

## BREEAM New Construction 2018

Bicester Office 1

Pre-assessment

Bicester Arc Office Park

25 September 2023      Assessment report



Marks & Spencer's BREEAM Excellent Cheshire Oaks store (Image: Marks & Spencer)

## Assessment references

<b>Registration number:</b>	TBC	<b>Date created:</b>	9/11/2021
<b>Created by:</b>	Dan Williams		

## Site details

<b>Site name:</b>	Bicester Arc Office Park		
<b>Address:</b>			
<b>Town:</b>			
<b>County:</b>			
<b>Postcode:</b>			
<b>Country:</b>	United Kingdom		


## Certificate details

The certificate will have the name of the architect (if entered above) and the name of the developer (from above).

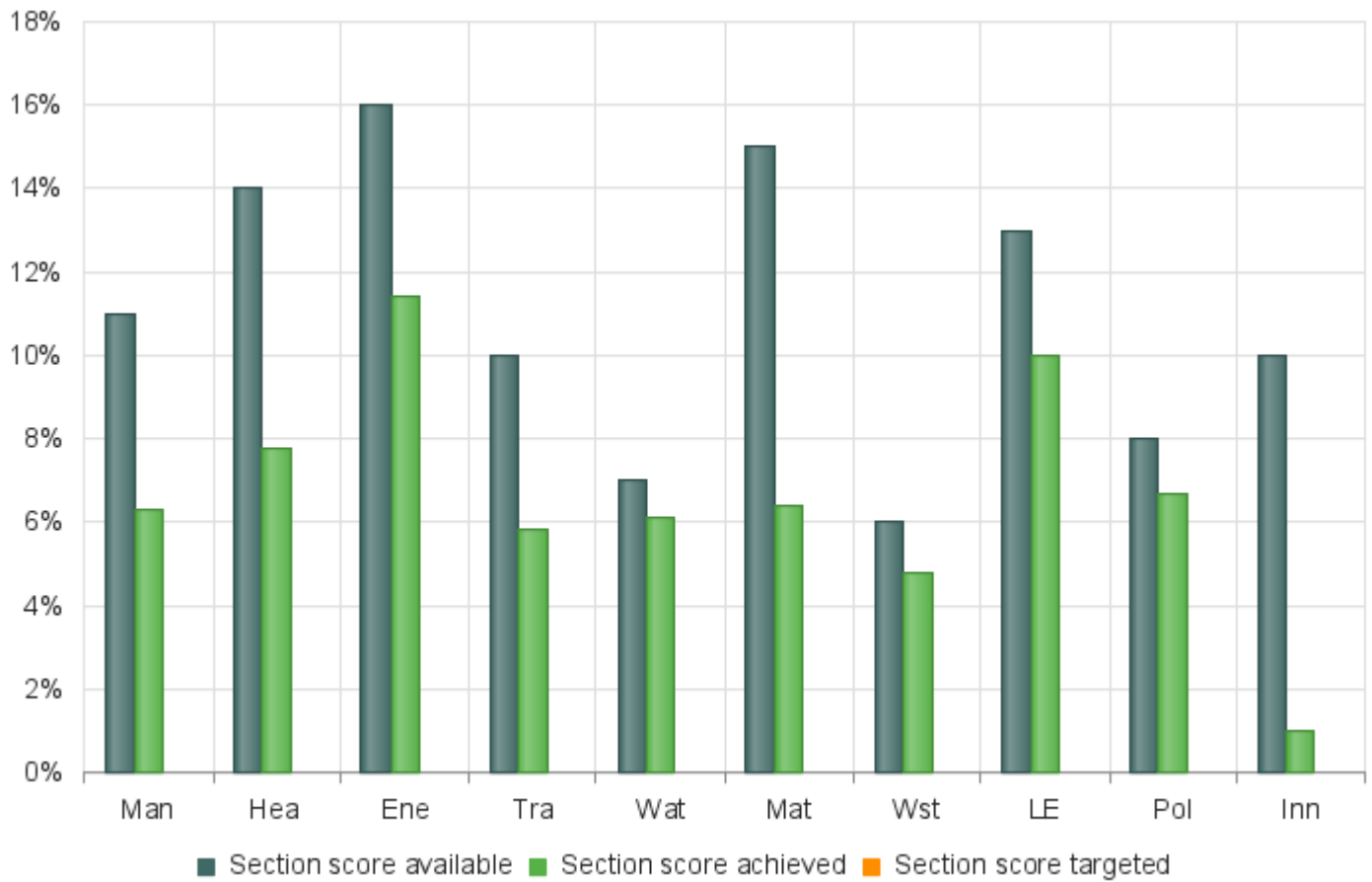
Any other names to appear on the certificate are listed below:

Name	Label
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## BREEAM Rating

	Credits available	Credits achieved	Credits targeted	% Credits achieved	Weighting	Category score	Target score
<b>Man</b>	21.0	12.0	0.0	57.14%	11.00%	6.28%	0.00%
<b>Hea</b>	18.0	10.0	0.0	55.56%	14.00%	7.77%	0.00%
<b>Ene</b>	21.0	15.0	0.0	71.43%	16.00%	11.42%	0.00%
<b>Tra</b>	12.0	7.0	0.0	58.33%	10.00%	5.83%	0.00%
<b>Wat</b>	8.0	7.0	0.0	87.50%	7.00%	6.12%	0.00%
<b>Mat</b>	14.0	6.0	0.0	42.86%	15.00%	6.42%	0.00%
<b>Wst</b>	10.0	8.0	0.0	80.00%	6.00%	4.80%	0.00%
<b>LE</b>	13.0	10.0	0.0	76.92%	13.00%	10.00%	0.00%
<b>Pol</b>	12.0	10.0	0.0	83.33%	8.00%	6.66%	0.00%
<b>Inn</b>	10.0	1.0	0.0	10.00%	10.00%	1.00%	0.00%
<b>Total</b>	139.0	86.0	0.0	61.87%	-	66.34%	0.00%
<b>Rating</b>	-	-	-	-	-	 <b>Very Good</b>	Unclass

## Performance by environmental category



## Indicator scores



More information (<https://www.breeam.com/news/new-breeam-indicators-to-be-added-to-breeam/>) about the BREEAM indicator scores

## Issue scores

Please Note: X means the exemplary credit for the relevant issue

### Management

Man 01 Project Brief and design

**0 / 4**

Man 02 Life cycle cost and service life planning

**1 / 4**

Man 03 Responsible construction practices

**5 / 6** X: 0 / 1

Man 04 Commissioning and handover

**4 / 4**

Man 05 Aftercare

**2 / 3**

### Health and Wellbeing

Hea 01 Visual comfort

**2 / 5** X: 0 / 2

Hea 02 Indoor air quality

**2 / 4** X: 0 / 1

Hea 04 Thermal comfort

**2 / 3**

Hea 05 Acoustic performance

**3 / 3**

Hea 06 Security

**0 / 1** X: 0 / 1

Hea 07 Safe and Healthy Surroundings

**1 / 2**

### Energy

Ene 01 Reduction of energy use and carbon emissions

**9 / 13** X: 0 / 5

Ene 02 Energy monitoring

**2 / 2**

Ene 03 External lighting

**1 / 1**

Ene 04 Low carbon design

**1 / 3**

Ene 05 Energy efficient cold storage

**N/A**

Ene 06 Energy efficient transportation systems

**2 / 2**

Ene 07 Energy efficient laboratory systems

**N/A**

Ene 08 Energy efficient equipment

**N/A**

## Transport

Tra 01 Transport assessment and travel plan

**2 / 2**

Tra 02 Sustainable transport measures

**5 / 10**

## Water

Wat 01 Water consumption

**4 / 5** X: 0 / 1

Wat 02 Water monitoring

**1 / 1**

Wat 03 Water leak detection

**2 / 2**

Wat 04 Water efficient equipment

**N/A**

## Materials

Mat 01 Life cycle impacts

**0 / 7** X: 0 / 3

Mat 02 Environmental impacts from construction products

**1 / 1**

Mat 03 Responsible sourcing

**3 / 4** X: 0 / 1

Mat 05 Designing for durability and resilience

**1 / 1**

Mat 06 Material efficiency

**1 / 1**

## Waste

Wst 01 Construction waste management

**3 / 4** X: 0 / 1

Wst 02 Use of recycled and sustainably sourced aggregates

**1 / 1** X: 0 / 1

Wst 03 Operational waste

**1 / 1**

Wst 04 Speculative finishes (Offices only)

**1 / 1**

Wst 05 Adaptation to climate change

**1 / 1** X: 0 / 1

Wst 06 Design for disassembly and adaptability

**1 / 2**

## Land use and ecology

LE 01 Site selection

**0 / 2**

LE 02 Ecological risks and opportunities

**2 / 2** X: 0 / 1

LE 03 Managing impacts on ecology

**3 / 3**

LE 04 Ecological change and enhancement

**3 / 4** X: 0 / 1

LE 05 Long term ecology  
management and  
maintenance

**2 / 2**

## Pollution

Pol 01 Impact of refrigerants

**3 / 3**

Pol 02 Local air quality

**0 / 2**

Pol 03 Flood risk  
management and reducing  
surface water run-off

**5 / 5**

Pol 04 Reduction of Night  
Time Light Pollution

**1 / 1**

Pol 05 Noise attenuation

**1 / 1**

## Innovation

Inn 01 Innovation

**0 / 0** X: 1 / 10

## Initial details

Technical manual issue number : Issue 3.0

Project scope : Fully fitted

Building type (main description) : Office

Sub-group : General office building

Assessment stage : Design (interim)

Building floor area (GIA) : 6600 m<sup>2</sup>



Building floor area (NIFA) : 5573 m<sup>2</sup>

Is the building designed to be untreated? : No

Building services - heating system type : Air system

Building services - cooling system type : Air-conditioning

Does the building have external areas within the boundary of the assessed development? :  
Yes

Are commercial or industrial-sized refrigeration and storage systems specified? : No

Are building user lifts present? : Yes

Are building user escalators or moving walks present? : No

Are there any water demands present other than those assessed in Wat 01? : No

Are there statutory requirements, or other issues outside of the control of the project, that impact the ability to provide outdoor space : No

Are there any systems specified that contribute to the unregulated energy load? : No

Are the Post-occupancy stage credits targeted in Ene 01 issue? : No

Are laboratories present? : No

Are there fume cupboard(s) and/or other containment devices present? : No

## Category assessment

### Management (Man)

#### Man 01 Project Brief and design

To optimise final building design through recognising and encouraging an integrated design process and robust stakeholder engagement.

##### Assessment criteria

Stakeholder consultation (interested parties) :	No
Project delivery planning :	No
Prerequisite: Have the client and the contractor formally agreed performance targets? :	No

**Credits awarded : 0**

#### Man 02 Life cycle cost and service life planning

To promote the business case for sustainable buildings and to deliver whole life value by encouraging the use of life cycle costing to improve design, specification, through-life maintenance and operation.

##### Assessment criteria

Elemental LCC :	No
Component level LCC options appraisal :	No
Capital cost reporting :	Yes
Capital cost of the project :	0.25 Â£k/m <sup>2</sup>

**Credits awarded : 1**

#### Man 03 Responsible construction practices

To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.

##### Assessment criteria

Prerequisite: Are all timber and timber-based products used during the construction process of the project 'legally harvested and traded timber'? :	Yes
Environmental management :	Yes

Prerequisite: Have the client and the contractor formally agreed performance targets? :	Yes
BREEAM Advisory Professional (site) :	No
Responsible construction management :	2
Monitoring of construction site impacts :	Yes
Utility consumption :	Yes
Transport of construction materials and waste :	Yes
Exemplary level criteria - Responsible construction management :	No

#### Key Performance Indicators: Construction site energy use

Energy consumption (total) - site processes :	10 kWh
Energy consumption (intensity) - site processes :	10 kWh/project value

#### Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes :	10 KgCO <sub>2</sub> eq
Carbon dioxide emissions (intensity) - site processes :	10 KgCO <sub>2</sub> eq/project value

**Credits awarded : 5**

## Man 04 Commissioning and handover

To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.

#### Assessment criteria

Commissioning testing schedule and responsibilities :	Yes
Commissioning - design and preparation :	Yes
Testing and inspecting building fabric :	Yes
Handover - have a technical and a non-technical building user guide been developed prior to handover? :	Yes
Handover - have a technical and a non-technical training schedule been prepared around handover? :	Yes

**Credits awarded : 4**

## Man 05 Aftercare

To ensure the building operates in accordance with the design intent and operational demands, through providing aftercare to the building owner and occupants during the first year of occupation.

### Assessment criteria

Is this a speculative development? :	No
Aftercare support :	Yes
Commissioning - implementation :	Yes
Post occupancy evaluation :	No
The client or building occupier commits funds to pay for the POE in advance. :	No

**Credits awarded : 2**

## Health and Wellbeing (Hea)

### Hea 01 Visual comfort

To encourage best practice in visual performance and comfort by ensuring daylighting, artificial lighting and occupant controls are considered.

#### Assessment criteria

Control of glare from sunlight :	Yes
Daylighting (building type dependent) :	0
View Out :	No
Internal and external lighting levels, zoning and controls :	Yes
Exemplary level criteria- Internal and external lighting levels, zoning and control :	No

**Credits awarded : 2**

### Hea 02 Indoor air quality

To encourage and support healthy internal environments with good indoor air quality.

#### Assessment criteria

Pre requisite: Indoor air quality (IAQ) plan :	Yes
Ventilation :	Yes
Emissions from building products :	1
Post-construction indoor air quality measurement :	No
Exemplary level criteria- Emissions from building products :	No

#### Key Performance Indicators

Total volatile organic compound (TVOC) concentration :	1 $\hat{1}\frac{1}{4}$ g/m <sup>3</sup>
Formaldehyde concentration :	1 $\hat{1}\frac{1}{4}$ g/m <sup>3</sup>

**Credits awarded : 2**

### Hea 04 Thermal comfort

To ensure the building is capable of providing an appropriate level of thermal comfort.

#### Assessment criteria

Thermal modelling :	Yes
Design for future thermal comfort :	No
Thermal zoning and controls :	Yes

#### Key Performance Indicators

PMV and PPD Indices :

**Credits awarded : 2**

## Hea 05 Acoustic performance

To ensure the building is capable of providing an appropriate acoustic environment to provide comfort for building users.

#### Assessment criteria

Criteria performance requirements or SQA bespoke requirements? :	Criteria performance requirements
Sound insulation :	1
Indoor ambient noise level :	Yes
Room acoustics :	Yes

**Credits awarded : 3**

## Hea 06 Security

To encourage the planning and implementation of effective measures that provide an appropriate level of security to the building and site.

#### Assessment criteria

Security of site and building :	No
Exemplary level criteria :	No

**Credits awarded : 0**

## Hea 07 Safe and Healthy Surroundings

To encourage the provision of safe access around the site and outdoor space that enhances the wellbeing of building users. .

### Assessment criteria

Safe Access : Yes

Outside Space : No

**Credits awarded : 1**

# Energy (Ene)

## Ene 01 Reduction of energy use and carbon emissions

To minimise operational energy demand, primary energy consumption and CO<sub>2</sub> emissions.

### Energy performance

Country :	England
Can a .inp file be uploaded? :	No
Without the .inp file being uploaded only the standard methodology can be used. This may impact the number of credits that can be awarded. :	
Energy Production by Technology :	
Photovoltaic systems (Actual) :	150 kWh/m <sup>2</sup>
Photovoltaic systems (Notional) :	130 kWh/m <sup>2</sup>
Wind turbines (Actual) :	0 kWh/m <sup>2</sup>
Wind turbines (Notional) :	0 kWh/m <sup>2</sup>
CHP generators (Actual) :	0 kWh/m <sup>2</sup>
CHP generators (Notional) :	0 kWh/m <sup>2</sup>
Solar thermal systems (Actual) :	0 kWh/m <sup>2</sup>
Solar thermal systems (Notional) :	0 kWh/m <sup>2</sup>
Energy & CO <sub>2</sub> Emissions Summary :	
Actual building energy demand :	40 MJ/m <sup>2</sup> yr
Notional building energy demand :	100 MJ/m <sup>2</sup> yr
Actual building primary energy consumption :	40 kWh/m <sup>2</sup> yr
Notional building primary energy consumption :	100 kWh/m <sup>2</sup> yr
Actual building CO <sub>2</sub> -eq emissions (BER) :	40 KgCO <sub>2</sub> -eq/m <sup>2</sup> yr
Notional building CO <sub>2</sub> -eq emissions (TER) :	100 KgCO <sub>2</sub> -eq/m <sup>2</sup> yr



**Towards carbon negative (exemplary credits)**

Zero net CO<sub>2</sub>-eq emissions : No

**Energy performance - Building score**

Heating and cooling demand energy performance ratio (EPRdem) : 0.29

Primary consumption energy performance ratio (EPRpc) : 0.0

Total BREEAM credits achieved : 5.0

CO<sub>2</sub>-eq energy performance ratio (EPRco2-eq) : 0.299

Overall building energy performance ratio (EPRnc) : 0.589

% improvement BER/TER : 60.0 %

**Prediction of operational energy consumption**

Has a design workshop focusing on operational energy performance been carried out? : Yes

Additional energy modelling to generate predicted operational energy consumption figures carried out? : Yes

Predicted energy consumption targets by end use, design assumptions and input data reported? : Yes

Risk assessment to highlight any significant design, technical, and process risks? : Yes

**Post-occupancy stage (exemplary credits)**

Maximum credits achieved in Ene 02 Energy monitoring? : Yes

The client or building occupier commits funds to pay for the post-occupancy stage? : No

The energy model is submitted to BRE and retained by the building owner? : No

**Credits awarded : 9**

**Ene 02 Energy monitoring**

To encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption. To enable managers and consultants post-handover to compare actual performance with targets in order to inform ongoing management and help in reducing the performance gap.

**Assessment criteria**

Sub-metering of end use categories : Yes

Sub-metering of high energy load and tenancy areas : Yes

**Credits awarded : 2**

## Ene 03 External lighting

To reduce energy consumption through the specification of energy efficient light fittings for external areas of the development.

### Assessment criteria

External lighting has been designed out? : No

Is external lighting specified in accordance with the relevant criteria? : Yes

**Credits awarded : 1**

## Ene 04 Low carbon design

To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.

### Assessment criteria

Has the first credit within Hea 04 been achieved? : Yes

Passive design analysis : No

Free cooling : No

Low and zero carbon technologies : Yes

### KPI

Total on-site and/or near-site LZO energy generation :

Expected energy consumption and CO<sub>2</sub>-eq emissions reduction resulting from passive design measures :

Energy consumption :

CO<sub>2</sub>-eq emissions :

Expected energy consumption and CO<sub>2</sub>-eq emissions reduction resulting from passive design measures as a percentage :

Energy consumption :

CO<sub>2</sub>-eq emissions :

Expected reduction in CO<sub>2</sub>-eq emissions resulting from the LZC technologies :  
 Expected reduction in CO<sub>2</sub>-eq emissions resulting from the LZC technologies as a percentage :

: 1

**Credits awarded**

## Ene 05 Energy efficient cold storage

To encourage the installation of energy efficient refrigeration systems, in order to reduce operational greenhouse gas emissions resulting from the system's energy use.

**Assessment criteria - N/A**

## Ene 06 Energy efficient transportation systems

To encourage the specification of energy efficient transport systems within buildings.

### Assessment criteria

Energy consumption : Yes

Energy efficient features - Lifts : Yes

**Credits awarded : 2**

## Ene 07 Energy efficient laboratory systems

To encourage laboratory areas that are designed to minimise their operational energy consumption and associated CO<sub>2</sub> emission

**Assessment criteria - N/A**

## Ene 08 Energy efficient equipment

To encourage installation of energy efficient equipment to ensure optimum performance and energy savings in operation

**Assessment criteria - N/A**

## Transport (Tra)

### Tra 01 Transport assessment and travel plan

To reward awareness of existing local transport and identify improvements to make it more sustainable.

#### Assessment criteria

Travel plan : Yes

**Credits awarded : 2**

### Tra 02 Sustainable transport measures

To maximise the potential for local public, private and active transport through provision of sustainable transport measures appropriate to the site.

#### Assessment criteria

Prerequisite : Yes

Location type (based on existing AI) : AI <25

Number of points achieved overall : 5

**Credits awarded : 5**

#### Comments :

AI 3.66

## Water (Wat)

### Wat 01 Water consumption

To reduce the consumption of potable water for sanitary use in new buildings through the use of water efficient components and water recycling systems.

#### Assessment criteria

Please select the calculation procedure used :	Standard approach
Credits awarded :	4
Exemplary performance :	No

#### Key Performance Indicators

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 :

Default building occupancy :

**Credits awarded : 4**

### Wat 02 Water monitoring

To reduce the consumption of potable water in new buildings through the effective management and monitoring of water consumption.

#### Assessment criteria

Water meter on the mains water supply to each building :	Yes
Sub-metering/monitoring equipment on supply to plant/building areas :	Yes
Pulsed output or other open protocol communication output and BMS	Yes

connection :

The water monitoring strategy used enables the identification of all water consumption for sanitary uses as assessed under Wat 01 (L/person/day) : No

**Credits awarded : 1**

### Wat 03 Water leak detection

To reduce the consumption of potable water in new buildings through minimising wastage due to water leaks.

#### Assessment criteria

Leak detection system : Yes

Flow control devices : Yes

**Credits awarded : 2**

### Wat 04 Water efficient equipment

To reduce water consumption for uses not assessed under Wat 01 by encouraging specification of water efficient equipment.

**Assessment criteria - N/A**

## Materials (Mat)

### Mat 01 Life cycle impacts

To reduce the burden on the environment from construction products by recognising and encouraging measures to optimise construction product consumption efficiency and the selection of products with a low environmental impact (including embodied carbon), over the life cycle of the building.

#### Assessment criteria

Total Mat 01 credits achieved - taken from the Mat 01/02 Results 0

Submission Tool :

Total Exemplary credits achieved - taken from the Mat 01/02 Results 0

Submission Tool :

**Credits awarded : 0**

### Mat 02 Environmental impacts from construction products

To encourage availability of robust and comparable data on the impacts of construction products through the provision of EPD.

#### Assessment criteria

Mat 02 credit achieved - Taken from the Mat 01/02 Results Submission 1

Tool. :

**Credits awarded : 1**

### Mat 03 Responsible sourcing

To facilitate the selection of products that involve lower levels of negative environmental, economic and social impact across their supply chain including extraction, processing and manufacture.

#### Assessment criteria

Prerequisite: All timber and timber based products are 'Legally harvested and traded timber' : Yes

Has the enabling sustainable procurement credit been achieved? : Yes

Mat 03 minimum scope level : plus Substructure and hard landscaping / Internal Finishes

Percentage of available for percentage of RSM points achieved : 20 %

**Credits awarded : 3**

## Mat 05 Designing for durability and resilience

To reduce the need to repair and replace materials resulting from damage to exposed elements of the building and landscape.

### Assessment criteria

Protecting vulnerable parts of the building from damage and exposed parts of the building from material degradation : Yes

**Credits awarded : 1**

## Mat 06 Material efficiency

To avoid unnecessary materials use arising from over specification without compromising structural stability, durability or the service life of the building.

### Assessment criteria

Material optimisation measures investigated and implemented at all relevant stages : Yes

**Credits awarded : 1**



## Waste (Wst)

### Wst 01 Construction waste management

To reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.

#### Assessment criteria

Is demolition occurring under the developer's ownership for the purpose of enabling the assessed development? : No

Compliant Resource Management Plan : Yes

Have waste materials been sorted into separate key waste groups? : Yes

Exemplary level criteria : Yes

#### KPI

Measure/units for the data being reported : tonnes

Non-hazardous construction waste (excluding demolition/excavation) - fill in to award 'Construction resource efficiency' credits :

Total non-hazardous construction waste generated :

Non-hazardous non-demolition construction waste diverted from landfill - fill in to award diversion from landfill credit :

Total non-hazardous non-demolition construction waste diverted from landfill :

Non-hazardous demolition waste diverted from landfill - fill in to award diversion from landfill credit :

Total non-hazardous demolition waste generated :

Total non-hazardous demolition waste to disposal :

Non-hazardous excavation waste diverted from landfill - fill in to award credit :

Material for reuse :

Material for recycling :

Material for energy recovery :

Hazardous waste to disposal :

**Credits awarded : 3**

## Wst 02 Use of recycled and sustainably sourced aggregates

To encourage the use of more sustainably sourced aggregates, encourage reuse where appropriate and avoid waste and pollution arising from disposal of demolition and other forms of waste.

### Assessment criteria

Is demolition occurring under the developer's ownership for the purpose of enabling the assessed development? : No

Projects Sustainable Aggregate points : 4

### KPI

Total quantity of aggregate :

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

**Credits awarded : 1**

## Wst 03 Operational waste

To encourage the recycling of operational waste through the provision of dedicated storage facilities and space.

### Assessment criteria

Compliant recycling and non-recyclable waste storage allocated : Yes

Static waste compactor(s) or baler(s) : N/A

Vessel(s) for composting suitable organic waste and water outlet : Yes

**Credits awarded : 1**

## Wst 04 Speculative finishes (Offices only)

To minimise the wastage associated with the installation of floor and ceiling finishes in lettable areas in speculative buildings where tenants have not been involved in their selection.

### Assessment criteria

Speculative floor and ceiling finishes : Are installed in a show area only

**Credits awarded : 1**

## Wst 05 Adaptation to climate change

To minimise the future need of carrying out works to adapt the building to take account of more extreme weather changes resulting from climate change and changing weather patterns.

### Assessment criteria

Resilience of structure, fabric, building services and renewables installation Yes

:

Exemplary level - responding to climate change : No

**Credits awarded : 1**

## Wst 06 Design for disassembly and adaptability

To avoid unnecessary materials use, cost and disruption arising from the need for future adaptation works as a result of changing functional demands and to maximise the ability to reclaim and reuse materials at final demolition in line with the principles of a circular economy.

### Assessment criteria

Design for disassembly and functional adaptability - recommendations : Yes

Disassembly and functional adaptability - implementation : No

**Credits awarded : 1**

## Land use and ecology (LE)

### LE 01 Site selection

To encourage the use of previously occupied or contaminated land and avoid land which has not been previously disturbed.

#### Assessment criteria

Percentage of proposed development's footprint on previously occupied land: :	0 %
Contaminated land :	No

**Credits awarded : 0**

### LE 02 Ecological risks and opportunities

To determine the existing ecological value associated with the site and surrounding areas, and the risks and opportunities for ecological protection and enhancement.

#### Assessment criteria

Assessment route selection :	Comprehensive
Prerequisite - Statutory obligations :	Yes
Survey and Evaluation :	Yes
Determining ecological outcomes :	Yes
Exemplary level - Wider site sustainability :	No

**Credits awarded : 2**

### LE 03 Managing impacts on ecology

To avoid, or limit as far as possible, negative ecological impacts associated with the site and surrounding areas resulting from the project.

#### Assessment criteria

Assessment route :	Comprehensive
Prerequisite - Ecological risks and opportunities :	Yes

**Credits awarded : 3**

## LE 04 Ecological change and enhancement

To enhance ecological value of the area associated with the site in support of local, regional and national priorities.

### Assessment criteria

Assessment route :	Comprehensive
Prerequisite - Managing negative impacts on ecology :	Yes
Ecological enhancement (Comprehensive route only) :	Yes
Change and enhancement of ecology (Comprehensive route only) :	2

**Credits awarded : 3**

## LE 05 Long term ecology management and maintenance

To secure ongoing monitoring, management and maintenance of the site and its habitats and ecological features, to ensure intended outcomes are realised for the long term.

### Assessment criteria

Assessment route :	Comprehensive
At least one credit achieved under LE 04 for 'Change and Enhancement of Ecology' :	Yes
Prerequisite - Statutory obligations, planning and site implementation :	Yes
Management and maintenance throughout the project :	Yes
Landscape and ecology management plan :	Yes

**Credits awarded : 2**

## Pollution (Pol)

### Pol 01 Impact of refrigerants

To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.

#### Assessment criteria

Refrigerant containing systems installed in the assessed building? : Yes

Prerequisite: All systems (with electric compressors) comply with BS EN 378:2016 (parts 2 and 3) and (where applicable) Institute of Refrigeration Ammonia Refrigeration Systems code of practice? : Yes

Total Direct Effect Life Cycle CO<sub>2</sub>eq (DELCO<sub>2</sub>). Emissions from the system : Global Warming Potential (GWP) of the specified refrigerant(s) 10 or less? Yes

#### Leak detection

Are all the systems hermetically sealed? : Yes

**Credits awarded : 3**

### Pol 02 Local air quality

To contribute to a reduction in local air pollution through the use of low emission combustion appliances in the building.

#### Assessment criteria

Is the project required to connect to a District Heating system, and it supplies all heating and hot water demands to the building? : No

How many credits have been achieved? : 0

**Credits awarded : 0**

### Pol 03 Flood risk management and reducing surface water run-off

To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on and off-site, watercourse pollution and other environmental damage.

#### Assessment criteria

Prerequisite: Has an appropriate consultant demonstrated and confirmed the development's compliance with all sought credits? : Yes

Has a site-specific flood risk assessment been conducted? : Yes

Annual probability of flooding :	Low
Has the pre-requisite for the Surface Water Run-Off credits been achieved? :	Yes
Has the Surface Water Run-Off - Rate credit been achieved? :	Yes
Flooding of property will not occur in the event of local drainage system failure :	Yes
Has the Surface Water Run-Off - Volume credit been achieved? :	Yes
Minimising watercourse pollution :	Yes

**Credits awarded : 5**

## Pol 04 Reduction of Night Time Light Pollution

To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.

### Assessment criteria

External lighting has been designed out? :	No
Does external lighting meet all relevant criteria? :	Yes

**Credits awarded : 1**

## Pol 05 Noise attenuation

To reduce the likelihood of noise arising from fixed installations on the new development affecting nearby noise-sensitive buildings.

### Assessment criteria

Noise-sensitive areas/buildings within 800m radius of the development :	Yes
Is the site compliant with all relevant criteria? :	Yes

**Credits awarded : 1**

# Innovation (Inn)

## Inn 01 Innovation

To support innovation within the construction industry through the recognition of sustainability related benefits which are not rewarded by standard BREEAM issues.

### Assessment criteria

Number of 'approved' innovation credits achieved? : 1

**Credits awarded : 0**

**Exemplary credits awarded : 1**