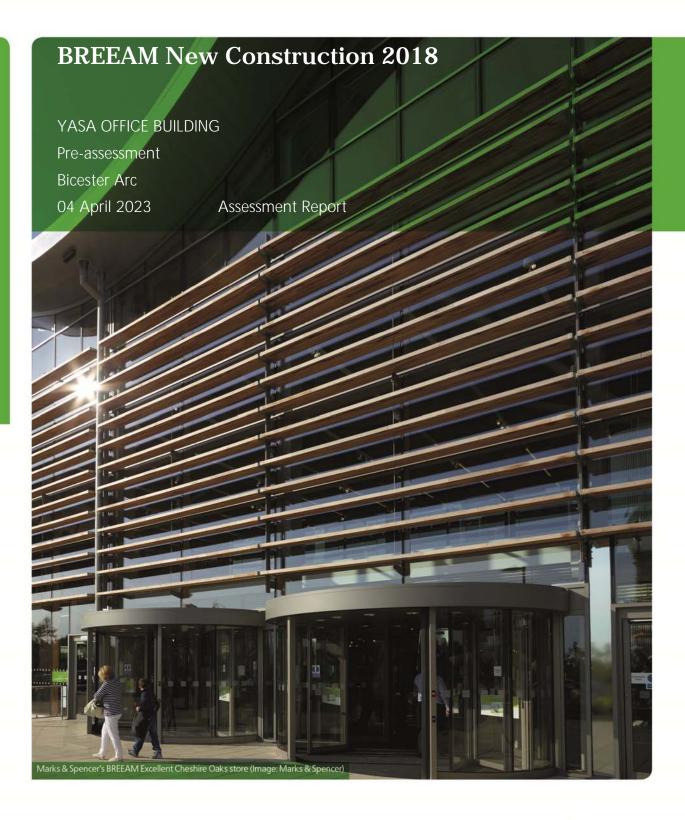
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Assessn	nent	reie	ren	ces

Registration
number:YASA 1Date created:4/4/2023Created by:Dan Williams

Site details

Site name:	Bicester Arc
Address:	YASA Office Building
Town:	
County:	
Post code:	
Country:	United Kingdom

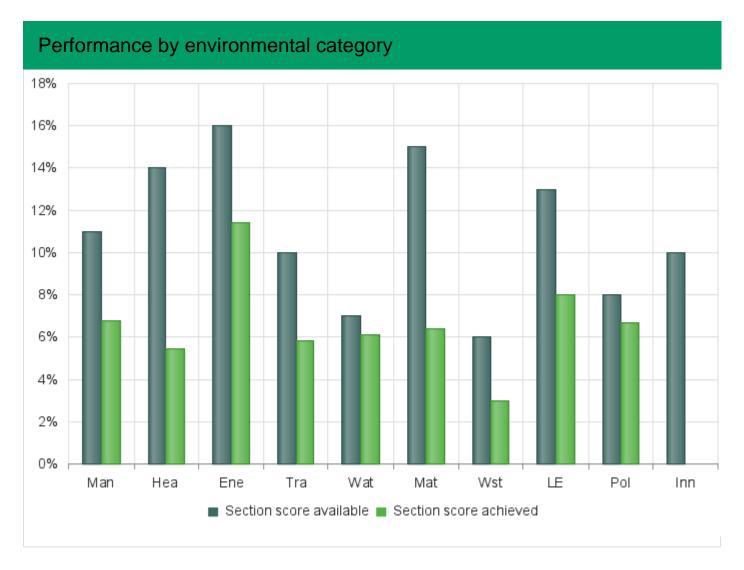
Certificate details

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

BREEAM Rating							
	Credits available	Credits achieved	Credits targeted	% Credits achieved	Weighting	Category score	Target score
Man	21.0	13.0	0.0	61.90%	11.00%	6.80%	0.00%
Hea	18.0	7.0	0.0	38.89%	14.00%	5.44%	0.00%
Ene	21.0	15.0	0.0	71.43%	16.00%	11.42%	0.00%
Tra	12.0	7.0	0.0	58.33%	10.00%	5.83%	0.00%
Wat	8.0	7.0	0.0	87.50%	7.00%	6.12%	0.00%
Mat	14.0	6.0	0.0	42.86%	15.00%	6.42%	0.00%
Wst	10.0	5.0	0.0	50.00%	6.00%	3.00%	0.00%
LE	13.0	8.0	0.0	61.54%	13.00%	8.00%	0.00%
Pol	12.0	10.0	0.0	83.33%	8.00%	6.66%	0.00%
Inn	10.0	0.0	0.0	0.00%	10.00%	0.00%	0.00%
Total	139.0	78.0	0.0	56.12%	-	59.73%	0.00%
Rating	-	-	-	-	-	Very Good	Unclass





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

1/4

Man 03 Responsible construction practices

5/6 x:0/1

Man 05 Aftercare

2/3

Man 02 Life cycle cost and service life planning

1/4

Man 04 Commissioning and handover

4/4

Health and Wellbeing

Hea 01 Visual comfort

2/5 x:0/2

Hea 04 Thermal comfort

2/3

Hea 06 Security

1 / 1 x: o / 1

Hea 02 Indoor air quality

2/4 x: 0/1

Hea 05 Acoustic performance

0/3

Hea 07 Safe and Healthy Surroundings

0/2

Energy

Ene 01 Reduction of energy use and carbon emissions

9 / 13 x:0/

Ene 02 Energy monitoring

2/2

Ene 03 External lighting

Ene 05 Energy efficient cold storage

N/A

Ene 07 Energy efficient laboratory systems

N/A

Ene 04 Low carbon design

1/3

Ene 06 Energy efficient transportation systems

2/2

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 03 Water leak detection

2/2

Wat 02 Water monitoring

Wat 04 Water efficient equipment

N/A

Materials

Mat 01 Life cycle impacts

4/7 x:0/3

Mat 02 Environmental impacts from construction products

Mat 03 Responsible sourcing

2/4 x:0/1

Mat 05 Designing for durability and resilience

Mat 06 Material efficiency

Waste

Wst 01 Construction waste management

 $3/4_{X:0/1}$

Wst 03 Operational waste

Wst 05 Adaptation to climate change

X: 0 / 1

Wst 02 Use of recycled and sustainably sourced aggregates

X: 0 / 1

Wst 04 Speculative finishes (Offices only)

Wst 06 Design for disassembly and adaptability

Land use and ecology

LE 01 Site selection

0/2

LE 03 Managing impacts on ecology

2/3

LE 02 Ecological risks and opportunities

2/2_{X:0/1}

LE 04 Ecological change and enhancement

2/4_{X:0/1}

LE 05 Long term ecology management and maintenance

2/2

Pollution

Pol 01 Impact of refrigerants

3/3

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

5/5

Pol 05 Noise attenuation

1/1

Pol 02 Local air quality

0/2

Pol 04 Reduction of Night Time Light Pollution

1/1

Innovation

Inn 01 Innovation

0/0

 $X \cdot 0 / 10$

Initial details

YASA Office Building

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): 5109 m²

Building floor area (NIFA): 4445 m²

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):

Project delivery planning: Yes

Prerequisite: Have the client and the contractor formally agreed Yes

performance targets?:

BREEAM Advisory Professional (Concept Design): No

Credits awarded: 1

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:

Component level LCC options appraisal : No

Capital cost reporting: Yes

Capital cost of the project : 1500 £k/m²

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 Yes

construction process of the project 'legally harvested and traded timber'?:

Environmental management : Yes

Prerequisite: Have the client and the contractor formally agreed

performance targets?:

BREEAM Advisory Professional (site):

Responsible construction management: 2

Monitoring of construction site impacts: Yes

Utility consumption:

Transport of construction materials and waste:

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

Yes

Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes : 10 KgCO₂eq

Carbon dioxide emissions (intensity) - site processes : 10 KgCO₂

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 Yes

developed prior to handover?:

Handover - have a technical and a non-technical training schedule been Yes

prepared around handover?:

Credits awarded: 4

Man 05 Aftercare

Assessment criteria

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.

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 No advance. :

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):

Λ

View Out:

No

Internal and external lighting levels, zoning and controls:

Yes

No

Exemplary level criteria- Internal and external lighting levels, zoning and

control:

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 :

Exemplary level criteria- Emissions from building products:

Key Performance Indicators

Formaldehyde concentration:

Total volatile organic compound (TVOC) concentration:

Credits awarded: 2

Hea 04 Thermal comfort

To ensure the building is capable of providing an appropriate leve	l 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 acousticomfort for building users.	ustic environment to provide
Assessment criteria	
Criteria performance requirements or SQA bespoke requirements	?: Criteria

performance requirements

Sound insulation :	0

Indoor ambient noise level:

Room acoustics:

Credits awarded: 0

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:

Exemplary level criteria:

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 :	No
Outside Space :	No
Credits awarded : 0	

Energy (Ene)

Ene 01 Reduction of energy use and carbon emissions

To minimise operational energy demand, primary energy consumption and CO2 emissions.

Energy performance	
Country:	England
Can a .inp file be uploaded? :	No
Without the .inp file being uploaded only the standard methodology can bused. This may impact the number of credits that can be awarded. : Energy Production by Technology :	oe
Energy & CO ₂ Emissions Summary :	
Actual building energy demand :	40 MJ/m ² yr
Notional building energy demand :	100 MJ/m ² yr
Actual building primary energy consumption :	40 kWh/m ² yr
Notional building primary energy consumption :	100 kWh/m ² yr
Actual building CO ₂ -eq emissions (BER) :	40 KgCO ₂ -eq/m ² yr
Notional building CO ₂ -eq emissions (TER) :	100 KgCO ₂ -eq/m ² yr
Towards carbon negative (exemplary credits)	
Zero net CO ₂ -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 ₂ -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 Yes carried out? :

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

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

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

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 No post-occupancy stage? :

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

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 LZC energy generation:

Expected energy consumption and CO₂-eq emissions reduction resulting

from passive design measures:

Expected energy consumption and CO₂-eq emissions reduction resulting

from passive design measures as a percentage :

Expected reduction in CO₂-eq emissions resulting from the LZC

technologies:

Expected reduction in CO₂-eq emissions resulting from the LZC

technologies as a percentage:

Credits awarded

: 1

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 consumptionand associated CO2 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:

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

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:

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 No consumption for sanitary uses as assessed under Wat 01 (L/person/day):

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 4

Submission Tool:

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

Submission Tool:

Credits awarded: 4

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 0

Tool.:

Credits awarded: 0

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 Yes

and traded timber':

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: 10 %

Credits awarded: 2

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 :

Credits awarded: 0

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 No relevant stages :

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 No enabling the assessed development? :

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 :

 m^3

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:

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 No enabling the assessed development? :

Projects Sustainable Aggregate points:

KPI

Total quantity of aggregate:

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

Credits awarded: 0

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: N/A

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 specified by

the building's

occupant(s)/tenant(s)

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 No

Credits awarded: 0

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 : No

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 0 %

land::

Contaminated land:

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

Planning and measures on-site:

Managing negative impacts:

Credits awarded: 2

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): 1

Credits awarded: 2

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 Yes

Ecologyâ:

Prerequisite - Statutory obligations, planning and site implementation : Yes

Management and maintenance throughout the project: Yes

Landscape and ecology management plan : Yes

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

Prequisite: All systems (with electric compressors) comply with BSA EN Yes

378:2016 (parts 2 and 3) and (where applicable) Institute of Refrigeration

Ammonia Refrigeration Systems code of practice? : 10 kgCO2eq/kW

Total Direct Effect Life Cycle CO2eq (DELC). Emissions from the system:

Global Warming Potential (GWP) of the specified refrigerant(s) 10 or less? Yes

Leak detection

No Are all the systems hermetically sealed?:

Yes BREEAM compliant automatic refrigerant leak detection system installed and able to manage the remaining refrigerant charge:

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?:

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 Yes

No

the development's compliance with all sought credits?:

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

Annual probability of flooding: Low

Yes

Has the pre-requisite for the Surface Water Run-Off credits been

achieved?:

Has the Surface Water Run-Off - Rate credit been achieved? :

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? : Nο

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

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? :

0