

BREEAM UK Refurbishment & Fit-out 2014

Sugden Hall 21/4099/FUL - EX

Pre-assessment

SUGDEN HALL, TEDDINGTON

24 June 2022 Assessment Report



PwC's BREEAM Outstanding rated One Embankment Place in London. Image: Hofton + Crow.

Assessment references

Registration number:	Sugden Hall 21/4099/FUL - EX	Date created:	24/6/2022
Created by:	Elizaveta Bell		

Site details

Site name:	SUGDEN HALL, TEDDINGTON
Address:	SUGDEN HALL, STATION ROAD,
Town:	TEDDINGTON
County:	
Post code:	TW11 9AA
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).

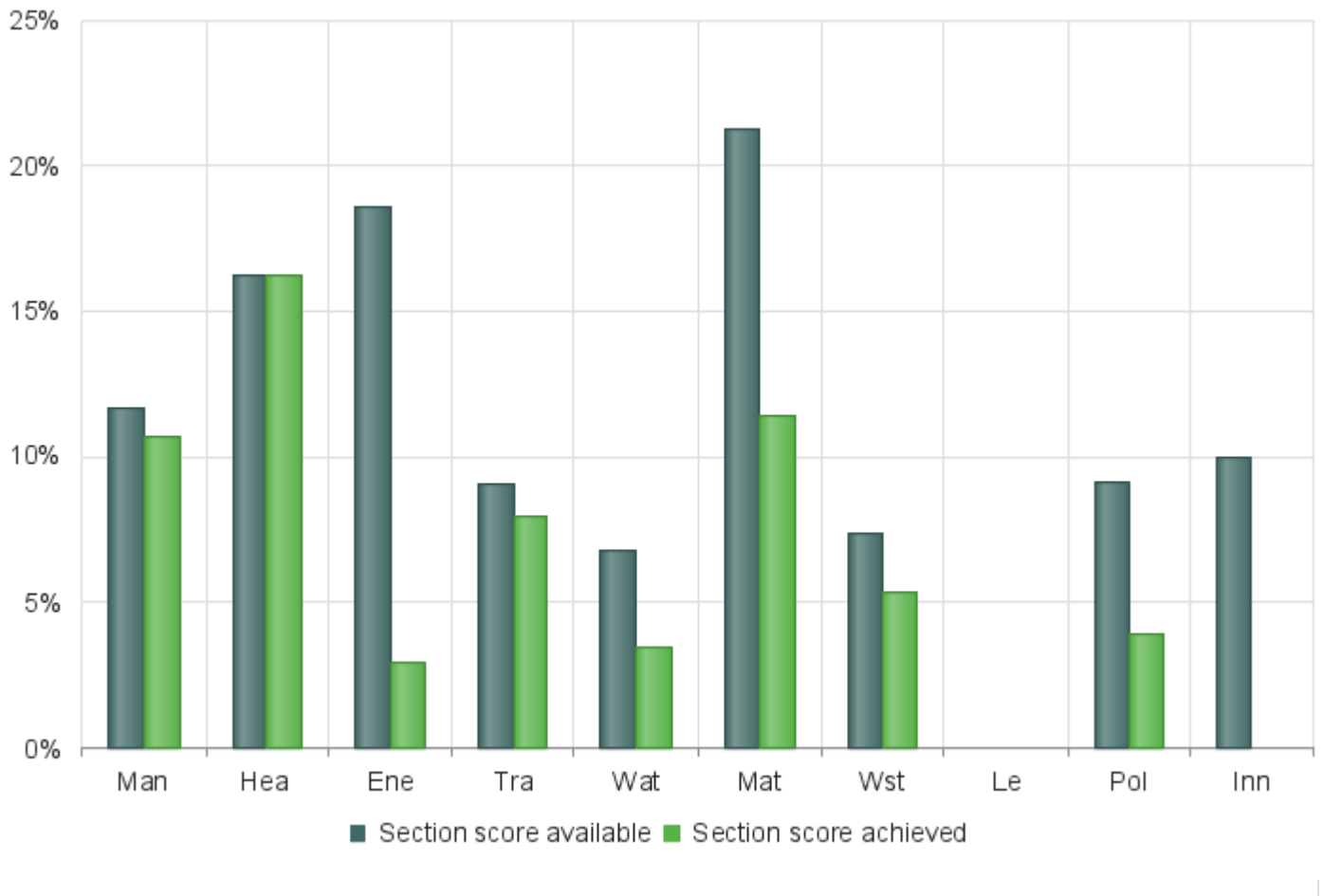
Any other names to appear on the certificate are listed below:

Name	Label
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BREEAM Rating

	Credits available	Credits achieved	Credits targeted	% Credits achieved	Weighting	Category score	Target score
Man	12.0	11.0	11.0	91.67%	11.64%	10.66%	10.66%
Hea	14.0	14.0	14.0	100.00%	16.20%	16.19%	16.19%
Ene	19.0	3.0	12.0	15.79%	18.56%	2.93%	11.72%
Tra	8.0	7.0	7.0	87.50%	9.05%	7.91%	7.91%
Wat	6.0	3.0	3.0	50.00%	6.79%	3.39%	3.39%
Mat	13.0	7.0	7.0	53.85%	21.21%	11.42%	11.42%
Wst	7.0	5.0	5.0	71.43%	7.42%	5.30%	5.30%
Le	0.0	0.0	0.0	0.00%	0.00%	0.00%	0.00%
Pol	7.0	3.0	3.0	42.86%	9.14%	3.91%	3.91%
Inn	10.0	0.0	0.0	0.00%	10.00%	0.00%	0.00%
Total	96.0	53.0	62.0	55.21%	-	61.74%	70.53%
Rating	-	-	-	-	-	 Very Good	Excellent

Performance by environmental category



Issue scores

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

Management

Man 01 Project Brief and design

2 / 2 X: 0 / 2

Man 02 Life cycle cost and service life planning

1 / 1

Man 03 Responsible construction practices

3 / 4 X: 0 / 1

Man 04 Commissioning and handover

2 / 2

Man 05 Aftercare

3 / 3 X: 0 / 1

Health and Wellbeing

Hea 01 Visual comfort

7 / 7 X: 0 / 1

Hea 02 Indoor air quality

3 / 3 X: 0 / 2

Hea 03 Safe containment in laboratories

N/A

Hea 04 Thermal comfort

3 / 3

Hea 05 Acoustic performance

N/A

Hea 06 Safety and security

1 / 1

Energy

Ene 01 Reduction of energy use and carbon emissions

0 / 15 X: 0 / 5

Ene 02 Energy monitoring

1 / 2

Ene 03 External lighting

N/A

Ene 04 Low carbon design

2 / 2

Ene 05 Energy efficient cold storage

N/A

Ene 06 Energy efficient transportation systems

N/A

Ene 07 Energy efficient laboratory systems

N/A

Ene 08 Energy efficient equipment

N/A

Ene 09 Drying space

N/A

Transport

Tra 01 Sustainable transport solutions

5 / 5

Tra 02 Proximity to Amenities

1 / 1

Tra 03 Cyclist facilities

1 / 2

Tra 04 Maximum car parking capacity

N/A

Tra 05 Travel plan

N/A

Water

Wat 01 Water consumption

2 / 5 X: 0 / 1

Wat 02 Water monitoring

1 / 1

Wat 03 Water leak detection
and prevention

N/A

Wat 04 Water efficient
equipment

N/A

Materials

Mat 01 Life cycle impacts

3 / 6 X: 0 / 1

Mat 03 Responsible sourcing

1 / 4 X: 0 / 1

Mat 04 Insulation

1 / 1

Mat 05 Designing for
durability and resilience

1 / 1

Mat 06 Material efficiency

1 / 1

Waste

Wst 01 Construction waste
management

2 / 4 X: 0 / 1

Wst 02 Recycled aggregates

N/A

Wst 03 Operational waste

1 / 1

Wst 04 Speculative finishes

N/A

Wst 05 Adaptation to climate
change

1 / 1

Wst 06 Functional
adaptability

1 / 1

Land use and ecology

Le 02 Protection of ecological features

N/A

Le 04 Enhancing site ecology

N/A

Le 05 Long term impact on biodiversity

N/A

Pollution

Pol 01 Impact of refrigerants

N/A

Pol 02 Nox Emissions

0 / 3

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

3 / 4 X: 0 / 1

Pol 04 Reduction of Night Time Light Pollution

N/A

Pol 05 Noise attenuation

N/A

Innovation

Inn 01 Innovation

0 / 0 X: 0 / 10

Initial details

SUGDEN HALL, STATION ROAD,

Part 1 : Fabric and structure : Yes

Part 2 : Core services : No

Part 3 : Local services : Yes

Part 4 : Interior design : Yes

Technical manual issue number : Issue 2.0

Project type : Change of use

Client : Building/portfolio owner

Assessment stage : Design

Building type (main description) : Healthcare

Building type (sub-group) : Healthcare - Health centre / clinic

Building floor area (NIFA) Net internal floor area : 133

Building floor area (GIFA) Gross internal floor area : 133

Refurbishment/Fit-out assessment area : 133

What range does the projects value fall into? : < Â£1 million

New extension assessment area (if applicable within the scope of the assessment) :

Historic building (listed building or building in a conservation area) : No

Is commercial and/or industrial scale refrigeration or storage specified/present : No

Are building user transportation systems (lifts and/or escalators) specified/present? : No

Are there systems that significantly contribute towards unregulated energy demands? : No

For industrial buildings, are there office areas? : N/A

Where the scope of the refurbishment covers tenancy areas only, are sanitary fittings present in the tenanted areas? :

Does the building have or mitigate any unregulated water demand? e.g. irrigation or soft-landscaped areas requiring no irrigation, car washing, other significant process related :
No

Are there new or existing landscaping areas within the refurbishment or fit-out zone and within developer control? : No

Are there any external areas within the refurbishment or fit-out zone and within developer control that can feasibly be enhanced in line with LE 04 : No

Is there any local cooling present or within scope of refurbishment or fit-out works? : Yes

Is there any local heating or hot water present or within scope of refurbishment or fit-out works? : Yes

Is any externally mounted plant present or specified? : Yes

Is this a speculative refurbishment? : No

Is external lighting within scope of the refurbishment or fit-out zone? : No

Is this a simple building? : Yes

If undertaking a Part 4 assessment, is there any equipment specified that requires commissioning (see Man04 CN13) :

Is any new insulation specified? : Yes

Is Wat01 within the scope of the assessment in accordance with Table 42? : Yes

Are high grade aggregates to be used in the refurbishment scheme? : No

Are there laboratories present and if so what % of total building area do they represent : No
laboratories present

Laboratory containment area : No laboratories present

Category assessment

Management (Man)

Man 01 Project Brief and design

Assessment criteria

Stakeholder consultation (project delivery) : Yes

Stakeholder consultation (third party) : Yes

Exemplary level criteria :

Credit scoring

Credits scored : 2

Exemplary credits scored : 0

Credits awarded : 2

Man 02 Life cycle cost and service life planning

Assessment criteria

Capital cost reporting : Yes

Capital cost of the project :

Credit scoring

Credits scored : 1

Credits awarded : 1

Man 03 Responsible construction practices

Assessment criteria

Is all timber used in the project 'legally harvested and traded timber'? : Yes

Environmental management : No

Considerate construction : 2

Has the project achieve the minimum standard for an Excellent or : No

Outstanding rating? :	
Monitoring of refurbishment or fit-out site impacts :	Yes
Utility consumption :	Yes
Exemplary level criteria - monitoring the transport impact of construction materials and waste :	No

Key Performance Indicators: Construction site energy use

Energy consumption (total) - site processes :

Energy consumption (intensity) - site processes :

Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes :

Greenhouse gas emissions (intensity) - site processes :

Key Performance Indicators: Construction site use of freshwater resources

Use of freshwater resource (total) - site processes :

Use of freshwater resource (intensity) - site processes :

Credit scoring

Credits scored : 3

Exemplary credits scored : 0

Credits awarded : 3

Man 04 Commissioning and handover

Assessment criteria

Commissioning schedule and responsibilities :	Yes
Handover :	Yes
Has a Building User Guide been developed prior to handover? :	Yes

Credit scoring

Credits scored : 2

Credits awarded : 2

Man 05 Aftercare

Assessment criteria

Aftercare support :	Yes
Seasonal commissioning :	Yes
Post occupancy evaluation :	Yes
Exemplary level criteria :	No

Credit scoring

Credits scored :	3
Exemplary credits scored :	0

Credits awarded : 3

Health and Wellbeing (Hea)

Hea 01 Visual comfort

Assessment criteria

Glare control :	Yes
Daylighting :	Yes
View out :	Yes
Internal and external lighting levels, zoning and controls :	Yes
Exemplary level daylighting :	No

Credit scoring

Credits scored :	7
Exemplary credits scored :	0

Credits awarded : 7

Hea 02 Indoor air quality

Assessment criteria

Ventilation :	Yes
VOCs (products) :	Yes
Adaptability - potential for natural ventilation :	Yes
Exemplary level VOCs (products) :	Yes

Credit scoring

Credits scored :	3
Exemplary credits scored :	0

Credits awarded : 3

Hea 03 Safe containment in laboratories

Assessment criteria - N/A**Hea 04 Thermal comfort****Assessment criteria**

Thermal modelling :	Yes
Criterion 4 - Impact of fit-out on thermal comfort :	Yes
Adaptability - for a projected climate change scenario :	Yes
Thermal zoning and control :	Yes

Key Performance Indicators: Thermal comfort

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

Key Performance Indicators: Adaptability

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

Credit scoring

Credits scored :	3
Exemplary credits scored :	0

Credits awarded : 3**Hea 05 Acoustic performance****Assessment criteria - N/A****Hea 06 Safety and security****Assessment criteria**

Security of site and building :	Yes
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Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Energy (Ene)

Ene 01 Reduction of energy use and carbon emissions

Assessment option

Which option is being followed : Option 1: Whole building energy model

Building Score

Country : England

Upload existing building '_epc.inp' file :

Upload proposed building '_epc.inp' file :

Credits :

Actual (existing) building energy demand (DemEx) :

Reference building energy demand (DemRef) :

Actual (proposed) building energy demand (DemProp) :

Actual (existing) building primary energy consumption (PEEx) :

Reference building primary energy consumption (PERef) :

Actual (proposed) building primary energy consumption (PEProp) :

Actual (existing) building CO2 emissions (BEREx) :

Reference building CO2 emissions (SER) :

Actual (proposed) building CO2 emissions (BERProp) :

Building energy demand individual parameter EPR (Energy performance Ratio) :

Primary energy consumption individual parameter EPR (Energy performance Ratio) :

Building CO2 emissions individual parameter EPR (Energy performance Ratio) :

EPRNDR (Energy Performance Ratio Non Domestic Refurbishment) :

Exemplary Assessment Criteria

Zero regulated carbon : No

Equivalent % of the building's 'regulated' energy consumption generated by 0 % carbon neutral sources and used to meet energy demand from 'unregulated' building systems or processes? :

Is the building designed to be carbon negative? :

If the building is defined as 'carbon negative' what is the total (modelled) renewable/carbon neutral energy generated and exported? : 0 kWh/yr

Credit scoring

Exemplary credits scored : 0

Credits awarded : 0

Ene 02 Energy monitoring

Assessment criteria

Sub-metering of major energy consuming systems : Yes

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

Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Ene 03 External lighting

Assessment criteria - N/A

Ene 04 Low carbon design

Assessment criteria

Passive design analysis : Yes

Free cooling : Yes

Credit scoring

Credits scored : 2

Exemplary credits scored : 0

Credits awarded : 2

Comments :

Air source heat pumps can only be considered as a renewable technology when used in heating mode.

Ene 05 Energy efficient cold storage

Assessment criteria - N/A

Ene 06 Energy efficient transportation systems

Assessment criteria - N/A

Ene 07 Energy efficient laboratory systems

Assessment criteria - N/A

Ene 08 Energy efficient equipment

Assessment criteria - N/A

Ene 09 Drying space

Assessment criteria - N/A

Transport (Tra)

Tra 01 Sustainable transport solutions

Assessment criteria

Building type category (for purposes of Tra01 assessment :	Healthcare - GP surgery, Health centre, Community hospital
Public transport accessibility index :	13
Ref A building dedicated bus services :	No
Ref B enhanced cycle storage space provision :	No
Ref C enhanced cyclist facilities :	No
Ref D electric vehicle charging points :	No
Ref E car sharing spaces :	No
Ref F digital information points :	No
Ref G onsite facilities to reduce the need to travel :	No
Ref H improvement actions to enhance Accessibility Index :	No

Credit scoring

Credits scored :	5
Exemplary credits scored :	0

Credits awarded : 5

Tra 02 Proximity to Amenities

Assessment criteria

Close proximity and accessibility to applicable amenities :	Yes
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Credit scoring

Credits scored :	1
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Exemplary credits scored : 0

Credits awarded : 1

Tra 03 Cyclist facilities

Assessment criteria

Building type category (for purpose of Tra03 issue assessment) : Other building type 3

Number of compliant cycle storage spaces provided : 5

Showers : No

Changing facilities : No

Lockers : No

Drying space : No

Cyclist facilities compliant : No

Cycle storage spaces compliant : No

Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Tra 04 Maximum car parking capacity

Assessment criteria - N/A

Tra 05 Travel plan

Assessment criteria - N/A

Water (Wat)

Wat 01 Water consumption

Standard approach data

Water consumption :

Water demand met via greywater/rainwater sources :

Total net water consumption :

Improvement on baseline performance :

Key performance indicator

Total net water consumption :

Default building occupancy :

Alternative approach data

Overall level achieved :

Percentage of demand met from grey or rainwater :

Credit scoring

Credits scored : 2

Exemplary credits scored : 0

Credits awarded : 2

Wat 02 Water monitoring

Assessment criteria

Metering/monitoring equipment on supply to plant/building areas : Yes

Pulsed output or other open protocol communication output : No

Existing BMS connection : No

Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Wat 03 Water leak detection and prevention

Assessment criteria - N/A

Wat 04 Water efficient equipment

Assessment criteria - N/A

Materials (Mat)

Mat 01 Life cycle impacts

Assessment criteria

Exemplary level compliant :	No
Options :	Option 1
Option 1: Total Mat 01 points achieved :	

Credit scoring

Credits scored :	3
Exemplary credits scored :	0

Credits awarded : 3

Mat 03 Responsible sourcing

Assessment criteria

All timber and timber based products are 'Legally harvested and traded timber' :	Yes
Is there a documented sustainable procurement plan :	No
Have at least three material types been responsibly sourced (criterion 1) :	Yes
% of available RSM points achieved :	

Credit scoring

Credits scored :	1
Exemplary credits scored :	0

Credits awarded : 1

Mat 04 Insulation

Assessment criteria

Embodied impact - insulation index :

Credit scoring

Credits scored :	1
Exemplary credits scored :	0

Credits awarded : 1**Mat 05 Designing for durability and resilience****Assessment criteria**

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

Credit scoring

Credits scored :	1
Exemplary credits scored :	0

Credits awarded : 1**Mat 06 Material efficiency****Assessment criteria**

Material optimisation measures investigated and implemented at relevant stages :	Yes
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Credit scoring

Credits scored :	1
Exemplary credits scored :	0

Credits awarded : 1

Waste (Wst)

Wst 01 Construction waste management

Assessment criteria

Pre-refurbishment audit :	Yes
% of points achieved for direct re-used or recycled (table 64) :	0 %

Key performance indicator - construction waste

Exemplary level compliant - Resource efficiency and diversion of waste from landfill :	No
Non-hazardous non-demolition construction waste diverted from landfill :	

Total non-hazardous demolition waste generated :

Non-hazardous demolition waste diverted from landfill :

Material for reuse :

Material for recycling :

Material for energy recovery :

Hazardous waste to disposal :

Credit scoring

Credits scored :	2
Exemplary credits scored :	0

Credits awarded : 2

Wst 02 Recycled aggregates

Assessment criteria - N/A

Wst 03 Operational waste

Assessment criteria

Segregation and storage of operational recyclable waste volumes :	Yes
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Static waste compactor(s) or baler(s) :

Vessel(s) for composting suitable organic waste :

Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Wst 04 Speculative finishes

Assessment criteria - N/A

Wst 05 Adaptation to climate change

Assessment criteria

Adaptation to climate change - structural and fabric resilience : Yes

Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Wst 06 Functional adaptability

Assessment criteria

Functional adaptability : Yes

Credit scoring

Credits scored : 1

Exemplary credits scored : 0

Credits awarded : 1

Land use and ecology (Le)

Le 02 Protection of ecological features

Assessment criteria - N/A

Le 04 Enhancing site ecology

Assessment criteria - N/A

Le 05 Long term impact on biodiversity

Assessment criteria - N/A

Pollution (Pol)

Pol 01 Impact of refrigerants

Assessment criteria - N/A

Pol 02 Nox Emissions

Assessment criteria

Nox emission level - space heating :

Nox emission level - cooling :

Nox emission level - water heating :

Does this building meet BREEAMs compliance note relating to the definition of a highly insulated building? :

Energy consumption: heating and hot water :

Credit scoring

Credits scored : 0

Exemplary credits scored : 0

Credits awarded : 0

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

Assessment criteria

Annual probability of flooding : Low

Avoidance of flooding : Yes

Flood resilience of resistance strategy : N/A

Neutral impact on surface water : Yes

Reducing run-off : No

Minimising watercourse pollution : No

Exemplary level compliant : No

Credit scoring

Credits scored :	3
Exemplary credits scored :	0

Credits awarded : 3**Pol 04 Reduction of Night Time Light Pollution****Assessment criteria - N/A****Pol 05 Noise attenuation****Assessment criteria - N/A**

Innovation (Inn)

Inn 01 Innovation

Assessment criteria

Number of 'approved' innovation credits achieved? : 0

Credit scoring

Credits scored : 0

Exemplary credits scored : 0

Credits awarded : 0