of emissions)
- 8 The reported impact includes net water consumption from the micro-components utilised by building occupants for sanitary purposes. The impact accounts for water recycling/rainwater collection, where used for permissible non-potable water demands (For further detail refer to BREEAM 2011 New Construction Technical Guide (SD5073)).
- 9 The reported impact is net water consumption i.e. accounts for any water recycling/rainwater collection used to off-set a potable site demand. This KPI is not assessed/reported at the design stage of assessment/certification.
- 10 The reported impact covers non-hazardous waste from new construction materials, it therefore excludes hazardous and demolition and excavation waste. Where assessed and reported at the design stage of assessment this KPI is based on a target as reported in a compliant Site Waste Management Plan.
- 11 The reported impact covers non-hazardous waste from site demolition. Where assessed and reported at the design stage at the design stage of assessment this KPI is based on the target demolition waste diverted from landfill, as reported in a compliant Site Waste Management Plan. If no demolition taking place on site this KPI is not applicable.
- 12 Where assessed and reported at the design stage of assessment this KPI is based on a target as reported in a compliant Site Waste Management Plan.
- 13 The reported impact covers the proportion of the key building elements present and assessed by BREEAM that are responsibly sourced, where responsibly sourced is defined as follows; where at least 80% of the materials that make-up an element achieve certification in accordance with one of the responsible sourcing schemes defined in table 10-2 of the BREEAM 2011 New Construction Technical Guide (SD5073).
- 14 The reported impact covers the percentage "time out of range" of the minimum and maximum temperatures for summer and winter settings, whereby winter and summer settings are defined in accordance with the appropriate industry standard (refer to the BREEAM 2011 New Construction Technical Guide (SD5073) for further detail).
- 15 The total volatile organic compound (TVOC) concentration is measured post construction (but pre-occupancy) over 8 hours. Formaldehyde concentration level is measured post construction (but pre-occupancy) averaged over 30 minutes. Both KPI's are measured in accordance with European and/or ISO standards (refer to the BREEAM New Construction Technical Manual for relevant standard numbers. At the design stage of assessment no data is available for this KPI as they are both measured once the building has been constructed (but pre-occupancy) for the purpose of post construction assessment.

"INA" = Indicator Not Assessed. This will be the case where either the data required for the KPI is not gathered/measured by the building's project team or not assessed/quantified in BREEAM for a particular building type or assessment stage e.g. energy consumption for construction process at the design stage of assessment.

"-" = KPI not applicable to building being assessed.

**BREEAM Bespoke 2011 New Construction Assessment Report: Assessment Issue Scoring**

Building name	Deeside Energy from Waste Facility
Building score (%)	74.31%
Building rating	Excellent
Minimum standards level achieved	Outstanding level

**MANAGEMENT**

**Man01 Sustainable Procurement**

No. of BREEAM credits available	8	Available contribution to overall score	4.36%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria		Compliant?	Credits available	Credits achieved
Project brief and design	Criteria 1-3	Yes	1	1
	Criteria 4-6	Yes	1	1
	Criteria 7-9	Yes	1	1
	Criteria 10-13	Yes	1	1
Construction and handover	Criteria 14-17	No	1	0
	Criteria 18-21	Yes	1	1
	Criteria 22	Yes	1	1
Aftercare	Criteria 23-24	Yes	1	1
	Exemplary level (Criteria 25)	Yes	1	1

Total BREEAM credits achieved	7
Total contribution to overall building score	3.82%
Total BREEAM innovation credits achieved	1
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Man02 Responsible Construction Practices**

No. of BREEAM credits available	2	Available contribution to overall score	1.09%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant considerate construction scheme used	Considerate Constructors Scheme
	Level achieved by the project using the compliant scheme	A CCS score of 36 or more

Total BREEAM credits achieved	2
Total contribution to overall building score	1.09%
Total BREEAM innovation credits achieved	1
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Man03 Construction Site Impacts**

No. of BREEAM credits available	5	Available contribution to overall score	2.73%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Energy consumption monitoring	Yes	1	1
Water consumption monitoring	Yes	1	1
Transport of construction materials and waste monitoring	Yes	1	1
Timber procurement	Yes	1	1
Construction site management: EMS	Yes	1	1
Construction site management - Pollution Prevention Procedures	Yes		

Key Performance Indicators: Construction site energy use

Energy consumption (total) - site processes		Information not available at design stage
Energy consumption (intensity) - site processes		Information not available at design stage
Distance (total) - materials transport to site		Information not available at design stage
Distance (total) -waste transport from site		Information not available at design stage
Energy consumption (total) - materials transport to site		Information not available at design stage
Energy consumption (total) - waste transport from site		Information not available at design stage
Energy consumption (intensity) - materials transport to site		Information not available at design stage
Energy consumption (intensity) - waste transport from site		Information not available at design stage

Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes		Information not available at design stage
Greenhouse gas emissions (intensity) - site processes		Information not available at design stage
Greenhouse gas emissions (total) - materials transport to site		Information not available at design stage
Greenhouse gas emissions (total) - waste transport from site		Information not available at design stage
Greenhouse gas emissions (intensity) - materials transport to site		Information not available at design stage
Greenhouse gas emissions (intensity) - waste transport from site		Information not available at design stage

Key Performance Indicators: Construction site use of freshwater resources

Use of freshwater resource (total) - site processes		Information not available at design stage
Use of freshwater resource (intensity) - site processes		Information not available at design stage

Total BREEAM credits achieved	5
Total contribution to overall building score	2.73%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Man04 Stakeholder Participation**

No. of BREEAM credits available	4	Available contribution to overall score	2.18%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Consultation	Yes	1	1
Inclusive and accessible design	Yes	1	1
Building user information	Yes	1	1
Post occupancy evaluation and information dissemination	Yes	1	1

Total BREEAM credits achieved	4
Total contribution to overall building score	2.18%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Man05 Life cycle cost and service life planning**

No. of BREEAM credits available	3	Available contribution to overall score	1.64%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Feasibility stage LCC: concept design/development proposals	No	1	0
Strategic and system level LCC: component analysis and selection	No	1	0
Technical design LCC: specification and maintenance strategy	No	1	0

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**HEALTH & WELLBEING**

**Hea01 Visual Comfort**

No. of BREEAM credits available	3	Available contribution to overall score	3.21%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Fluorescent lamps fitted with high frequency ballasts?	Yes	N/A	N/A
Daylight factor	Yes	1	1
Glare control and view out	Yes	1	1
Internal and external lighting	Yes	1	1
Exemplary level daylighting	No	1	0
<b>Total BREEAM credits achieved</b>	<b>3</b>		
<b>Total contribution to overall building score</b>	<b>3.21%</b>		
<b>Total BREEAM innovation credits achieved</b>	<b>0</b>		
<b>Minimum standard(s) level</b>	<b>Outstanding level</b>		

Assessor comments/notes:

**Hea02 Indoor Air Quality**

No. of BREEAM credits available	4	Available contribution to overall score	4.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Min. sources of air pollution: air quality plan (criterion 1)	No	1	0
Min. sources of air pollution: internal and external source (criterion 2-5)	No	1	0
Minimising sources of air pollution: VOCs (specification)	No	1	0
Minimising sources of air pollution: VOCs (measurement)	No	1	0
Potential for Natural Ventilation	No	1	0
			N/A

Key Performance Indicators: Indoor air quality

Concentration levels of formaldehyde	Information not available at design stage
Total volatile organic compound (TVOC) concentration	Information not available at design stage

<b>Total BREEAM credits achieved</b>	<b>0</b>
<b>Total contribution to overall building score</b>	<b>0.00%</b>
<b>Total BREEAM innovation credits achieved</b>	<b>N/A</b>
<b>Minimum standard(s) level</b>	<b>N/A</b>

Assessor comments/notes:

**Hea03 Thermal Comfort**

No. of BREEAM credits available	2	Available contribution to overall score	2.14%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Thermal modelling	No	1	0
Thermal zoning and control strategy	No	1	0

Key Performance Indicators: Thermal comfort (Time out of range (TOR))

TOR of min. and max. temperatures for summer and winter settings		Indicator Not Assessed
--	--	------------------------

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Hea04 Water Quality**

No. of BREEAM credits available	1	Available contribution to overall score	1.07%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Minimising risk of contamination: water systems	Yes	1	1
Minimising risk of contamination: failsafe humidification	N/A		
Provision of fresh drinking water	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.07%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:



**Hea05 Acoustic Performance**

No. of BREEAM credits available	2	Available contribution to overall score	2.14%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Appointment of a suitably qualified acoustician	Yes		
Acoustic performance standards and testing requirements	Yes	2	2
<b>Total BREEAM credits achieved</b>		<b>2</b>	
<b>Total contribution to overall building score</b>		<b>2.14%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**Hea06 Safety and Security**

No. of BREEAM credits available	2	Available contribution to overall score	2.14%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Safe external access	Yes	1	1
Security of site and building	Yes	1	1
<b>Total BREEAM credits achieved</b>		<b>2</b>	
<b>Total contribution to overall building score</b>		<b>2.14%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**ENERGY**

**Ene01 Reduction of CO<sub>2</sub> Emissions**

No. of BREEAM credits available	15	Available contribution to overall score	10.56%
No. of BREEAM innovation credits available	5	Minimum standards applicable	Yes

Ene01 Calculator and Key Performance Indicators

Building floor area	5500	m <sup>2</sup>
Notional building energy demand	295.19	MJ/m <sup>2</sup> /annum
Actual building energy demand	160.68	MJ/m <sup>2</sup> /annum
Notional building energy consumption	164.43	kWh/m <sup>2</sup> /yr
Actual building energy consumption	84.06	kWh/m <sup>2</sup> /yr
Target Emission Rate (TER)	23.00	kgCO <sub>2</sub> /m <sup>2</sup> /yr
Building Emission Rate (BER)	2.30	kgCO <sub>2</sub> /m <sup>2</sup> /yr
Building Emission Rate improvement over TER	90.00%	
Demand Energy Performance Ratio (EPR)	0.2413	
Consumption Energy Performance Ratio (EPR)	0.4082	
CO <sub>2</sub> Energy Performance Ratio (EPR)	0.3396	
Overall Building Energy Performance Ratio (EPR <sub>NC</sub> )	0.9891	

Have the values entered above for the non-domestic building been verified using BREEAM's Ene01 Compliance Checker website?	Yes
--	-----

Equivalent % of the building's 'regulated' energy consumption generated by carbon neutral sources and used to meet energy demand from 'unregulated' building systems or processes?	
Is the building designed to be 'carbon negative' ?	
If the building is defined as 'carbon negative' what is the total (modelled) renewable/carbon neutral energy generated and exported	

Total BREEAM credits achieved	14
Total contribution to overall building score	9.85%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Ene02 Energy Monitoring**

No. of BREEAM credits available	2	Available contribution to overall score	1.41%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Monitoring of major energy consuming systems	Yes	1	1
Monitoring of energy use by tenancy or function area	Yes	1	1
<b>Total BREEAM credits achieved</b>		<b>2</b>	
<b>Total contribution to overall building score</b>		<b>1.41%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>	<b>Outstanding level</b>		

Assessor comments/notes:

**Ene03 External Lighting**

No. of BREEAM credits available	1	Available contribution to overall score	0.70%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
External lighting specification	Yes	1	1
<b>Total BREEAM credits achieved</b>		<b>1</b>	
<b>Total contribution to overall building score</b>		<b>0.70%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>	<b>N/A</b>		

Assessor comments/notes:

**Ene04 Low and Zero Carbon Technology**

No. of BREEAM credits available	5	Available contribution to overall score	3.52%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Compliant LZC feasibility study	Yes	2	1
Scope of the feasibility study	Operational stage carbon savings/emissions		
Percentage net reduction in operational stage CO2 emissions	20.00%	2	2
Energy source of the LZC system	Biomass		
Please select	No	1	0

KPI - Low and/or zero carbon energy generation

Total on-site and/or near-site LZC energy generation  kWh/yr

Total BREEAM credits achieved	3
Total contribution to overall building score	2.11%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Ene05 Energy Efficient Cold Storage**

**Assessment Issue Not Applicable**

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Total BREEAM credits achieved	N/A		
Total contribution to overall building score	N/A		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

**Ene06 Energy Efficient Transportation Systems**

No. of BREEAM credits available	2	Available contribution to overall score	1.41%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Transportation system analysis and strategy Energy efficient transportation features	Yes	1	1
	Yes	1	1
<b>Total BREEAM credits achieved</b>	2		
<b>Total contribution to overall building score</b>	1.41%		
<b>Total BREEAM innovation credits achieved</b>	N/A		
<b>Minimum standard(s) level</b>	N/A		

Assessor comments/notes:

**Ene07 Energy Efficient Laboratory Systems**

**Assessment Issue Not Applicable**

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
<b>Total BREEAM credits achieved</b>	N/A		
<b>Total contribution to overall building score</b>	N/A		
<b>Total BREEAM innovation credits achieved</b>	N/A		
<b>Minimum standard(s) level</b>	N/A		

Assessor comments/notes:

**Ene08 Energy Efficient Equipment**

No. of BREEAM credits available	2	Available contribution to overall score	1.41%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Present	Significant majority contributor
Small power and plug in equipment	Yes	Yes
Swimming pool	No	
Communal laundry	No	
Data centre	No	
IT-intensive operation areas	Yes	Yes
Residential areas	No	
Healthcare	No	
Kitchen and catering facilities	No	

	Compliant	Credits available	Credits achieved
Significant majority contributors BREEAM compliant	Yes	2	2

Total BREEAM credits achieved	2
Total contribution to overall building score	1.41%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Ene09 Drying Space**

**Assessment Issue Not Applicable**

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved

Total BREEAM credits achieved	N/A
Total contribution to overall building score	N/A
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**TRANSPORT**

**Tra01 Public Transport Accessibility**

No. of BREEAM credits available	3	Available contribution to overall score	2.67%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra01 issue assessment) **Other Building Type 1**

Assessment Criteria	Compliant	Credits available	Credits achieved
Public transport accessibility index	0.00	3	0
Building dedicated bus service	No		0
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

**Tra02 Proximity to Amenities**

No. of BREEAM credits available	1	Available contribution to overall score	0.89%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Close proximity and accessible to applicable amenities	No	1	
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

**Tra03 Cyclist facilities**

No. of BREEAM credits available	2	Available contribution to overall score	1.78%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra03 issue assessment)	Other Building - transport type 1
Number of compliant cycle storage spaces provided	10
Cyclist facilities provided	Showers and changing facilities and lockers

Assessment Criteria	Compliant?	Credits available	Credits achieved
Cycle storage spaces	Yes	2	2
Cyclist facilities	Yes		
Total BREEAM credits achieved	2		
Total contribution to overall building score	1.78%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

**Tra04 Maximum Car Parking Capacity**

No. of BREEAM credits available	2	Available contribution to overall score	1.78%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra04 issue)	Other Building - transport type 1
Buildings Accessibility Index (sourced from issue Tra01)	0

Assessment Criteria	Compliant?	Credits available	Credits achieved
Maximum parking capacity	Yes	2	1
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.89%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:



**Tra05 Travel Plan**

No. of BREEAM credits available	1	Available contribution to overall score	0.89%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Transport plan based on site specific travel survey/assessment	Yes	1	1
<b>Total BREEAM credits achieved</b>		<b>1</b>	
<b>Total contribution to overall building score</b>		<b>0.89%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**WATER**

**Wat01 Water Consumption**

No. of BREEAM credits available	5	Available contribution to overall score	3.33%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Please select the calculation procedure used

Standard approach data

Water Consumption from building micro-components	<input type="text"/>	L/person/day
Water demand met via greywater/rainwater sources	<input type="text"/>	L/person/day
Total net water consumption	<input type="text"/>	L/person/day
Improvement on baseline performance	40.00%	%

Key Performance Indicator - use of freshwater resource

Total net Water Consumption	<input type="text"/>	m3/person/yr
Default building occupancy	<input type="text"/>	

Alternative approach data

Overall microcomponent performance level achieved	<input type="text"/>
	<input type="text"/>

<b>Total BREEAM credits achieved</b>	<b>3</b>
<b>Total contribution to overall building score</b>	<b>2.00%</b>
<b>Total BREEAM innovation credits achieved</b>	<b>0</b>
<b>Minimum standard(s) level</b>	<b>Outstanding level</b>

Assessor comments/notes:

**Wat02 Water Monitoring**

No. of BREEAM credits available	1	Available contribution to overall score	0.67%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Water meter on the mains water supply to the building(s)	Yes	1	1
Metering/monitoring equipment on supply to plant/building areas	Yes		
Pulsed output on all relevant water meters	Yes		
Existing BMS connection	N/A		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.67%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Wat03 Water Leak Detection and Prevention**

No. of BREEAM credits available	2	Available contribution to overall score	1.33%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Leak detection on building's mains water supply	Yes	1	1
Flow control device to each sanitary area/facility	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.33%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Wat04 Water Efficient Equipment**

No. of BREEAM credits available	1	Available contribution to overall score	0.67%
No. of BREEAM innovation credits available	No	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Specification/installation of water efficient equipment	Yes	1	1
<b>Total BREEAM credits achieved</b>		<b>1</b>	
<b>Total contribution to overall building score</b>		<b>0.67%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**MATERIALS**

**Mat01 Life Cycle Impacts**

No. of BREEAM credits available	6	Available contribution to overall score	5.77%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria

Total Mat01 credits achieved	5
Total Mat01 points achieved	
Number of building elements assessed	
Exemplary level compliant?	No

Key Performance Indicator - embodied green house gas emissions by element	Total area of element m <sup>2</sup>	Total impact kgCO <sub>2</sub> eq.	Area of element impact data relevant to m <sup>2</sup>
External walls			
Windows			
Roof			
Upper floor construction			
Internal wall			
Floor finishes/coverings			

Key Performance Indicator - embodied green house gas emissions for building (assessed elements only)

Total embodied green house gas emissions for building (by assessed elements)	Missing data	kgCO <sub>2</sub> eq.		kgCO <sub>2</sub> eq./m <sup>2</sup>
Proportion of applicable building elements that data reported covers				

<b>Total BREEAM credits achieved</b>	<b>5</b>
<b>Total contribution to overall building score</b>	<b>4.81%</b>
<b>Total BREEAM innovation credits achieved</b>	<b>0</b>
<b>Minimum standard(s) level</b>	<b>N/A</b>

Assessor comments/notes:

**Mat02 Hard Landscaping and Boundary Protection**

No. of BREEAM credits available	1	Available contribution to overall score	0.96%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
External hard landscaping and boundary protection	Yes	1	1
Total BREEAM credits achieved		1	
Total contribution to overall building score		0.96%	
Total BREEAM innovation credits achieved		N/A	
Minimum standard(s) level		N/A	

Assessor comments/notes:

**Mat03 Responsible Sourcing**

No. of BREEAM credits available	3	Available contribution to overall score	2.88%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant	Credits available	Credits achieved
Percentage of available responsible sourcing points achieved	25.00%	3	1
All timber sourced in accordance with the UK Govt's Timber Procurement Policy.	Yes		

Building elements	Element present / assessed	% element responsibly sourced	Responsible sourcing points
Structural Frame	Yes	100%	1.00
Ground floor	Yes	100%	1.00
Upper floors (including separating floors)	Yes	100%	1.00
Roof	Yes	100%	1.00
External walls	Yes	100%	1.00
Internal walls	Yes	100%	1.00
Foundation/substructure	Yes	100%	1.00
Fittings	Yes	100%	1.00
Hard landscaping	Yes	100%	1.00

Total BREEAM credits achieved	1
Total contribution to overall building score	0.96%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Mat04 Insulation**

No. of BREEAM credits available	2	Available contribution to overall score	1.92%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Embodied impact - insulation index	2.00	1	1
Responsible sourcing - % of insulating materials responsibly sourced	100%	1	1
<b>Total BREEAM credits achieved</b>	<b>2</b>		
<b>Total contribution to overall building score</b>	<b>1.92%</b>		
<b>Total BREEAM innovation credits achieved</b>	<b>N/A</b>		
<b>Minimum standard(s) level</b>	<b>N/A</b>		

Assessor comments/notes:

**Mat05 Designing for Robustness**

No. of BREEAM credits available	1	Available contribution to overall score	0.96%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Suitable durability/protection measures to vulnerable building areas	Yes	1	1
<b>Total BREEAM credits achieved</b>	<b>1</b>		
<b>Total contribution to overall building score</b>	<b>0.96%</b>		
<b>Total BREEAM innovation credits achieved</b>	<b>N/A</b>		
<b>Minimum standard(s) level</b>	<b>N/A</b>		

Assessor comments/notes:

**WASTE**

**Wst01 Construction Waste Management**

No. of BREEAM credits available	4	Available contribution to overall score	5.00%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?
Compliant Site Waste Management Plan	Yes
Compliant Pre-demolition audit	N/A

**Key Performance Indicators - Construction Waste**

Measure/units for the data being reported	tonnes	
Non-hazardous construction waste (excluding demolition/excavation)	3.20	tonnes/100m2
Total non-hazardous construction waste generated	17600.00	tonnes
Non-hazardous non-demolition const. waste diverted from landfill	95.00%	%
Total non-hazardous non-demolition const. waste diverted from landfill	16720.00	tonnes
Total non-hazardous demolition waste generated		Indicator Not Applicable
Non-hazardous demolition waste diverted from landfill		Indicator Not Applicable
Total non-hazardous demolition waste to disposal		Indicator Not Applicable
Material for reuse		tonnes
Material for recycling		tonnes
Material for energy recovery		tonnes
Hazardous waste to disposal		tonnes

Total BREEAM credits achieved	4
Total contribution to overall building score	5.00%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**Wst02 Recycled Aggregates**

No. of BREEAM credits available	1	Available contribution to overall score	1.25%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria	Total
Total % of high-grade aggregate that is recycled/secondary aggregate	25%

% of high-grade aggregate that is recycled/secondary aggregate - by application

Application	Value
Structural frame	N/A
Floor slabs including ground floor slabs	25%
Bitumen/hydraulically bound base, binder and surface courses	70%
Concrete road surfaces	N/A
Pipe bedding	N/A
Building foundations	N/A
Granular fill and capping	N/A
Gravel landscaping	N/A

Total BREEAM credits achieved	1
Total contribution to overall building score	1.25%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Assessor comments/notes:

**Wst03 Operational Waste**

No. of BREEAM credits available	1	Available contribution to overall score	1.25%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Segregation and storage of operational recyclable waste volumes	Yes	1	1
Static waste compactor(s) or baler(s)	N/A		
Vessel(s) for composting suitable organic waste	N/A		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.25%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Wst04 Speculative Floor and Ceiling Finishes

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Total BREEAM credits achieved	N/A		
Total contribution to overall building score	N/A		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

**LAND USE & ECOLOGY**

LE01 Site Selection

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Previously developed land	No	1	0
Contaminated land	No	1	0
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:



**LE02 Ecological Value of Site and Protection of Ecological Features**

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Ecological value of the land defined using

Assessment Criteria	Compliant?	Credits available	Credits achieved
Land of low ecological value	No	1	0
Protection of existing ecological features	No		

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**LE03 Mitigating Ecological Impact**

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Data sourced for calculating the change in ecological value from

Assessment Criteria	Value	Standard
Change in ecological value	-3.00	Plant species richness

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

**LE04 Enhancing Site Ecology**

No. of BREEAM credits available	3	Available contribution to overall score	3.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Suitably Qualified Ecologist appointment (SQE)	Yes	3	1
Implementation of the Suitably Qualified Ecologists general recommendations	Yes		
Change in ecological value (as confirmed by Suitably Qualified Ecologist)	-3	<i>Plant species richness</i>	
<b>Total BREEAM credits achieved</b>		<b>1</b>	
<b>Total contribution to overall building score</b>		<b>1.00%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**LE05 Long Term Impact on Biodiversity**

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Mandatory criteria - SQE, legislation & landscape/habitat management plan	Yes	2	2
Additional criteria - Biodiversity Champion	Yes		
Additional criteria - Training of site workforce	Yes		
Additional criteria - Monitor and record actions to protection site biodiversity	Yes		
Additional criteria - New ecologically valuable habitat creation	Yes		
Additional criteria - Construction programme minimises disturbance to wildlife	Yes		
<b>Total BREEAM credits achieved</b>		<b>2</b>	
<b>Total contribution to overall building score</b>		<b>2.00%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**POLLUTION**

**Pol01 Impact of Refrigerants**

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria		Credits available	Credits achieved
Refrigerant containing systems installed in the assessed building?	Yes	2	0
Global Warming Potential of the specified refrigerant(s) 10 or less?	No		
Total Direct Effect Life Cycle CO <sub>2</sub> eq. emissions from the system		kgCO <sub>2</sub> eq/kW coolth capacity	
Cooling/Heating capacity of the system		kW	
BREEAM compliant refrigerant leak detection and containment	No	1	0

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Pol02 NO<sub>x</sub> Emissions**

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

NO <sub>x</sub> emission level - space heating	0.00	mg/kWh
NO <sub>x</sub> emission level - cooling		mg/kWh
NO <sub>x</sub> emission level - water heating		mg/kWh
Does this building meet BREEAM's definition of a highly insulated building?		
Energy consumption: heating only or heating and cooling (as appropriate)		kWh/m <sup>2</sup> /yr

Total BREEAM credits achieved	3
Total contribution to overall building score	2.31%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Pol03 Surface Water Run off**

No. of BREEAM credits available	5	Available contribution to overall score	3.85%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Annual probability of flooding Flood Risk Assessment	Low	2	2
	Yes		
Surface water run off – peak rate	Yes	1	1
Surface water run off – volume, attenuation and/or limiting discharge	Yes	1	1
Minimising watercourse pollution	Yes	1	1

Total BREEAM credits achieved	5
Total contribution to overall building score	3.85%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Pol04 Reduction of Night Time Light Pollution**

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
External lighting specification	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.77%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

**Pol05 Noise Attenuation**

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant	Credits available	Credits achieved
Noise-sensitive areas/buildings within 800m radius of the development	Yes	1	1
Noise impact assessment and, if applicable, noise attenuation measures	Yes		
<b>Total BREEAM credits achieved</b>		<b>1</b>	
<b>Total contribution to overall building score</b>		<b>0.77%</b>	
<b>Total BREEAM innovation credits achieved</b>		<b>N/A</b>	
<b>Minimum standard(s) level</b>		<b>N/A</b>	

Assessor comments/notes:

**INNOVATION**

**Inn01 Innovation**

No. of BREEAM innovation credits available	10	Available contribution to overall score	10.00%
		Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Man01 Sustainable Procurement	Yes	1	1
Man02 Responsible Construction Practices	Yes	1	1
Hea01 Visual Comfort	No	1	0
Ene01 Reduction of CO2 Emissions	No	5	0
Ene04 Low and Zero Carbon Technology	No	1	0
Ene05 Energy Efficient Cold Storage	N/A	N/A	N/A
Wat01 Water Consumption	No	1	0
Mat01 Life Cycle Impacts	No	1	0
Mat03 Responsible Sourcing of Materials	No	1	0
Wst01 Construction Waste Management	No	1	0
Wst02 Recycled Aggregates	No	1	0

Number of 'approved' innovation credits achieved?

<b>Total BREEAM innovation credits achieved</b>	<b>2</b>
<b>Total contribution to overall building score</b>	<b>2.00%</b>
<b>Minimum standard(s) level</b>	<b>N/A</b>

Assessor comments/notes:

**BREEAM Bespoke 2011 New Construction Assessment Report: Assessment Validation References**

**Building name:** Deeside Energy from Waste Facility

Identifier	Assessment Evidence Reference	Assessment issue	Issue criteria No. and/or compliance note	Assessor's supporting notes/information
1	e.g. Project A, First floor plan, rev05, 1/10/10. Supplied by F Fitzgerald (23/3/11)	Wat 02	e.g. 1	e.g. Plan indicates location of water meter in plant room located in south-west corner of the building.
2	e.g. See identifier 1	Mat05	e.g. 1 and 2c	e.g. Plan indicates vehicle parking within 1m of north façade and the provision of barriers to protect façade.
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				

Identifier	Assessment Evidence Reference	Assessment issue	Issue criteria No. and/or compliance note	Assessor's supporting notes/information
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				
101				
102				
103				
104				
105				
106				
107				
108				
109				
110				
111				
112				
113				

Identifier	Assessment Evidence Reference	Assessment issue	Issue criteria No. and/or compliance note	Assessor's supporting notes/information
114				
115				
116				
117				
118				
119				
120				
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				
132				
133				
134				
135				
136				
137				
138				
139				
140				
141				
142				
143				
144				
145				
146				
147				
148				
149				
150				
151				
152				
153				
154				
155				
156				
157				
158				
159				
160				
161				
162				
163				
164				
165				
166				
167				
168				
169				
170				
171				
172				
173				
174				



Identifier	Assessment Evidence Reference	Assessment issue	Issue criteria No. and/or compliance note	Assessor's supporting notes/information
175				
176				
177				
178				
179				
180				
181				
182				
183				
184				
185				
186				
187				
188				
189				
190				
191				
192				
193				
194				
195				
196				
197				
198				
199				
200				
	Insert further rows if required.			

## BREEAM Bespoke 2011 New Construction Assessment Report: Version Control

Version	Release Date	Description of changes/additions made to the BREEAM Assessment Scoring and Reporting Tool
<b>Current Version</b>		
2.91	15/08/2012	Man01: The shell only compliance option 2 has been made applicable to the construction and handover credits/criteria.
<b>Previous Versions</b>		
2.90	06/08/2012	<p>Tra 03: In the Assessment Issue Scoring worksheet the note 'This issue is not applicable to the assessment of prison buildings.' occurred for the Tra03 issue. This is not the case and the spreadsheet still allows the user to score under the issue, as per the requirements outlined in the technical manual. The tool has been amended so that this note no longer appears.</p> <p>The 'frozen panes' rows at the top of the Assessment Issue Scoring worksheet has been adjusted to fewer rows, as previously the large banner at the top was causing problems for users with smaller screens.</p> <p>Tra01: A note has been added, which appears for buildings located in a London Borough, giving advice about using Transport for London's Planning Information Database for sourcing the buildings Accessibility Index.</p>
2.80	15/06/2012	<p>Ene01: The EPR-BREEAM credit scale has been amended (as outlined in the Ene01 paper published BRE Global).</p> <p>Ene01: A statement and drop-down list has been added asking the assessor to confirm that they have used BREEAM's Ene01 Compliance Checker website to verify the data used to determine the number of BREEAM Ene01 credits achieved.</p> <p>Assessment Details: "Other: Ambulance Trust building" has been added to the "Building Type (Sub-Group)" drop-down list of options.</p>
2.70	03/05/2012	<p>Ene09: Under versions 2.20 to 2.60 Ene09 was applicable to sub-building type "Multi-Residential - Supported Living Facility". This issue does not apply to the assessment of this multi-residential building type.</p> <p>Ene01: The Ene01 calculator has been amended to enable the assessment of multi-residential buildings that are modelled using SAP only. This follows on from the change in version 2.60 where the Ene01 calculator was adapted to enable the assessment of multi-residential buildings that used both SAP and SBEM for the purpose of Building Regulations compliance. As a result of this change the Ene01 calculator can now cater for multi-residential building types that have been modelled using either SAP only, SBEM only or a combination of both SAP and SBEM.</p> <p>PoI02: This issue has been updated to reflect that BREEAM does not require the assessment and benchmarking of NO<sub>x</sub> emissions from cooling under the BREEAM 2011 PoI02 assessment issue, but does require the reporting of such emissions where present (as reported in the March 2012 Assessor Process Note, published 30/3/2012).</p> <p>Hea05: Under version 2.20 to 2.60 Hea05 was not showing the correct amount of credits for sub-building type "Multi-Residential - Supported Living Facility" (i.e. four credits).</p> <p>Assessment Details worksheet: The BREEAM Assessor's declaration statement has been amended so that the assessor's name and assessor organisations name appear in the statement. The box asking the assessor to confirm the statement has been removed and replaced with a space for the assessor's signature and date.</p> <p>Assessment Details Worksheet: A copyright and disclaimer statement has been added at the foot of the worksheet.</p> <p>Formatting: The colour scheme and font size has been amended to provide better contrast and legibility for users.</p> <p>Minor changes have been made for the purpose of BRE Global adaptation of the tool for use on bespoke projects.</p>
2.60	24/12/2011	Ene01: The Ene01 calculator (contained within the Assessment Issue Scoring worksheet) and Assessment Details worksheet has been amended to facilitate the assessment of multi-residential buildings with self contained dwellings, where the self-contained dwellings are assessed using SAP. For these types of assessment the assessor will also need to use the Ene01 Supplementary Calculator for Multi-Residential Buildings Using SAP (provided separately). This calculator converts the relevant SAP 2009 values in to the actual and notional energy demand, consumption and CO <sub>2</sub> emission rate required for the Ene01 assessment.
2.50	12/12/2011	Ene01: Under previous versions of this tool the Ene01 Calculator would award 15 credits for an EPR <sub>NC</sub> ≥ 0.90 regardless of whether the building had achieved the minimum requirement for a 100% improvement on the Target Emission Rate (TER). In accordance with the BREEAM 2011 Technical Guide, 15 Ene01 credits can only be awarded where the building achieves an EPR <sub>NC</sub> of 0.90 and a 100% improvement on the TER i.e. the building is net zero carbon. Where a building achieves an EPR <sub>NC</sub> of 0.90 but does not achieve the 100% improvement a maximum of 14 credits are achievable. This bug has been fixed under version 2.50 of the tool. Note: This bug will only have affected projects that are aiming to achieve all 15 Ene01 credits, any assessed project achieving less than 15 credits is therefore unaffected by this change.
2.40	08/12/2011	Wst02 & 03: Under previous versions the cell confirming the available percentage contribution to overall score contained an error that resulted in the percentage contribution being under-stated by between 0.03% and 0.29% for some building types and overstated by 0.14% for other types (the actual percentage for any single type of building is dependent on the selection made in the Assessment Details worksheet). This calculating error is not present and does not affect the Waste section score and therefore overall building score and rating calculated in the Assessment Rating and KPIs worksheet.
2.30	06/12/2011	<p>Hea02: The selection options for this issue have been adjusted so that compliance can be confirmed with criterion 1 only (air quality plan), which is necessary for achieving compliance with credits two and three (relating to VOCs), without having to rely on awarding the first credit. This was the change intended in version 2.00 of the of the reporting tool for Hea02 (see below).</p> <p>Assessment References Worksheet: Some cells in the references worksheet are inadvertently locked in the previous version, preventing data entry. In this version they are unlocked.</p>
2.20	14/11/2011	<p>The building type 'Supported living facilities' has been added as a sub-group to the Multi-Residential building type option. It has also been added as an optional building type to the drop-down list used for the Tra03 and Tra04 issues. In addition the 'visual arts' credit and criteria within the Hea01 issue has been made applicable to this building sub-type.</p> <p>Ene09 Drying Space: When selecting the building type 'Other: Residential Institution' this issue is confirmed as 'Not Applicable'. In previous versions of the tool this issue was applicable; it should only apply to multi-residential building types e.g. key worker accommodation, halls of residence etc. and not non-dwelling residential building types such as hotels, hostels, training centres etc.</p> <p>Hea05: When selecting the building type 'Other: Residential Institution' two credits are made available for this assessment issue (in accordance with the criteria in the Technical Manual for 'Other Buildings'). In previous versions four credits were available; four credits should only be available for multi-residential building types, with only two credits available for residential buildings of a non-dwelling type e.g. hotels, hostels, training centres etc.</p>
2.10	14/10/2011	Hea05 Acoustic Performance: In the previous version only two credits were made available where 'Education - All age range school' or 'Education - Academy school' building type was selected. This has been amended in this version and three credits are available for this building type.

2.00	07/10/2011	Version 2.0 of the Assessment and Reporting tool is compatible with Microsoft Excel 2003.
		Hea05 Acoustic Performance: In the previous version only two credits were made available where 'Education - Non-acute special educational (SEN) school' building type was selected. This has been amended in this version and three credits are now available for this building type.
		Man01 Sustainable Procurement: In some instances, where one credit had been achieved, the minimum standards for the excellent rating was not confirmed as complied with. This anomaly has been corrected.
		Ene01 Reduction of CO <sub>2</sub> Emissions: As reported in Guidance Note 02 (2/09/11): A 25% and 40% improvement corresponds to an EPR on the CO <sub>2</sub> emissions scale of 0.215 and 0.294 respectively. However, version 1.1 of the BREEAM 2011 reporting tool confirms the Excellent and Outstanding minimum standards have been met only if an EPR of 0.22 or 0.30 is achieved. These levels actually correspond to a percentage improvement just above 25% and 40%. This anomaly has been rectified in version 2.0 of tool so that the Excellent and Outstanding minimum standards are met where the BER is 25% and 40% lower than the TER (2010 notional building) respectively.
		The Indoor Air Quality KPIs (in the Assessment Rating and KPIs worksheet) reference note 12. This reference is incorrect. A new reference has been added (15) and the Indoor Air Quality KPIs now refer to this note.
		Wat01 Water Consumption: Where using the alternative method a drop-down list has been added to enable users to select the approach used to measure and assess the performance of a specified rainwater or greywater system. This has been done to ensure consistency with the Wat01 calculator.
		Hea02 Indoor Air Quality: In the previous version it was possible to confirm compliance with the VOC criteria, and award the available credits, without first having achieved compliance with criterion 1 (Indoor air quality). This anomaly has been corrected.
1.10	29/07/2011	Assessment Details: In v.1.00 the 'location type' field in the assessment details tab was a mandatory field, despite not being labelled as such. In v.1.10 it is not a mandatory field.
		Assessment Details: In v.1.10 the fields in the assessment details tab that are specific to a single building type, e.g. industrial and healthcare buildings, have been defined as non-mandatory where neither of those building types are selected. In such instances a single default option in the drop-down box will be available and should be selected.
		Man01 Sustainable Procurement: In v.1.10 functionality has been added to the Man01 issue to prevent the second credit (criteria 7-9) for appointing a BREEAM Accredited Professional being awarded where the first credit (criteria 4-6) has not been achieved. The third credit for appointing a BREEAM AP can be awarded independently of the first two credits and is therefore not affected by this change. Functionality has also been added to prevent the credit for data collation and aftercare (criteria 23-24) being awarded where the credit for commissioning (criteria 22) has not first been achieved.
		Man 05 Life Cycle Costing and Service Life Planning: In v.1.10 functionality has been added to the Man05 issue to prevent the second and third credits being awarded where the first credit has not been achieved.
		Hea 03 Thermal Comfort: Functionality also added to Hea03 issue to prevent the second credit being awarded where the first credit has not been achieved.
		Assessment Details: User information notes have been added to the mandatory fields cells in the Assessor Details worksheet. These notes provide guidance on which BREEAM issues are affected by the user selection and what to do where, at the start of assessment, information is not known.
		Hea03 Thermal Comfort issue: a bug has been fixed in the credits achieved cell. The bug was resulting in credits not being awarded where 'Yes' was selected by the user in the compliant cell.
		Ene07 Energy Efficient Laboratory System issue: A bug has been fixed in the credits available cell. The bug was resulting in a "FALSE" statement in this cell for higher education building types where the laboratory floor space was less than 10% of the Gross Floor Area and fume cupboards were confirmed as specified.
		LE05 Long term impact on biodiversity issue: A bug has been fixed that enabled, for a given selection of responses to the additional criteria, a credit being awarded where non compliance with the mandatory criteria was confirmed.
		Pol 02 NOx Emissions: In v.1.0 when "fully fitted" was selected in the assessment details for the project type and the building was confirmed as a highly insulated building, i.e. "HIB" was entered in the relevant cell, the available BREEAM credit was not awarded. This loss of functionality has been restored in v.1.10.
1.00	01/07/2011	BREEAM 2011 New Construction Go Live version.