
BREEAM UK New Construction 2014 Pre-Assessment Estimator Report

Client: Balmoral Group

Site: Thurnscoe, Barnsley, South Yorkshire

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Report Details:

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1. Introduction

This BREEAM UK New Construction (NC) 2014 Pre-Assessment Estimator report has been prepared to support the planning application for the proposed development of a portion of land located towards the end of Barrowfield Road. Proposals are for the construction of a new build, two storey industrial processing factory with offices development. The site is located near an industrial complex of business and factories to the north and greenfield land to the south of and east of the proposed site. There are the Thurnscoe train station within approximately 500m via Lidget Lane and there are several bus nodes within 500m.

2. Local Planning Authority (LPA) Requirements

Under Policy CC1 Climate Change and Sustainable Construction, Barnsley Council's Core Strategy states that

All non-residential development will be expected, subject to viability, to achieve at least BREEAM standard of 'very good' or equivalent. This should be supported by preliminary assessments at planning application stage, per the Building Research Establishment's Environmental Assessment Method (BREEAM).

Based on the above and that the proposed development is in an urban area, the building will need to achieve an 'Very Good rating.

3. BREEAM UK New Construction - Overview

BREEAM (Building Research Establishment's Environmental Assessment Method) is a performance based assessment method and certification scheme for new buildings. The main aim of BREEAM is to mitigate the life cycle impacts of new buildings on the environment in a robust and cost effective manner.

The BREEAM New Construction scheme can be used to assess the environmental life cycle impacts of new non-domestic buildings at the design and construction stages.

Within the assessment there are nine categories of sustainable design, within which are a number of sub-categories. Credits are awarded where evidence can be provided to demonstrate compliance with the criteria in the sub-categories. There are also additional credits available for innovation where, the building goes beyond best practice in terms of a particular aspect of sustainability.

The credits are then converted into a points total and this determines the level of BREEAM New Construction rating achieved.

Minimum Standards

There are certain sub-categories within BREEAM New Construction where minimum standards must be met. These are dependent upon the BREEAM New Construction rating to be achieved, and include:

- Sustainable Procurement
- Visual Comfort
- Water Quality
- Water Consumption
- Responsible Sourcing of Materials

Optional Elements

In addition to the categories where minimum standards must be achieved, there are optional elements of the scheme where credits can be achieved for demonstrating compliance, including:

- Responsible Construction Practices
- Indoor Air Quality
- Thermal Performance
- Adaption to Climate Change
- Ecology
- Flood Risk

It is worth bearing in mind that in order to demonstrate compliance with certain categories, it may be necessary to appoint external consultants who have the qualifications and expertise required to prepare the required evidence.

4. BREEAM Pre-Assessment Estimator

The Pre-Assessment Estimator report prepared for the proposed building is provided in Appendix A. This sets out what is considered at this stage (based on the plans and specifications received to date) to be the best ways forward in terms of achieving the required rating.

An initial BREEAM Pre-Assessment Estimator (PAE) has been prepared to provide an indication as to how the proposed development could achieve a BREEAM 'Very Good' rating. The PAE has considered the existing nature of the development site and the existing site layout, along with the current development proposals and proposed site layout and demonstrated that the development affords the opportunity for many of the BREEAM sub-categories within BREEAM to be considered, being able to potentially achieve the minimum standards of the 'Excellent' rating.

It should be noted that to achieve a BREEAM 'Very Good' rating, a minimum score of 55% is required.

Currently a potential score of 59.5% is proposed to be achieved. This would give the project a 'Very Good' BREEAM rating.

It is important to note that the Pre-Assessment Estimator is only an initial guide to give an indication of how the proposed unit may feasibly achieve a BREEAM rating; should planning permission be granted, it is strongly recommended that early consideration is given to BREEAM in order to ensure that a feasible BREEAM strategy can be achieved.

The credits allocated in the BREEAM pre-assessment estimator have been based on the site layout and design plus BREEAM assessor experience, therefore these are currently assumed until confirmed by the design team.

Appendix A - BREEAM UK New Construction 2014 - Pre-Assessment Estimator

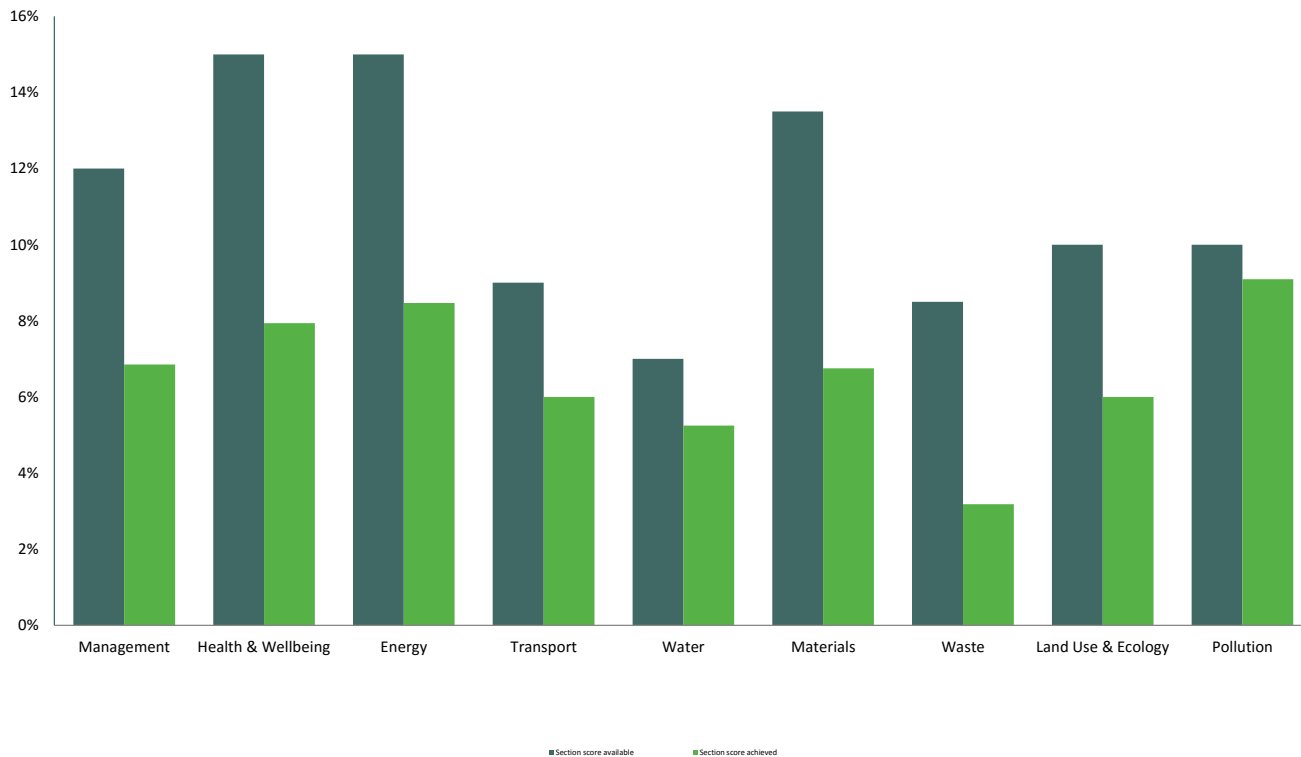


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Overall Building Performance

Building name	Thurnscoe
Indicative BREEAM rating	Very Good
Indicative Total Score	59.5%
Min. standards level achieved	Excellent level

Building Performance by Environment Section



Environmental Section	No. credits available	Indicative no. credits Achieved	% credits achieved	Section Weighting	Indicative Section Score
Management	21	12	57.14%	12.00%	6.85%
Health & Wellbeing	17	9	52.94%	15.00%	7.94%
Energy	23	13	56.52%	15.00%	8.47%
Transport	9	6	66.67%	9.00%	6.00%
Water	8	6	75.00%	7.00%	5.25%
Materials	10	5	50.00%	13.50%	6.75%
Waste	8	3	37.50%	8.50%	3.18%
Land Use & Ecology	10	6	60.00%	10.00%	6.00%
Pollution	11	10	90.91%	10.00%	9.09%
Innovation	10	0	0.00%	N/A	0

BREEAM UK New Construction 2014 Pre-Assessment Estimator: Assessment Issue Scoring



Building name	Thurnscoe
Building score (%)	59.50%
Building rating	Very Good
Minimum standards level achieved	Excellent level

MANAGEMENT

Man 01 Project brief and design

No. of BREEAM credits available	4	Available contribution to overall score	2.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Will stakeholder consultation (project delivery) take place?	Yes	1	1
Will stakeholder consultation (third party) take place?	Yes	1	1
Will a sustainability champion (design) be assigned?	No	1	0
Will a sustainability champion (monitoring progress) be assigned?	No	1	0

Total BREEAM credits achieved	2
Total contribution to overall building score	1.14%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Man 02 Life cycle cost and service life planning

No. of BREEAM credits available	4	Available contribution to overall score	2.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will an elemental life cycle cost (LCC) analyses be carried out?	No	2	0
Will a component level LCC plan be developed?	No	1	0
Will the predicted capital cost be reported?	No	1	0
Expected capital cost of the project (if available)		£/m ²	

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

Comments/notes:

Man 03 Responsible construction practices

No. of BREEAM credits available	6	Available contribution to overall score	3.43%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Is all site timber used in the project 'legally harvested and traded timber'?	Yes		
Will/does the principal contractor operate a compliant Environmental Management System?	Yes	1	1
Will a construction stage sustainability champion be assigned?	No	1	0
Will a considerate construction scheme be used by the principal contractor? (One credit where 'compliance' has been achieved. Two credits where 'compliance' is significantly exceeded.)	1	2	1
Will construction site impacts be metered/monitored?	Yes		
Will site utility consumption be metered/monitored?	Yes	1	1
Will transport of construction materials and waste be metered/monitored?	Yes	1	1
Will exemplary level criteria be met?			

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	4
Total contribution to overall building score	2.29%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Excellent level

Comments/notes:



Man 04 Commissioning and handover

No. of BREEAM credits available	4	Available contribution to overall score	2.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will commissioning schedule and responsibilities be developed & accounted for?	Yes	1	1
Will a commissioning manager be appointed?	Yes	1	1
Will the building fabric be commissioned?	No	1	0
Will a building user guide be developed prior to handover?	Yes	1	1
Will a training schedule be prepared for building occupiers/managers?	Yes	1	1

Total BREEAM credits achieved	3
Total contribution to overall building score	1.71%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Man 05 Aftercare

No. of BREEAM credits available	3	Available contribution to overall score	1.71%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will aftercare support be provided to building occupiers?	Yes	1	1
Will seasonal commissioning occur over 12months once substantially occupied?	Yes	1	1
Will a post occupancy evaluation be carried out 1 year after occupation?	Yes	1	1
Will exemplary level criteria be met?	No	1	0

Total BREEAM credits achieved	3
Total contribution to overall building score	1.71%

Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Comments/notes:

HEALTH & WELLBEING

Hea 01 Visual Comfort

No. of BREEAM credits available	4	Available contribution to overall score	3.53%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will the design provide adequate glare control for building users?	Yes	1	1
How many credits will be targeted for the daylighting criteria?	0	1	0
Will the design provide adequate view out for building users?	Yes	1	1
Will internal/external lighting levels, zoning and controls be specified in accordance with the relevant CIBSE Guides/British Standards?	Yes	1	1
Will exemplary level criteria be met?	No	1	0

Total BREEAM credits achieved	3
Total contribution to overall building score	2.65%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Hea 02 Indoor Air Quality

No. of BREEAM credits available	5	Available contribution to overall score	4.41%
No. of BREEAM innovation credits available	2	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will an air quality plan be produced and building designed to minimise air pollution?	No	1	0
Will building be designed to minimise the concentration and recirculation of pollutants in the building?	No	1	0

Will the relevant products be specified to meet the VOC testing and emission levels required?	No	1	0
Will formaldehyde and total VOC levels be measured post construction?	No	1	0
Will the building be designed to, or have the potential to provide, natural ventilation?	Yes	1	1
Will exemplary level VOCs (products) criteria be met?			

Key Performance Indicators: Indoor air quality

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

Total BREEAM credits achieved	1
Total contribution to overall building score	0.88%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Hea 03 Safe containment in laboratories

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

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will an objective risk assessment of proposed laboratory facilities' design be completed?			
Will the manufacture & installation of fume cupboards and containment devices meet best practice standards?			
Will containment level 2 & 3 labs meet best practice safety & performance criteria?			

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

Comments/notes:

Hea 04 Thermal comfort

No. of BREEAM credits available	3	Available contribution to overall score	2.65%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will thermal modelling of the design be carried out?	No	1	0
Will the building design be adapted for a projected climate change scenario?	No	1	0
Will the modelling inform the development of a thermal zoning and control strategy?	No	1	0

Key Performance Indicators: Thermal comfort

Predicted Mean Vote (PMV)	
Predicted Percentage Dissatisfied (PPD)	

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

Comments/notes:

Hea 05 Acoustic Performance

No. of BREEAM credits available	3	Available contribution to overall score	2.65%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Credits	Credits available	Credits achieved
Will the building meet the appropriate acoustic performance standards and testing requirements for: a. Sound insulation b. Indoor ambient noise level c. Reverberation times?	3	3	3

Total BREEAM credits achieved	3
Total contribution to overall building score	2.65%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Hea 06 Safety and Security

No. of BREEAM credits available	2	Available contribution to overall score	1.76%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Where external site areas are present, will safe access be designed for pedestrians and cyclists?	Yes	1	1
Will a suitably qualified security consultant be appointed and security considerations accounted for?	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.76%
Total BREEAM innovation credits achieved	N/A

Minimum standard(s) level

N/A

Comments/notes:

ENERGY

Ene 01 Reduction of energy use and carbon emissions

No. of BREEAM credits available	12	Available contribution to overall score	7.83%
No. of BREEAM innovation credits available	5	Minimum standards applicable	Yes

How do you wish to assess the number of BREEAM credits achieved for this issue?

Select the target number of BREEAM credits for the Ene01 issue:

Ene 01 Calculator

Country of the UK where the building is located	<input type="text"/>	Confirm building regulation and version to be used:	<input type="text"/>
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New Construction (Fully fitted)

Building floor area	<input type="text"/>	m2
Notional building heating and cooling energy demand	<input type="text"/>	MJ/m2yr
Actual building heating and cooling energy demand	<input type="text"/>	MJ/m2yr
Notional building primary energy consumption	<input type="text"/>	kWh/m2yr
Actual building primary energy consumption	<input type="text"/>	kWh/m2yr
Target emission rate (TER)	<input type="text"/>	kgCO2/m2yr
Building emission rate (BER)	<input type="text"/>	kgCO2/m2yr
Building emission rate improvement over TER	<input type="text"/>	
Heating & cooling demand energy performance ratio (EPR _{ED})	<input type="text"/>	
Primary consumption energy performance ratio (EPR _{PC})	<input type="text"/>	
CO ₂ Energy performance ratio (EPR _{CO2})	<input type="text"/>	
Overall building energy performance ratio (EPR _{NC})	<input type="text"/>	

Where specified, please confirm the energy production from onsite or near site energy generation technologies	<input type="text"/>
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?	<input type="text"/>
Is the building designed to be 'carbon negative' ?	<input type="text"/>
If the building is defined as 'carbon negative' what is the total (modelled) renewable/carbon neutral energy generated and exported?	<input type="text"/>

Total BREEAM credits achieved	5
Total contribution to overall building score	3.26%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Excellent level

Comments/notes:

Ene 02 Energy monitoring

No. of BREEAM credits available	2	Available contribution to overall score	1.30%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment criteria

Assessment criteria	Compliant?	Credits available	Credits achieved
Will a BMS or sub-meters be specified to monitor energy use from major building services systems?	Yes	1	1
Will a BMS or sub-meters be specified to monitor energy use by tenant/building function areas?	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.30%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Ene 03 External lighting

No. of BREEAM credits available	1	Available contribution to overall score	0.65%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment criteria

Assessment criteria	Compliant?	Credits available	Credits achieved
Will external light fittings and controls be specified in accordance with the BREEAM criteria?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.65%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:



Ene 04 Low carbon design

No. of BREEAM credits available	3	Available contribution to overall score	1.96%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment criteria

Assessment criteria	Compliant?	Credits available	Credits achieved
Will passive design measures be used in line with an analysis be carried out during concept design stage (RIBA stage 2 or equivalent)?	No	1	0
Will free cooling measures be implemented in the whole building in line with the passive design analysis?	No	1	0
Will a LZC technology be specified in line with a feasibility study carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent)?	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	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 05 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

Will the refrigeration system be designed, installed & commissioned in accordance with BREEAM criteria?	No	N/A	N/A
Will the refrigeration system demonstrate a saving in indirect greenhouse gas emissions?	No	N/A	N/A

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

Comments/notes:

Ene 06 Energy efficient transportation systems

No. of BREEAM credits available	3	Available contribution to overall score	1.96%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment criteria

Assessment criteria	Compliant?	Credits available	Credits achieved
Will a transportation system analysis be carried out to determine and specify the optimum number, size and type of lifts that is most energy efficient?	Yes	1	1
Will the relevant energy-efficient features criteria be met?	Yes	2	2

Total BREEAM credits achieved	3
Total contribution to overall building score	1.96%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 07 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

Assessment criteria	Compliant?	Credits available	Credits achieved
Pre-requisite: Criterion 1 of Hea 03 - risk assessment of laboratory facilities			
Have the occupants' laboratory requirements & performance criteria been confirmed during the preparation of the initial project brief to minimise energy demand?			
Best Practice Energy Practices in Laboratories (table 27)			
Will the laboratory meet criteria item b) Fan power?			
Will the laboratory criteria item c) Fume cupboard volume flow rates?			
Will the lab meet item d) Grouping / isolation of high filtration/ventilation activities?			
Will the laboratory meet criteria item e) Energy recovery - heat?			
Will the laboratory meet criteria item f) Energy recovery - cooling?			

Will the laboratory meet criteria item g) Grouping of cooling loads?	
Will the laboratory meet criteria item h) Free cooling?	
Will the laboratory meet criteria item i) Load responsiveness?	
Will the laboratory meet criteria item j) Cleanrooms?	
Will the laboratory meet criteria item k) Diversity?	
Will the laboratory meet criteria item l) Room air-change rates?	

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

Comments/notes:

Ene 08 Energy efficient equipment

No. of BREEAM credits available	2	Available contribution to overall score	1.30%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment criteria

Which of the following will be present and likely to be a/the major contributor to 'unregulated' energy use?	Present	Major impact
Ref A Small power and plug in equipment?	Yes	Yes
Ref B Swimming pool?		
Ref C Communal laundry?		
Ref D Data centre?		
Ref E IT-intensive operation areas?	Yes	Yes
Ref F Residential areas?		
Ref G Healthcare?		
Ref H Kitchen and catering facilities?	Yes	Yes

	Compliant	Credits available	Credits achieved
Will the significant majority contributor(s) to 'unregulated' energy use above meet the BREEAM criteria?	Yes	2	2

Total BREEAM credits achieved	2
Total contribution to overall building score	1.30%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 09 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

Will internal/external drying space and fixings be provided?

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

Comments/notes:

TRANSPORT

Tra 01 Public Transport Accessibility

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

Building type category (for purpose of Tra01 issue assessment)	Business (office/industrial)
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Assessment Criteria

Assessment Criteria	Compliant	Credits available	Credits achieved
Indicative public transport accessibility index (AI):	8.00	3	3
Will the building have a dedicated bus service?			N/A

AI	Indicative Accessibility Index for pre-assessment
0	Poor or no public transport provision
1	A single BREEAM compliant public transport node available
2	Some BREEAM compliant public transport nodes/services available
4	A selection of BREEAM compliant public transport nodes/services available
8	Good provision of public transport i.e. small urban centre / suburban area
10	Very Good provision of public transport i.e. small/medium urban centre
12	Excellent provision of public transport, i.e. medium urban centre
18	Excellent provision of public transport, i.e. large urban/metropolitan city centre

Total BREEAM credits achieved	3
Total contribution to overall building score	3.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Tra 02 Proximity to Amenities

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

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Will the building be in close proximity of and accessible to applicable amenities?	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

Comments/notes:

Tra 03 Cyclist facilities

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

Building type category (for purpose of Tra03 issue assessment)	Business - (office/Industrial)
How many compliant cycle storage spaces will be provided?	10
What cyclist facilities will be provided?	Showers 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	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Staff numbers and cycles spaces required to be confirmed.

Tra 04 Maximum Car Parking Capacity

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

Building type category (for purpose of Tra04 issue)	Business - (office/Industrial)
Building's indicative Accessibility Index (sourced from issue Tra01)	8

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Will BREEAM's maximum parking capacity criteria for the building type/Accessibility Index be met?	No	2	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

Comments/notes:

Tra 05 Travel Plan

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

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a transport plan based on site specific travel survey/assessment be developed?	Yes	1	1

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

Comments/notes:

WATER

Wat 01 Water Consumption

No. of BREEAM credits available	5	Available contribution to overall score	4.38%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

How do you wish to assess the BREEAM credits to be achieved for this issue? Define a target % improvement over baseline sanitary fittings

What is the target for % reduction in potable water consumption for sanitary use in the building? 40% - three credits

Please select the calculation procedure used

Standard approach data

Water Consumption from building micro-components

Water demand met via greywater/rainwater sources	
Total net water consumption	
Improvement on baseline performance	

Key Performance Indicator - use of freshwater resource

Total net Water Consumption		Indicator not assessed
Default building occupancy		Indicator not assessed

Alternative approach data

Overall microcomponent performance level achieved	

Total BREEAM credits achieved	3
Total contribution to overall building score	2.63%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Comments/notes:

Wat 02 Water Monitoring

No. of BREEAM credits available	1	Available contribution to overall score	0.88%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will there be a water meter on the mains water supply to the building(s)?	Yes	1	1
Will metering/monitoring equipment be specified on the water supply to any relevant plant/building areas?	Yes		
Will all specified water meters have a pulsed output?	Yes		
If the site/building has an existing BMS connection, will all pulsed meters be connected to the BMS?	N/A		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.88%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Wat 03 Water Leak Detection and Prevention

No. of BREEAM credits available	2	Available contribution to overall score	1.75%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a mains water leak detection system be installed on the building's mains water supply?	Yes	1	1
Will flow control devices be installed in each sanitary area/facility?	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.75%
Total BREEAM innovation credits achieved	N/A

Minimum standard(s) level

N/A

Comments/notes:

Wat 04 Water Efficient Equipment

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

Has a meaningful reduction in unregulated water demand been achieved?			
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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

Comments/notes:

MATERIALS

Mat 01 Life Cycle Impacts

No. of BREEAM credits available	2	Available contribution to overall score	2.70%
No. of BREEAM innovation credits available	3	Minimum standards applicable	No

How do you wish to assess the number of BREEAM credits to be achieved for this issue? Define the number of Mat 01 credits achieved

Assessment Criteria

Predicted total Mat01 credits achieved	2
Predicted total Mat01 points achieved	
Number of building elements assessed	
Green Guide exemplary level compliant?	
Has IMPACT compliant software been used?	

Key Performance Indicator - embodied green house gas emissions by element	Total area of element m ²	Total impact kgCO ₂ eq.	Area of element impact data relevant to m ²
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 ₂ eq.		kgCO ₂ eq./m ²
Proportion of applicable building elements that data reported covers				

Total BREEAM credits achieved	2
Total contribution to overall building score	2.70%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Mat 02 Hard Landscaping and Boundary Protection

No. of BREEAM credits available	1	Available contribution to overall score	1.35%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will ≥80% of all external hard landscaping and boundary protection achieve a Green Guide A or A+ rating?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	1.35%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Mat 03 Responsible Sourcing

No. of BREEAM credits available	4	Available contribution to overall score	5.40%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant	Credits available	Credits achieved
All timber and timber based products are 'Legally harvested and trader timber'	Yes		
Is there a documented sustainable procurement plan?		1	0
Percentage of available responsible sourcing of materials points achieved		3	0

Please confirm the route used to assess Mat03

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

Comments/notes:

Mat 04 Insulation

No. of BREEAM credits available	1	Available contribution to overall score	1.35%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

		Credits available	Credits achieved	
What is the building's targeted insulating index?	2.50	1	1	Note: An insulatio

Total BREEAM credits achieved	1
Total contribution to overall building score	1.35%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Mat 05 Designing for durability and resilience

No. of BREEAM credits available	1	Available contribution to overall score	1.35%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Will suitable durability/protection measures be specified and installed to vulnerable areas of the building?	Yes	1	1
Will suitable durability/protection measures be specified and installed to exposed parts of the building?	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.35%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Mat 06 Material efficiency

No. of BREEAM credits available	1	Available contribution to overall score	1.35%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Will material efficiency measures be identified & implemented during all RIBA stages?	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

Comments/notes:

WASTE

Wst 01 Construction Waste Management

No. of BREEAM credits available	4	Available contribution to overall score	4.25%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

How do you wish to assess the number of BREEAM credits to be achieved for this issue?

Select the number of BREEAM credits being targeted for issue Wst 01: BREEAM Wst01 Innovation credits:

Assessment Criteria	Compliant?
Construction resource management plan	<input type="text"/>
Compliant Pre-demolition audit	<input type="text"/>
Does the excavation waste meet the exemplary level requirements?	<input type="text"/>

Key Performance Indicators - Construction Waste

Measure/units for the data being reported	
Non-hazardous construction waste (excluding demolition/excavation)	<input type="text"/>
Total non-hazardous construction waste generated	<input type="text"/>
Non-hazardous non-demolition const. waste diverted from landfill	<input type="text"/>
Total non-hazardous non-demolition const. waste diverted from landfill	<input type="text"/>
Total non-hazardous demolition waste generated	<input type="text"/>
Non-hazardous demolition waste diverted from landfill	<input type="text"/>
Total non-hazardous demolition waste to disposal	<input type="text"/>
Material for reuse	<input type="text"/>
Material for recycling	<input type="text"/>
Material for energy recovery	<input type="text"/>
Hazardous waste to disposal	<input type="text"/>

Note: At the pre-assessment stage this will be a target k
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Total BREEAM credits achieved	2
Total contribution to overall building score	2.13%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Comments/notes:

Wst 02 Recycled Aggregates

No. of BREEAM credits available	1	Available contribution to overall score	1.06%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria	Total
What is the target total % of high-grade aggregate that will be recycled/secondary aggregate?	0%

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

Structural frame	
Bitumen/hydraulically bound base, binder and surface courses	
Building foundations	
Concrete road surfaces	
Pipe bedding	
Granular fill and capping	

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

Comments/notes:

Wst 03 Operational Waste

No. of BREEAM credits available	1	Available contribution to overall score	1.06%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will operational recyclable waste volumes be segregated and stored?	Yes	1	1
Will static waste compactor(s) or baler(s) be specified where appropriate?	Yes		
Will vessel(s) for composting suitable organic waste where appropriate?	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.06%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Wst 04 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

Comments/notes:

Wst 05 Adaption to climate change

No. of BREEAM credits available	1	Available contribution to overall score	1.06%
No. of BREEAM innovation credits available	1	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a climate change adaptation strategy appraisal for structural and fabric resilience be conducted by the end of Concept Design (RIBA Stage 2 or equivalent)?	No	1	0
Will exemplary level criteria – Responding to adaptation to climate change be met?	No	1	0

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

Comments/notes:

Wst 06 Functional adaptability

No. of BREEAM credits available	1	Available contribution to overall score	1.06%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a building specific functional adaptation strategy appraisal be conducted by Concept Design (RIBA Stage 2 or equivalent) and will functional adaptation measures be implemented?	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

Comments/notes:

LAND USE & ECOLOGY

LE 01 Site Selection

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

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will at least 75% of the proposed development's footprint be located on previously occupied land?	No	1	0
Is the site deemed to be significantly contaminated?	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

Comments/notes:

LE 02 Ecological Value of Site and Protection of Ecological Features

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

Ecological value of the land defined using A Suitably Qualified Ecologist

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Can the land within the construction zone be defined as 'land of low ecological value'?	Yes	1	1
Will all features of ecological value surrounding the construction zone/site boundary be protected?	Yes	1	1

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

Comments/notes:

LE 03 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 Suitably Qualified Ecologist site survey of plant species

Assessment Criteria

What is the likely change in ecological value as a result of the sites development?	<0≥-9 species (i.e. minimal negative change)	Plant species richn
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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

Comments/notes:

LE 04 Enhancing Site Ecology

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

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a suitably qualified ecologist be appointed to report on enhancing and protecting site ecology?	Yes	2	1
Will the suitably qualified ecologist's general recommendations be implemented?	Yes		
What is the targeted/intended improvement in ecological value as a result of enhancement actions?	<6 species (small positive change)		Plant species rich

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

Comments/notes:

LE 05 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

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a Suitably Qualified Ecologist be appointed to monitor/minimise impacts of site activities on biodiversity?	Yes	2	2
Will a landscape and habitat management plan be produced covering at least the first five years after project completion in accordance with British Standards?	Yes		
Number of applicable measures to improve biodiversity confirmed by SQE:	2		
Number of applicable measures implemented:	2		

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%

Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

POLLUTION

Pol 01 Impact of Refrigerants

No. of BREEAM credits available	3	Available contribution to overall score	2.73%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Yes	Credits available	Credits achieved
Refrigerant containing systems installed in the assessed building?	Yes	2	2
Do all systems (with electric compressors) comply with the requirements of BS EN 378:2008 (parts 2 & 3) & where refrigeration systems containing ammonia are installed, the IoR Ammonia Refrigeration Systems Code of Practice?	Yes		
Global Warming Potential of the specified refrigerant(s) 10 or less?	Yes		
What is the target range Direct Effect Life Cycle CO ₂ eq. emissions for the system?		kgCO ₂ eq/kW coolth capacity	
Cooling/Heating capacity of the system		kW	
Will a refrigerant leak detection and containment system be specified/installed?		1	0

Total BREEAM credits achieved	2
Total contribution to overall building score	1.82%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 02 NO_x Emissions

No. of BREEAM credits available	1	Available contribution to overall score	0.91%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Will office areas be compliant?	Yes	
NO _x emission level - space heating	70.00	mg/kWh
NO _x emission level - cooling	1200.00	mg/kWh

Does this building meet BREEAM's definition of a highly insulated building? Energy consumption: heating and hot water	N/A	kWh/m2 yr

Total BREEAM credits achieved	1
Total contribution to overall building score	0.91%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Assumed gas heating

Pol 03 Surface Water Run off

No. of BREEAM credits available	5	Available contribution to overall score	4.55%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
What is the actual/likely annual probability of flooding for the assessed site?	Low	2	2
Will a Flood Risk Assessment be undertaken?	Yes		
Will the site meet the BREEAM criteria for peak rate surface water run off?	Yes	1	1
Will the site meet the criteria for surface water run off volume, attenuation and/or limiting discharge?	Yes	1	1
Will the site be designed to minimise watercourse pollution in accordance with the BREEAM criteria?	Yes	1	1

Total BREEAM credits achieved	5
Total contribution to overall building score	4.55%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 04 Reduction of Night Time Light Pollution

No. of BREEAM credits available	1	Available contribution to overall score	0.91%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will the external lighting specification be designed to reduce light pollution?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.91%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 05 Noise Attenuation

No. of BREEAM credits available	1	Available contribution to overall score	0.91%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant	Credits available	Credits achieved
Will there be noise-sensitive areas/buildings within 800m radius of the development?	Yes	1	1
Will a noise impact assessment be carried out and, if applicable, noise attenuation measures specified?	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.91%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

INNOVATION

Inn 01 Innovation

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

Assessment Criteria

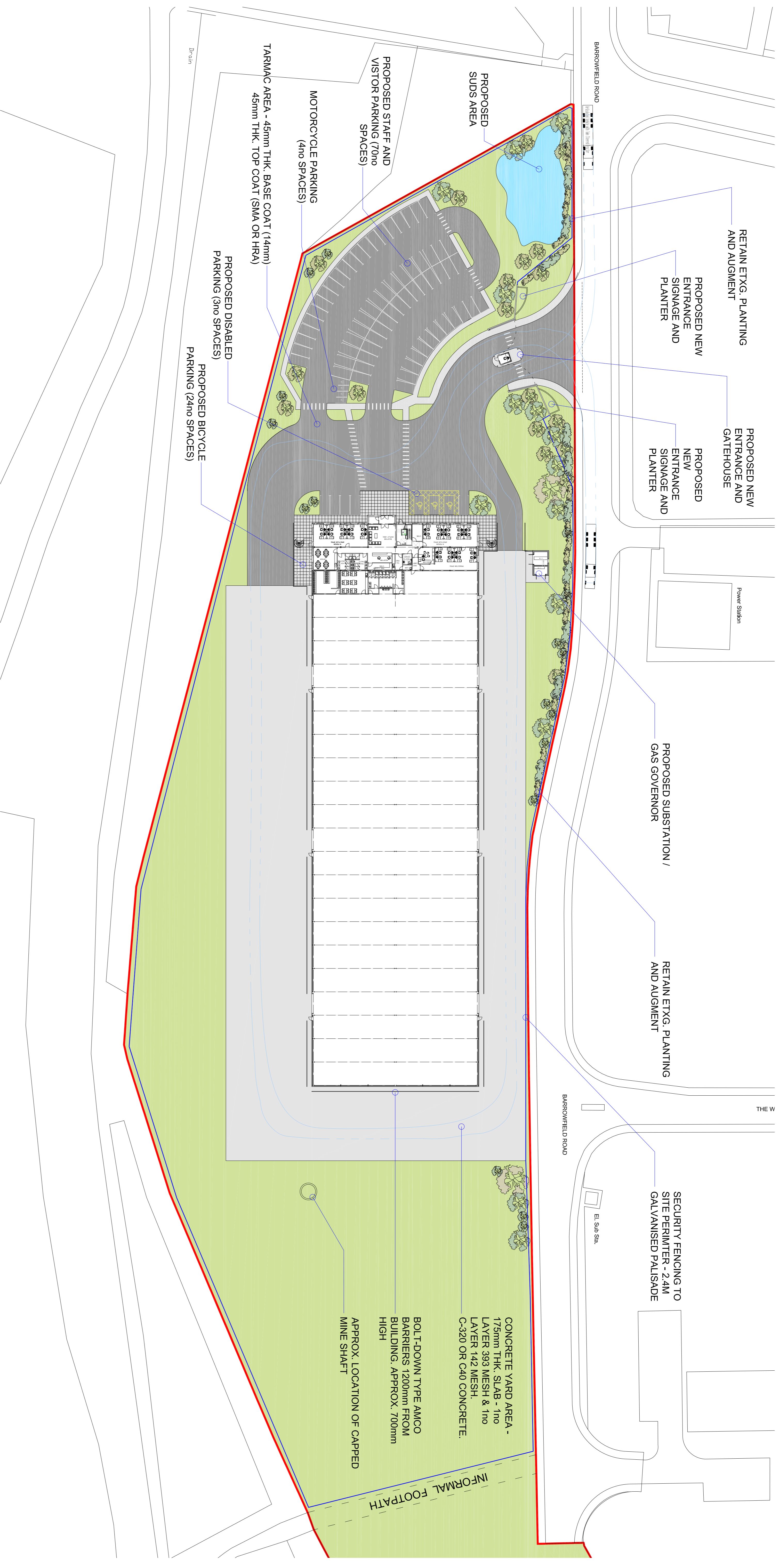
Assessment Criteria	Compliant?	Credits available	Credits achieved
Man 03 Responsible construction practices	No	1	0
Man 05 Aftercare	No	1	0
Hea 01 Visual Comfort	No	1	0
Hea 02 Indoor Air Quality	No	2	0
Ene 01 Reduction of energy use and carbon emissions	No	5	0
Wat 01 Water Consumption	No	1	0
Mat01 Life Cycle Impacts	No	3	0
Mat03 Responsible Sourcing of Materials	No	1	0

Wst01 Construction Waste Management	No	1	0
Wst02 Recycled Aggregates	No	1	0
Wst 05 Adaption to climate change	No	1	0

Number of 'approved' innovation credits achieved?

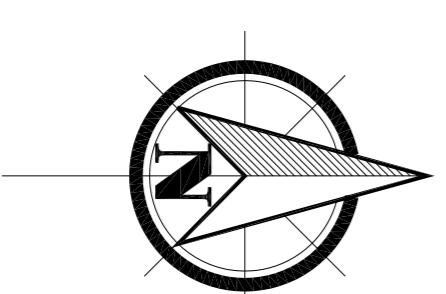
Total BREEAM innovation credits achieved	0
Total contribution to overall building score	0.00%
Minimum standard(s) level	N/A

Comments/notes:



NOTE: PLANTING SHOWN IS INDICATIVE ONLY.

- DENOTES PROPOSED VEHICLE TRACKING
- DENOTES PROPOSED NEW BOUNDARY FENCING - 2.4M HIGH GALVANISED PALISADE
- DENOTES SITE BOUNDARY



B - REVISED SITE LAYOUT	2016-11-14	
A - REVISED SITE LAYOUT	2016-11-01	
REVISIONS		
FEASIBILITY STUDY	FS <input checked="" type="checkbox"/> TENDER ISSUE	TI <input type="checkbox"/>
BUILDING WARRANT	BW <input type="checkbox"/> CONSTRUCTION ISSUE	CON <input type="checkbox"/>
PLANNING APPROVAL	PA <input type="checkbox"/> AS BUILT	AB <input type="checkbox"/>

Building Consultancy
Building Services, Project Management, Architectural Services.

Ryden COLUK
0131 225 6612

PROJECT
PROPOSED FACILITY, THURNSCOE, SOUTH YORKSHIRE

CLIENT
BALMORAL GROUP

DRWG. TITLE
DRAFT PROPOSED SITE LAYOUT PLAN

DRAWN BY	CHECKED BY	DATE
MF	AC	SEPTEMBER 2016

DRWGNR. | SCALE AT A1
E2631-001-H&eB | 1:500