

HELMSLEY HOUSE CARE HOME

BREEAM NEW CONSTRUCTION V6: PRE-ASSESSMENT REPORT



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HELMSLEY HOUSE
CARE HOME
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REPORT

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EXECUTIVE SUMMARY

RPS has been commissioned by Brackley Investments Limited to produce a BREEAM V6 Pre-Assessment for the construction of a new 78 bed residential care home.

It is our understanding that the funder requires an Excellent BREEAM rating to be achieved.

This report is based on information received to date, detailed within the main body of the report. Where specific information was not available, assumptions have been made in order to set up the BREEAM strategy.

This report outlines the credit strategy to be followed by the development in order to achieve the required BREEAM rating. If the strategy outlined in this report is followed it is considered that the development can achieve an 'Excellent' BREEAM rating. The full credit strategy for the report is detailed within the Section 3 of the report.

1.0 INTRODUCTION

This report outlines the sustainable design principles of the scheme in relation to the BREEAM New Construction V6 requirements.

The development will be assessed under the BREEAM New Construction V6 ‘Multi-Residential’ version of the methodology and it is our understanding that a minimum of BREEAM ‘Excellent’ is required.

BREEAM assessment and certification is generally carried out in three phases:

- A preliminary assessment to set up the strategy to meet the BREEAM target.
- An initial assessment and interim certification is carried out at the design stage
- Final assessment and certification is carried out after construction.

A BREEAM assessment measures the sustainability of a development against design categories, rating the design and construction process as a whole package. The categories included within a BREEAM assessment are:

- Management
- Health and Wellbeing
- Energy
- Transport
- Water
- Materials
- Waste
- Land Use and Ecology
- Pollution

BREEAM has a scoring system of six levels. The different levels are made up by achieving both the appropriate mandatory minimum standards together with a proportion of the other credits so that a score is achieved. The scores required for the corresponding ratings are summarised in the table below.

BREEAM rating	Points score
Unclassified	< 30
Pass	≥ 30
Good	≥ 45
Very Good	≥ 55
Excellent	≥ 70
Outstanding	≥ 85

Table 1: BREEAM rating scoring system

BREEAM Pre-Assessment

This Pre-Assessment follows the guidance set out in the BREEAM NC V6 technical manual, and thus the resulting score is based on version (SD5079).

The details for each category in the environmental ratings are in the completed Pre-Assessment below together with details of how the development intends to achieve this. This BREEAM pre-assessment has been completed based upon a review of the plans and the reports that form part of the planning submission.

The rating obtained by using this BREEAM Pre-Assessment is for guidance only. The predicted ratings may differ from those obtained through a formal assessment, which will be carried out by an appropriately licensed BREEAM assessor. Advice should be sought from a licensed assessor at an early stage in a project to ensure the estimated rating will be obtained.

Design Stage Review

Design specifications are assessed for each individual building, before construction begins. A rating is determined, and (subject to quality assurance) a Design Stage or Interim Certificate is awarded for each building. Registered assessors can apply for assessment of a site, compile and submit a design report for assessment and monitor the assessment status online.

Post Construction Stage Review

The Post Construction Stage (PCS) assessment confirms that buildings have either been built to the Design Stage specifications or to (documented) variations from the Design Stage. Variations must be re-assessed so that new scores and BREEAM levels can be calculated for each affected building. Where a Design Stage assessment has been undertaken, it is used to inform the PCS assessment.

2.0 SUMMARY OF PREDICTED SCORE

The tables in the following section set out the predicted BREEAM score likely to be achieved for the proposed development, based on the commitments and assumptions from the design team. Overall, it is predicted that the proposed development should achieve a score of **71.96%**, thereby achieving an '**Excellent**' rating. Note for an 'Excellent' rating a score of at least 70% is required

BREEAM Rating					
	Credits available	Credits achieved	% Credits achieved	Weighting	Category score
Man	21.0	13.0	61.90%	11.00%	6.80%
Hea	19.0	10.0	52.63%	14.00%	7.36%
Ene	23.0	15.0	65.22%	16.00%	10.43%
Tra	12.0	7.0	58.33%	10.00%	5.83%
Wat	9.0	6.0	66.67%	7.00%	4.66%
Mat	14.0	12.0	85.71%	15.00%	12.85%
Wst	9.0	7.0	77.78%	6.00%	4.66%
LE	13.0	8.0	61.54%	13.00%	8.00%
Pol	12.0	11.0	91.67%	8.00%	7.33%
Inn	10.0	4.0	40.00%	10.00%	4.00%
Total	142.0	93.0	65.49%	-	71.96%
Rating	-	-	-	-	 Excellent

Figure 1: Predictive Score

In addition, performance against the minimum standards required for an Excellent rating under each scenario is summarised below. If the required minimum standards are not met, then the target rating will not be achieved regardless of overall score.

Issue	Minimum / Mandatory Requirements Targeted
Man 03 –Responsible construction practices –Need to achieve at least 1 credit for responsible construction management	Yes
Man 04 –Commissioning & handover –Need to achieve the credit for commissioning test schedule & responsibilities	Yes
Man 04 –Commissioning & handover –Need to produce a Building User Guide	Yes
Ene 01 –Reduction of energy use and carbon emissions –Need to achieve at least 4 credits for energy performance or prediction of operational energy consumption	Yes
Ene 02 –Energy Monitoring –Installation of energy sub-metering that facilitates the monitoring of operational energy consumption	Yes
Wat 01 –Installation of efficient water-consuming components that result in a 12.5% improvement over baseline building water consumption	Yes
Wat 02 –Water Monitoring –Installation of a water meter on each mains water supply to each building (criterion 1).	Yes
Mat 03 –Responsible Sourcing of Materials –All timber and timber-based products used on the project are to be legally harvested and traded timber (criterion 1).	Yes
Wst 03 –Operational waste –Need to achieve credit by providing dedicated storage space for recyclable waste	Yes

Table 2: Minimum mandatory requirements for Excellent

Based on the information received to date, detailed within the main body of the report it is considered that the development can achieve the required 'Excellent' BREEAM rating.

3.0 DETAILED PRE-ASSESSMENT

The following pages provide a summary of which credits are being pursued as part of the BREEAM assessment.

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? :	Yes
BREEAM Advisory Professional (Concept Design) :	Yes
BREEAM Advisory Professional (Developed Design) :	Yes

Credits awarded : 2

Comments :

Project delivery planning credits not targeted.

Requirement is that prior to completion of the Concept Design, the project delivery stakeholders meet to identify and define for each key phase of project delivery:

1.a Roles

1.b Responsibilities

1.c Contributions.

2 Consider each one of the following items when defining roles, responsibilities and contributions for each key phase of the project:

2.a End user requirements

2.b Aims of the design and design strategy

2.c Particular installation and construction requirements or limitations

2.d Occupiers' budget and technical expertise in maintaining any proposed systems

2.e Maintainability and adaptability of the proposals

2.f Operational energy

2.g Requirements for the production of project and end user documentation

2.h Requirements for commissioning, training and aftercare support

BREEAM AP 2 credits targeted. RPS will undertake the role of BREEAM Advisory Professional at both concept design and developed design stages.

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 :	1000 Â£k/m ²

Credits awarded : 1

Comments :

Elemental life cycle cost plan credit not targeted. We are not aware that an elemental LCC plan will be produced before the end of concept design stage giving an indication of future replacement costs over a period of analysis of 20, 30, 50 or 60 years including service life, maintenance and operation cost estimates.

Component level LCC options appraisal credit not targeted. We are not aware that a component level LCC will be carried out by the end of Process Stage 4.

Capital cost credit targeted. Requirement is that the capital cost for the building in pounds per square metre of gross internal floor area is included as part of the submission to BRE for benchmarking purposes.

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
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Exemplary level criteria - Responsible construction management :	Yes
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Key Performance Indicators: Construction site energy use

Energy consumption (total) - site processes :	1 kWh
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Energy consumption (intensity) - site processes :	1 kWh/project value
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Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes :	1 KgCO ₂ eq
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Carbon dioxide emissions (intensity) - site processes :	1 KgCO ₂ eq/project value
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Credits awarded : 5

Exemplary credits awarded : 1

Comments :

6 credits available, 5 credits targeted.

The principal contractor will be required to operate an Environmental Management System and achieve all items referred to in table 4.1 Responsible Construction Management items which equates to a score of 39 under the Considerate Constructors Scheme.

Site related energy, water and transport impacts are to be monitored and recorded on a monthly basis.

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
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Commissioning - design and preparation :	Yes
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Testing and inspecting building fabric :	No
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Handover - have a technical and a non-technical building user guide been developed prior to handover? :	Yes
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Handover - have a technical and a non-technical training schedule been prepared around handover? :	Yes
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Credits awarded : 3**Comments :**

1 credit targeted for commissioning undertaken in accordance with Building Regulations, BSRIA and CIBSE guidelines.

1 credit targeted for undertaking design reviews and giving advice on suitability for ease of commissioning. Providing commissioning management input to construction programming and during installation stages. Management of commissioning, performance testing and handover or post-handover stages.

Credit not targeted for completing post-construction testing and inspection to quality-assure the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through airtightness testing and a thermographic survey).

1 credit targeted for developing two building user guides for the following users: Non-technical user guide for distribution to the building occupiers. Technical user guide for the premises facilities managers.

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**Comments :**

Aftercare support credit targeted - The Contractor will provide the necessary infrastructure and resources to provide aftercare support to the building occupier.

Commissioning implementation credit targeted - The building occupier will commit to collecting energy and water consumption data for a period of 12 months after initial occupation.

Post Occupation Evaluation credit not targeted - Requires the client or building occupier commit to carrying out a post occupancy evaluation (POE) exercise one year after initial building occupation and to disseminate the findings in terms of the buildings post occupancy performance.

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

Credits awarded : 2

Comments :

Visual Comfort - Credit not targeted. Requirements are that a glare control strategy designs out potential glare in all relevant building areas where risk has been identified. This should be achieved through building form and layout or building design measures. The glare control strategy does not increase energy consumption used for lighting. This is achieved by: Maximising daylight levels in all weather, cloudy or sunny and ensuring the use or location of shading does not conflict with the operation of lighting control systems. Occupant controlled blinds are an acceptable solution in bedrooms with desks however curtains will be provided.

Daylighting credits not targeted - The requirement for 2 credits is that daylighting calculations demonstrate that 80% of rooms achieve a daylight factor of 2%.

View out - Credit targeted. Requirement is that 95% of the floor area in relevant building areas will be within 8m of a wall which has a window or permanent opening that provides an adequate view out and the window or opening is greater than 20% of the surrounding wall area. The floor plans indicate that this should be achievable.

Internal and external lighting - Credit targeted. Internal lighting to be in accordance with SLL Code for Lighting 2012. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7. All external lighting to be specified in accordance with BS 5489-1:2013 and BS EN 12464-2:2014

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 :	Yes
Exemplary level criteria- Emissions from building products :	No

Key Performance Indicators

Formaldehyde concentration :	100 $\hat{1}/4\text{g}/\text{m}^3$
Total volatile organic compound (TVOC) concentration :	300 $\hat{1}/4\text{g}/\text{m}^3$

Credits awarded : 3**Comments :**

Pre-requisite: Targeted. A site-specific indoor air quality plan is required to be produced and implemented. The plan must be produced no later than the end of Concept Design. The objective of the plan is to facilitate a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during occupation of the building. The indoor air quality plan must consider the following:

- 1.a Removal of contaminant sources
- 1.b Dilution and control of contaminant sources:
- 1.c Procedures for pre-occupancy flush out
- 1.d Third party testing and analysis
- 1.e Maintaining good indoor air quality in-use.

Ventilation credit targeted. Requires the building to be designed to minimise the indoor concentration and recirculation of pollutants in the building as follows:

Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation. In naturally ventilated buildings or spaces: sensors either have the ability to alert the building owner or manager when CO₂ levels exceed the recommended set point, or are linked to controls with the ability to adjust the quantity of fresh air, i.e. automatic opening windows or roof vents. For naturally ventilated or mixed mode buildings, the design demonstrates that the ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates in accordance with CIBSE AM10.

Emissions from buildings. 1 credit is targeted which requires three out of the five product types to meet the emission limits, testing requirements and any additional requirements listed in Table 5.11 (Please refer to page 93 and 94 of the BREEAM Technical Manual SD5079 BREEAM New Construction Version 6.0)

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

Credits awarded : 2

Comments :

Thermal modelling credit targeted. Requires thermal modelling to be carried out using software in accordance with CIBSE AM11 Building Energy and Performance Modelling. The modelling demonstrates that for air-conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design.

Design for future thermal comfort credit not targeted. Requires thermal modelling to be undertaken for a projected climate change scenario:

Dynamic thermal simulation software packages provide the facility for building designs to be assessed under external climatic conditions specific to geographic location. Industry standard weather data for the UK is available in the form of Test Reference Years (TRYs) and Design Summer Years (DSYs) provided by CIBSE (2016) (<https://www.cibse.org/weatherdata>). This weather data enables thermal analysis of building designs under current climatic conditions, yet no account is taken of the projected variations in weather data that will occur during the building's life cycle as a result of climate change. The following probabilistic DSY weather data files should be used to establish the projected climate change environment against which the design is evaluated:

Naturally ventilated buildings

Time period: 2050s

Emissions scenario: Medium (A1B)

50th percentile DSY 2 and DSY 3

Mechanically ventilated or mixed mode buildings

Time period: 2020s

Emissions scenario: High (A1F1)

50th percentile DSY 2 and DSY 3

Thermal zoning and controls credit targeted. Requires the thermal modelling analysis to inform the temperature control strategy for the building and its users.

Hea 05 Acoustic performance

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

Assessment criteria

Sound insulation :	0
Indoor ambient noise level :	Yes
Room acoustics :	Yes

Credits awarded : 2

Comments :

Sound insulation not targeted. Requirement for 1 credit is that airborne sound insulation values are at least 3 dB higher and impact sound insulation values are at least 3 dB lower than the performance standards in the relevant building regulations or standards.

Ambient noise level credit targeted. Requires indoor ambient noise levels to comply with the design ranges given in Section 7 of BS 8233:2014.

Room acoustics credit targeted. Achieve the requirements relating to sound absorption within residential spaces and within the common spaces of the building described in the relevant building regulations.

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
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Exemplary level criteria :

Credits awarded : 0

Comments :

Credit not targeted. Requirement is that a Security Needs Assessment (SNA) is undertaken by a security expert (Architectural Liaison Officer, Crime Prevention Design Adviser or security consultant) during or prior to Concept Design (RIBA Stage 2 or equivalent). The purpose of the SNA will be to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development. The controls and recommendations shall be incorporated into proposals and implemented in the as-built development.

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 :	Yes

Credits awarded : 1**Comments :**

Safe access credit not targeted. Requires dedicated cycle route to cycle storage, delivery areas are not accessed through general parking areas.

Outside space credit targeted. Requirement is that there is an outside space providing building users with an external amenity area which is of an appropriate size to provide enough amenity for the predicted number of building users during coffee or lunch breaks to gather, socialise, relax and connect with the natural environment. The space is open to the sky, has appropriate seating areas and is non-smoking, it is located to ensure it is accessible to all building users and avoids areas that will have disturbances from sources of noise (e.g. building services, car parks, busy roads, delivery areas etc.)

The development includes outside terrace areas and extensive gardens.

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 be used. This may impact the number of credits that can be awarded. :	
Energy Production by Technology :	
Energy & CO ₂ Emissions Summary :	
Actual building energy demand :	236 MJ/m ² yr
Notional building energy demand :	236.59 MJ/m ² yr
Actual building primary energy consumption :	89 kWh/m ² yr
Notional building primary energy consumption :	89.35 kWh/m ² yr
Actual building CO ₂ -eq emissions (BER) :	8 KgCO ₂ -eq/m ² yr
Notional building CO ₂ -eq emissions (TER) :	8.51 KgCO ₂ -eq/m ² yr
Does this building contain areas that require a SAP assessment? :	No

Towards carbon negative (exemplary credits)

Zero net CO₂-eq emissions :

Energy performance - Building score

Heating and cooling demand energy performance ratio (EPRdem) :	0.051
Primary consumption energy performance ratio (EPRpc) :	0.197
Total BREEAM credits achieved :	2.0
CO ₂ -eq energy performance ratio (EPRco2-eq) :	0.048
Overall building energy performance ratio (EPRnc) :	0.296

% improvement BER/TER :

6.0 %

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

Has the operational energy performance of the building been substantially improved? : 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? : Yes

The energy model is submitted to BRE and retained by the building owner? : Yes

Credits awarded : 6

Exemplary credits awarded : 2

Comments :

Up to nine credits - Energy performance: Require design stage Part L calculation (BRUKL Output Document) to be carried out asap. Couch Perry Wilkes have indicated that 2 credits will be achieved.

Four credits targeted for prediction of operational energy consumption

- Involve relevant members of the design team in an energy design workshop focusing on operational energy performance.
- Undertake additional energy modelling during the design and post-construction stage to generate predicted operational energy consumption figures.
- Report predicted energy consumption targets by end use, design assumptions and input data (with justifications).
- Carry out a risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.

2 exemplar credits targeted for Post Occupancy Stage Energy modelling.

Requires the client or building occupier to commit funds to pay for the post occupancy stage. This requires an energy assessor to be appointed and to report on the actual energy consumption compared with the targets set.

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

Comments :

Sub metering of end use credit targeted. Requirements are that energy metering systems are installed so that at least 90% of the estimated annual energy consumption of each fuel is assigned to the end-use categories. This can be via an energy monitoring and management system or individual sub meters with pulsed outputs.

Sub metering of high energy load or tenancy areas credit targeted. Requires sub metering of relevant function areas or departments in single occupancy buildings.

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

Comments :

Credit targeted. Requirement is that external light fittings have:

Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt

Automatic control to prevent operation during daylight hours

Presence detection in areas of intermittent pedestrian traffic

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 :	Yes
Free cooling :	No
Low and zero carbon technologies :	Yes

KPI

Total on-site and/or near-site LZC energy generation :	61500 KWh/yr
Expected energy consumption and CO ₂ -eq emissions reduction resulting from passive design measures :	
Expected energy consumption and CO ₂ -eq emissions reduction resulting from passive design measures as a percentage :	
Expected reduction in CO ₂ -eq emissions resulting from the LZC technologies :	2.90 KgCO ₂ -eq/m ² yr
Expected reduction in CO ₂ -eq emissions resulting from the LZC technologies as a percentage :	10.80 %

Credits awarded : 2**Comments :**

One credit awarded for undertaking a Passive design analysis. Requirements are that the project team analyses the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures:

1. Site location
2. Site weather
3. Microclimate
4. Building layout
5. Building orientation
6. Building form
7. Building fabric
8. Thermal mass or other fabric thermal storage
9. Building occupancy type
10. Daylighting strategy
11. Ventilation strategy
12. Adaptation to climate change.

Implement passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings.

Couch Perry Wilkes have provided a compliant Passive Design Analysis dated 05.05.23

Free cooling: Credit not targeted. Requires a free cooling analysis to be undertaken demonstrating consideration of the following technologies:

1. Night time cooling (which could include the use of a high exposed thermal mass)

2. Ground coupled air cooling
3. Displacement ventilation (not linked to any active cooling system)
4. Ground water cooling
5. Surface water cooling
6. Evaporative cooling, direct or indirect
7. Desiccant dehumidification and evaporative cooling, using waste heat
8. Absorption cooling, using waste heat.

Low and zero carbon feasibility study credit awarded. Requires an energy specialist to complete a feasibility study by the end of Concept Design to establish the most appropriate recognised local (on-site or near-site) low and zero carbon (LZC) energy sources for the building, based on the feasibility study. The low and zero carbon feasibility study should cover as a minimum:

1. Energy generated from LZC energy source per year
2. Carbon dioxide savings from LZC energy source per year
3. Life cycle cost of the potential specification, accounting for payback
4. Local planning criteria, including land use and noise
5. Feasibility of exporting heat or electricity from the system
6. Any available grants
7. All technologies appropriate to the site and energy demand of the development
8. Reasons for excluding other technologies

Specify local LZC technologies for the building or development in line with the feasibility study recommendations.

Couch Perry Wilkes have provided a compliant Low Zero Carbon Feasibility Study dated 15.05.23

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

Comments :

Energy consumption credit targeted. Requirement is to analyse the transportation demand and usage patterns for the building to determine the optimum number and size of lifts.

Energy efficient features credit targeted. Requires specification of the following three energy efficient features for each lift:

- A standby condition for off-peak periods
- The lift car lighting and display lighting provides an average luminous efficacy across all fittings in the car of 70 luminaire lumens per circuit Watt
- Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.

Ene 07 Energy efficient laboratory systems

To encourage laboratory areas that are designed to minimise their operational energy consumption and 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

Swimming pool present? :	No
Laundry facilities with commercial-sized appliances present? :	Yes
Major impact? :	No
Data centre present? :	No
IT-intensive operating areas present? :	No
Domestic scale appliances (individual and communal facilities) present? :	Yes
Major impact? :	Yes
Healthcare equipment present? :	No
Kitchen and catering facilities present? :	Yes
Major impact? :	Yes
Other contributors :	

Significant majority contributors BREEAM compliant :

Yes

Credits awarded : 2

Comments :

Credits targeted. If the following white goods are provided they must achieve the following ratings (or better) under the 2021 EU Energy Efficiency Labelling Scheme:

1. Fridges, fridge-freezers: E rating
2. Washing machines: B rating
3. Dishwashers: D rating
4. Washer-dryers: D rating

Laundry facilities with commercial-sized appliances required to demonstrate at least one of the following for commercial-sized appliances:

1. Specification of heat recovery from waste water.
2. Use of greywater for part of the washing process. This may be recycled from the final rinse and used for the next pre-wash.
3. The commercial or industrial sized machines are identified as eligible for the UKs Enhanced Capital Allowance Scheme for water.

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

Comments :

Credit targeted. Requirements are as follows:

- 1 No later than Concept Design stage, undertake a site-specific transport assessment and draft travel plan, which can demonstrably be used to influence the site layout and built form.
 - 2 The site-specific travel assessment (or statement) shall cover as a minimum:
 - 2.a If relevant, travel patterns and attitudes of existing building or site users towards cycling, walking and public transport, to identify relevant constraints and opportunities.
 - 2.b Predicted travel patterns and transport impact of future building or site users.
 - 2.c Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors.
 - 2.d Reporting of the number and type of existing accessible amenities within 500m of the site.
 - 2.e Disabled access accounting for varying levels and types of disability, including visual impairment.
 - 2.f Calculation of the existing public transport Accessibility Index (AI)
 - 2.g Current facilities for cyclists.
 - 3 Following a transport assessment (in accordance with the requirements set out in criteria 2), develop a site specific travel plan that provides a long term management strategy which encourages more sustainable travel.
- The travel plan includes measures to increase or improve more sustainable modes of transport and movement of people and goods during the building's operation.
- 4 If the occupier is known, involve them in the development of the travel plan.
 - 5 Demonstrate that the travel plan will be implemented and supported by the building's management in operation.

Cole Easdon have provided a compliant Transport Statement and Travel Plan dated May 2023.

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 :

Pre-requisite achieved as a compliant Travel Plan has been provided.

- Cycle spaces credit targeted. Requirement is 1 space per 10 staff and 1 space per 10 visitors or beds. Based upon 78 beds, 7.8 rounded up to 8 secure and covered cycle spaces are required plus 3 for staff equating to 11 spaces required in total. Section 2.9 of the Transport Assessment states that 18 secure and covered cycle storage spaces will be provided.
- Cyclist Facilities credit targeted. Requires provision of at least two compliant cyclists' facilities for the building users from the following: Showers / Changing facilities / Lockers / Drying spaces.
- Electric Vehicle Charging points credit targeted. Requires provision of electric recharging stations of a minimum of 3kW for at least 10% of the total car parking capacity for the development. Section 2.7 of the Transport Statement confirms 31 car parking spaces will be provided of which 4 will have active electric vehicle charging points.
- Travel information point credit targeted. Requires provision of a public transport information system in a publicly accessible area, to allow building users access to up-to-date information on the available public transport and transport infrastructure. This may include signposting to public transport, cycling, walking infrastructure or local amenities. Section 8.15 of the Travel Plan confirms that a sustainable transport noticeboard will be provided in a prominent location within the building, where staff and visitors can obtain details of local bus and train services, information about ticket prices and how to obtain tickets, any changes to bus services and fares and any potential suspension of rail services. This will be regularly updated by the TPC. Real-time bus travel information will be promoted to employees. This is available through the mobile phone applications provided by Stagecoach online through their website.
- Car sharing credit targeted. Requires the set up of a car sharing group or facility to facilitate and encourage building users to car share. Allocate at least 5% of car spaces for car share. Section 8.11 of the Travel Plan confirms that details of local car sharing schemes (such as Liftshare.com) will be provided as part of the Welcome Packs issued to each employee.

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 : 2

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 : 2

Comments :

The following specification will achieve 2 credits:

WC's 4 litre flush

WHB taps 6 litres per minute

Showers 8 litres per minute

Kitchen taps 7 litres per minute.

Note Policy CS14 states that particular attention should be made to water efficiency measures.

Wat 02 Water monitoring