
Carnell Management Services Ltd

CMS Rockingham Energy Statement



July 2023



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Document Title:	Energy Statement
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1.0 Introduction

1.1 Purpose of the Report

Instructions were received from Carnell Management Services Ltd to produce an Energy Statement for the proposed development at the land adjacent to the A6195 and Rockingham Business Park, Rockingham Row, Birdwell, Barnsley S70 5TW. This report has been produced to support the planning application to be submitted for the proposed development, which is situated within the boundaries of Barnsley Metropolitan Borough Council.

This statement provides a response to the following relevant Barnsley Metropolitan Borough Council documents and policies:

- Barnsley Local Plan (adopted July 2019) - Policy CS22 Sustainable Design & Construction.
- Hoyland North Barnsley Masterplan Framework Report December 2019.

1.2 Site and Building Description

The development will be located at the land adjacent to the A6195 and Rockingham Business Park, Rockingham Row, Birdwell, Barnsley S70 5TW. The application seeks approval for the construction of 7 industrial units including car parking and cycle stores. A proposed site layout has been included in Appendix 1.

1.3 Methodology

The proposed specifications, building drawings and site plan were reviewed to gain a good understanding of the development; following this, SBEM calculations for all proposed building types have been completed to determine the As Designed performance of the development. The application will be considered under the new Part L1A 2022 regulations. Therefore, the new Elmhurst SBEM software has been used to conduct the above calculations.

In relation to the Part G water requirements, a proposed sanitaryware specification has been assessed against the 125 litres/person/day limit outlined in the building regulations requirements.

2.0 Planning Policy

2.1 Barnsley Local Plan (Adopted January 2019)

The Barnsley Local Plan, adopted July 2019, outlines the requirements for new developments regarding sustainability, with Policy CC2 having been identified as relevant.

2.2 Policy CC2 Sustainable Design and Construction

Development will be expected to minimise resource and energy consumption through the inclusion of sustainable design and construction features, where this is technically feasible and viable.

All non-residential development will be expected, to achieve a minimum standard of BREEAM 'Very Good' (or any future national equivalent). This should be supported by preliminary assessments at planning application stage.

2.3 Hoyland North Barnsley Masterplan Framework Report December 2019

The council has declared a climate emergency (September 2019), with a strategy for the borough achieving zero carbon by 2045 (Zero 45). As the Council strives to achieve this goal, new developments will be asked to play their part and through further work, consideration will be given to the following measures:

- *Creating energy efficient well insulated buildings in order to reduce carbon emissions;*
- *Use renewable energy sources (e.g. solar, wind, biofuels) for all or part of their energy needs to reduce carbon emissions;*
- *Sustainability standards such as BREEAM and CEEQUAL when designing developments;*
- *Creating sustainable drainage systems to safely deal with surface water run-off and minimising the risk of flooding;*
- *Identifying opportunities to incorporate space within new dwellings to accommodate low carbon technology in the future, this will make sure that new development is durable and adaptable;*
- *Minimising waste and use of materials throughout the lifetime of the development;*
- *Encourage recycling;*
- *Identifying opportunities for green roofs;*
- *Travel plans to encourage active and sustainable travel.*

Consideration will be given to the latest Building Regulations for housing, BREEAM for employment and CEEQUAL for infrastructure, landscaping and public realm. This will include identification of suitable low-carbon technologies, investigating renewable energy solutions and Combined Heat Power (CHP). Subject to feasibility, this approach will make sure that the development is future-proofed particularly given the anticipated build out rates over a 10-year period. An allowance has been made in the utility report for the provision of electric vehicle charging points for employment and residential development, and alternative technologies given that domestic gas boiler installation in residential properties will be obsolete from 2025.

Future applicants should also note that the council's local validation checklist requires the submission of an Energy Statement for residential schemes over 10 plus dwellings and non - residential schemes of 1,000sqm plus. The Energy Statement should clearly set out measures that will be included to deliver a carbon zero development. If zero carbon cannot be achieved, developers should demonstrate why this has not been possible and explain what steps have been taken in the provision of infrastructure and the design of individual properties to achieve zero carbon through retro fit at a future point.

3.0 Policy Response

CS Policy 2: Addressing Climate Change and Flood Risk / Hoyland North Barnsley Masterplan Framework Report December 2019

3.1 Principle 1

Development will be expected to minimise resource and energy consumption through the inclusion of sustainable design and construction features, where this is technically feasible and viable. / Creating energy efficient well insulated buildings in order to reduce carbon emissions;

3.1.1 Energy Efficiency

In efforts to reduce the overall carbon emissions associated with the development and to maximise the energy efficiency, the developer has a robust ‘fabric first’ approach to the build specification, which allows it to achieve compliance with all metrics under the recently adopted and revised Approved Document Part L 2022.

This will be achieved in this project through building fabric improvements with an uplift on the minimum requirements of Approved Document Part L1A 2022, and also specification of efficient mechanical and electrical services, including a number of ‘add-on’ measures to improve efficiency and performance.

Fabric Energy Efficiency is a measure of the efficiency of the building fabric, the key areas being building fabric U-values, thermal bridging, air permeability, thermal mass and features which affect lighting and solar gains. A higher fabric energy efficiency means that the building will require less energy to heat and cool thus reducing the energy demand of the property and the CO₂ released.

The table below demonstrates how the specification of the development at CMS Rockingham, Barnsley compares to the limiting values and minimum efficiencies allowed within Part L 2022:

Building Element	Limiting Part L 2022 Specification	Proposed Specification Part L
External Walls U-Value	0.26	0.25
Floor U-Value	0.18	0.18
Roof U-Value	0.16	0.16
Ground Floor U-Value	0.18	0.18
Window U-Value	1.60	1.40
Heating Efficiency	86%	95%
Pressure Test	8.00	5.00
Lighting Lumens	75 lm/w	110 lm/w

The development is proposed to adopt a ‘fabric first’ approach to the specification and as detailed above, the proposed U-Values are an uplift on the minimum requirements under Part L 2022. All the main building elements have been designed to provide a thermally efficient building envelope that achieves an improvement on the minimum requirements set out within Part L.

Robust, well insulated cavity walls, roof, floors and openings provide a comfortable environment within the development and reduce the buildings’ reliance on the main heating system. The more onerous air permeability targets will ensure that thermal performance is enhanced by minimising heat and energy losses through thermal bridges and air gaps. The air permeability target in the buildings is 5.00 m³/(h.m²), providing a considerable improvement over the Notional Building target.

To further reduce the associated energy usage of the development in use, the current proposed specification also incorporates Solar PV to be installed to reduce energy consumption and offset CO₂ emissions.

The installation of Solar PV in this development will reduce CO₂ emissions from the buildings’ energy use and will apply a large enough carbon reduction to achieve an overall emissions rate of net zero CO₂.

To summarise, all of the main building elements outlined in Table 1 have been designed to provide a thermally efficient building envelope that achieves an improvement on the minimum requirements set out within Part L. These elements allied to efficient mechanical and electrical services, achieve an improvement on the minimum requirements set out within Part L1A 2022 and ensure enhanced energy efficiency and reduce CO₂ emissions, thus mitigating the impacts of climate change.

3.1.2 SBEM Performance Metrics

To understand the overall proposed approximate performance of the development, SBEM calculations have been undertaken. The initial calculations have been undertaken on all of the proposed buildings at the development. Software outputs of the calculations completed can be made available on request.

3.1.3 Carbon Emissions Breakdown

The CMS Rockingham proposal will be a net zero carbon development. Table 2 below demonstrates the development’s total approximate breakdown of carbon emissions based on the non-domestic building types modelled.

Table 2: Carbon Emission Breakdown	
Domestic	Total Emission Rate (kg/CO₂/yr)
Target Emission Rate (TER)	34,563.46
Building Emission Rate (BER)	58.27
Total Carbon Reduction	34,505.19
Percentage Reduction (%)	99.83%

As a result of the SBEM outputs for the development, Table 2 shows the Target CO₂ emissions (TER) of the development to be 34,563.46 kg/CO₂/yr. The Predicted Carbon Emissions (BER) are demonstrated to be an improvement against this amount, currently modelled to achieve 58.27 kg/CO₂/yr.

Overall, this is a 34,505.19 kg/CO₂/yr reduction in carbon emissions. The carbon reduction has been applied to get a net zero carbon reduction, with a reduction of approximately 99.83% against the notional amount. This highlights the design specification performance of the development being an improvement above Building Regulations requirements, in order to meet the net zero requirement.

3.1.4 Photovoltaics

In September 2019, the Barnsley Metropolitan Borough Council declared a Climate Emergency with a strategy to achieve zero carbon by 2045. Submissions are required to clearly set out measures that will be included to deliver a carbon zero development. The client’s current proposals are to install Solar PV on the proposed units to achieve this goal.

Photovoltaic panels convert solar radiation into direct current electricity. In principle, they are an ideal source of renewable energy as they harness the most abundant source of energy on the Earth, the sun, and they produce electricity, which is the most useful form of energy.

PV's are silent in operation, have no moving parts and have a long life with low maintenance levels. PV systems can be connected to the grid or battery arrays in remote locations. Grid connected systems consist of PV arrays connected to the grid through a charge controller and an inverter. PV cells are more efficient at lower temperatures so good ventilation should be allowed around the PV modules where possible.

In order to meet the net zero CO₂ requirement, as part of the design proposals, the development at CMS Rockingham, Barnsley will include a Solar PV array to contribute to total energy demand and reduce CO₂ emissions in operation.

Table 3 shows the amount of PV being applied to each industrial unit at the CMS Rockingham development.

Table 3: PV Requirement	
Unit	Kilowatt-peak Equivalent (kWp)
Unit 1	45.00
Unit 2	69.00
Unit 3	78.00
Unit 4	74.00
Unit 5	32.00
Unit 6	15.30
Unit 7	16.50
Total	329.80

Table 4 shows the modelled PV energy reduction for CMS Rockingham, Barnsley.

Table 4: Energy Reduction from PV		
System	Proposed Energy Reduction (kWh/yr)	Kilowatt-peak Equivalent (kWp)
Photovoltaic Systems	296,820.00	329.80

Based on an average the results of the SBEM outputs demonstrate this will generate energy equivalent to an amount of approximately 296,820.00 kWh/yr. Actual generation may vary depending on a number of factors, including orientation, angle and any shading to the PV panels installed.

3.1.5 Sustainable Construction

The new development at CMS Rockingham, Barnsley will strive to incorporate sustainable design into the building. Material selection will endeavour to show preference to suppliers who operate responsible sourcing practices and have current environmental management certificates. Examples including FSC/PEFC certified timber products will be utilised, this ensures all products have been obtained from sustainable and legal sources.

Where possible, the development will look to source building materials from local suppliers. Through this approach, delivery materials will be transported lesser distance, reducing the associated CO₂ emissions and fuel use of delivery loads. Similarly, where feasible contractors and site personnel required will be selected who are local to the site to aid the construction efforts. This again will reduce the associated CO₂ emissions of travel, in addition to supporting the local economy.

In efforts to reduce waste throughout the construction process, as part of the design development, the design team have implemented a number of efficiency measures to eliminate potential waste. The development design is to standard material dimensions to avoid waste generation.

This reduces waste not only at the manufacturing stage, but also during construction as it reduces the need to re-size materials on site. In addition, the use of standardised materials increases the ease of deconstruction and improves the likelihood that the materials will be reused, in the eventuality that the site is redeveloped in the future.

3.1.6 Minimising Waste and Maximising Recycling During Construction and Operation

In efforts to reduce waste throughout the construction process, as part of the design development, the design team have implemented a number of measures to eliminate potential waste.

An effective site waste management system will be adopted relating to waste hierarchy principles of reduce, reuse, or recycle. All waste will be handled by a licensed waste contractor who will segregate and process waste produced. Such waste will be separated into key waste groups and recycled at a waste processing plant to be refined into new products or reused in other projects where they cannot be reformed.

Site hoarding or materials where safe and appropriate are transported from other sites for reuse. The design of the buildings looks to incorporate recycling facilities for users further encouraging the principles of recycling.

Barnsley Metropolitan Borough Council operate an alternative collection for refuse waste & recycling waste, allowing for building users to segregate waste types in a more sustainable manner. To enable efficient segregation of operational waste for users, sufficient spacings and access will be provided to buildings to enable waste bins to be collected in line with Barnsley Metropolitan Borough Council waste collection regime.

3.1.7 Water Efficiency

The development at CMS Rockingham, Barnsley will incorporate efficient, water saving sanitaryware to meet a reduced water consumption target below Building Regulations requirements. Where this is not possible, flow restrictors will be installed to limit water use of sanitaryware items.

A representative specification is demonstrated in Table 5 below, whilst the final flow rates of individual sanitaryware items may change as detailed design progresses, water conservation will continue to be prioritised. The Part G Calculator gives a more detailed breakdown of flow rates is available in Appendix 2.

Table 5: Proposed Sanitaryware Specification Flow Rates	
Component	Water Usage
WCs	6 Litres (Full Flush Volume), 3 Litres (Part Flush Volume)
Wash-hand basin taps	5 Litres/Minute
Kitchen taps	5 Litres/Minute
Calculated Use	62.7 Litres/Person/Day

This proposed specification has a calculated estimation of water use being 62.7 Litres/person/per day. This is comfortably below the Building Regulations target of 125 Litres/person/day, thereby meeting policy requirements.

3.3 Principle 3

All non-residential development will be expected, to achieve a minimum standard of BREEAM ‘Very Good’ (or any future national equivalent). This should be supported by preliminary assessments at planning application stage.

A pre-assessment has been completed for the proposal at CMS Rockingham, Barnsley which is projected to achieve a score of 56.72%. The minimum requirement for a ‘Very Good’ BREEAM Rating is 55% therefore the proposal is forecast to comply with policy requirements. The pre-assessment documents can be found in Appendix 3.

4.0 Conclusion

This statement has reviewed the proposed development at the land adjacent to the A6195 and Rockingham Business Park, Rockingham Row, Birdwell, Barnsley S70 5TW, which consists of the construction of 7 industrial units including car parking and cycle stores and has provided an assessment of the proposed scheme against the relevant Barnsley Metropolitan Borough Council documents and policies:

- Barnsley Local Plan (adopted July 2019) - Policy CS22 Sustainable Design & Construction.
- Hoyland North Barnsley Masterplan Framework Report December 2019.

The statement has highlighted that there is a focus on providing a high level of energy efficiency, reflecting the total energy efficiency and carbon reduction figures noted. The scheme currently proposes to utilise a good thermal envelope to minimise heat loss, as well as efficient heating and lighting systems, which will drive energy efficiency in the building. This is in line with the Policy CS22's objective of sustainable design and reducing energy use.

The calculations completed on the building fabric confirm that the specification will be net zero carbon and therefore greatly exceed the required performance in relation to carbon emissions. The proposed carbon emissions of 58.27 kg/CO₂/yr, against the target carbon emissions of 34,563.46 kg/CO₂/yr confirm an approximate 99.83% improvement. This equates to net zero emissions thus demonstrating how the proposal meets the Hoyland North Barnsley Masterplan net zero carbon requirements.

The use of 329.80 kWp of Solar PV in this development will contribute to reduced CO₂ emissions from the buildings' energy use, helping the scheme to comply with the Hoyland North Barnsley Masterplan and greatly exceed targets outlined in part L 2022 Building Regulations.

A proposed sanitaryware specification of 62.7 Litres/person/day has been provided. This is an improvement over the Building Regulations requirement of 125 Litres/person/day.

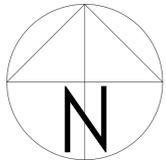
The development at CMS Rockingham, Barnsley is forecast to achieve a score of 56.72% for BREEAM. This equates to a 'Very Good' score, thus meeting policy requirements. This will be confirmed once construction has concluded.

Whilst PV and the listed water sanitaryware flow rates are the preferred specification at this present time, the strategy and required contribution may be subject to change as design develops further. Nonetheless, it will be ensured that where any changes are made, the policy requirements listed will be maintained.



Appendix 1

Proposed Site Plan



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Contractors must verify all dimensions, levels and co-ordinates of the site before commencing any work or making any shop drawings; no dimensions to be taken from drawing.

Note. This drawing is based on the topographical survey, by Ramowski Clarke Ltd, ref. 3508-02-b-US, dated 05/23.

Line of extg. sewers & easments as shown on dwg. no. 10-336-PH1-DE-500-001-REV J, (Hartwood).

This drawing is subject to Client & Planning approval and is to be read in conjunction with all other consultants drawings.

Note. Retaining walls shown are to be brick facing, except where noted, to structural engineers design/details.

Easement to extg. overhead electricity cables - 4.6m from each conductor or earth wire.



P13	Minor changes to the layout. Floor plans added. Retaining walls added. Area schedule updated.	SW	SW	06/23
P12	Minor changes to the layout. Area schedule updated.	SW	SW	03/23
P11	Trees and additional notes to western boundary added. Additional landscape area added to unit 3 car park.	SW	SW	02/23
P10	Roof slopes added.	SW	SW	01/23

Rev	Description	Drn	Vfd	Date
As outlined in section 2.3 of the CIB Industry Guidance to Designers, insignificant risks can usually be ignored, as can risks arising from routine construction activities, unless the design compounds or significantly alters these risks. In accordance with CDM Regulations 8, 9 and 11, any significant risks relating to the design features shown on this drawing have been identified and are annotated thus: <input checked="" type="checkbox"/>				
<input checked="" type="checkbox"/>	No significant risks have been identified.			
<input type="checkbox"/>	Significant risks have been identified - refer to notes on drawing for information on residual risks and any control measures to be employed.			
Refer to the current Designer's Risk Assessment sheets for further details.				
Designer's Signature				Date

Drawing Status **INFORMATION.**

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Project Proposed Development, Rockingham.	
Client Carnell Management Services Ltd.	
Title Proposed Site Plan.	
Wm's Project Ref. 12215	Drawn SW
Date Feb. 2022	Scale 1:500
Project Originator Zone Level Type Role Number Status Rev. 12215 - WMS - XX - XX - DR - A - 10003 - S2 - P13	

UNIT	GROUND		FIRST		TOTAL		OFFICE AREA, excl. circ./toilets		OFFICE % TO GIA	CARS	CYCLES	M/CYCLE	EAVES/HAUNCH HEIGHT
	sq.m	sq.ft	sq.m	sq.ft	sq.m	sq.ft	sq.m	sq.ft					
1	822	8,848	108	1,166	930	10,014	96.00	1,033.00	10.32	17	12	2	8m
2	1,394	15,003	157	1,691	1,551	16,694	163.00	1,754.00	10.51	24	12	2	8m
3	1,352	14,549	190	2,046	1,542	16,595	232.00	2,497.00	15.05	23	12	2	8m
4	1,731	18,632	184	1,979	1,915	20,611	208.00	2,239.00	10.86	32	12	2	8m
5	559	6,014	89	956	648	6,970	95.00	1,022.00	14.66	11	12	2	6m
6	316	3,401	0	0	316	3,401	36.00	387.50	11.39	6	Shared.	Shared.	6m
7	334	3,591	0	0	334	3,591	36.00	387.50	10.78	6	Shared.	Shared.	6m
TOTAL	6,508	70,038	728	7,838	7,236	77,876	866	9,320		119	60	10	



Appendix 2

Part G Water Calculations



Job no:	R3457
Date:	07.06.2023
Assessor name:	Adam Revill
Registration no:	
Development name:	CMS Rockingham, Barnsley

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PRINTING: before printing please make sure that in "Page Setup" you have selected the page to be as "Landscape" and that the Scale has been set up to 70% (maximum)

WATER EFFICIENCY CALCULATOR FOR NEW DWELLINGS - (BASIC CALCULATOR)

		Type 1		Type 2		Type 3		Type 4		Type 5		Type 6		Type 7		Type 8		Type 9		Type 10	
House Type:		Type 1		Type 2		Type 3		Type 4		Type 5		Type 6		Type 7		Type 8		Type 9		Type 10	
Description:		Specification 1																			
Installation Type	Unit of measure	Capacity/ flow rate	Litres/ person/ day																		
Is a dual or single flush WC specified?		Dual		Select option:		Click to Select		Click to Select		Click to Select											
WC	Full flush volume	6	8.76		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
	Part flush volume	3	8.88		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Taps (excluding kitchen and external taps)	Flow rate (litres / minute)	6	11.06		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Are both a Bath & Shower Present?		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:	
Bath	Capacity to overflow	0	0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Shower	Flow rate (litres / minute)	0	0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Kitchen sink taps	Flow rate (litres / minute)	6	13.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Has a washing machine been specified?		No		Select option:																	
Washing Machine	Litres / kg	0	17.16		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Has a dishwasher been specified?		No		Select option:																	
Dishwasher	Litres / place setting	0	4.50		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Has a waste disposal unit been specified?		No		Select option:																	
Water Softener	Litres / person / day		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Calculated Use		63.4		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
Normalisation factor		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91	
Code for Sustainable Homes	Total Consumption	57.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	Mandatory level	Level 5/6		-		-		-		-		-		-		-		-		-	
Building Regulations 17.K	External use	5.0		5.0		5.0		5.0		5.0		5.0		5.0		5.0		5.0		5.0	
	Total Consumption	62.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	17.K Compliance?	Yes		-		-		-		-		-		-		-		-		-	



Appendix 3

BREEAM Pre-Assessment Report

Carnell Management Services Ltd
CMS Rockingham

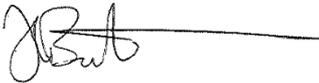


BREEAM Pre-Assessment Report

July 2023



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- Appendix 2 - Design Stage Evidence Tracker
- Appendix 3 - BREEAM V6 New Construction Key RIBA Stage Requirements

1.0 Introduction

1.1 Purpose of the Report

Focus Consultants were instructed by Martyn Carnell of Carnell Management Services Ltd, to undertake a BREEAM evaluation of the proposed Industrial Units located in Rockingham.

This initial overview and report has been commissioned to evaluate the scheme for compliance with BREEAM methodology and is based upon a meeting held on the 31st March 2023, at which a review of the relevant BREEAM credits was undertaken.

1.2 Key Aims

The report has three key purposes:

1. Following a BREEAM review meeting, assess the correct BREEAM methodology for the scheme.
2. Review the scheme against each of the BREEAM credits and confirm the possible score which could be achieved.
3. Highlight what will be required of the project team based upon the agreed strategy.

The report comprises two sections; the first covers a brief overview of the scheme, and a summary of the BREEAM score achieved, based on an indicative review. The second is a detailed evidence schedule, found in Appendix 2, confirming the individual credit requirements and evidence required for each of the credits targeted for the development.

Where appropriate, assumptions have been stated and recommendations are provided for ways in which the BREEAM ratings can be achieved or increased.

This report uses the following BRE documentation to support the assessment:

1. BREEAM New Construction V6 version 0.0 produced by the BRE Limited
2. BREEAM Pre Assessment Tool provided by the BRE.

1.3 Required Standards

The BREEAM rating required is 'Very Good', which is equivalent to a score of 55%. However, this rating will only be achieved where the minimum standards set within BREEAM are met. Those relevant to this scheme can be found in the table over the page.

Table 1.0: Minimum Standards	
Credit	Criteria
MAN 03 - Responsible Construction Practices	Achieve at least one credit under the responsible construction management issue, which requires items a, d, j, g, h, j, n, o and r to be achieved from table 4.1 Responsible construction management items.
MAN 04 - Commissioning and Handover	One credit must be achieved for commissioning-test schedule and responsibilities. The criteria referring to the production of a Building User Guide must be met.
MAN 05 - Aftercare	Ensure that seasonal commissioning is carried out on the building.
ENE 01 - Reduction of Energy Use and Carbon Emissions	Achieve at least four credits. This requires an SBEM and BRUKL that gives an energy performance ratio of at least 0.4.
ENE 02 - Energy Monitoring	Using a BMS, ensure that building users can see where at least 90% of estimated annual energy consumption is being used.
WAT 01 - Water Consumption	At least one of the available credits must be achieved. This requires the overall water consumption rate of the building to be at least 12.5% better than a Building Regulations compliant building.
WAT 02 - Water Monitoring	Install a meter on the incoming mains water supply.
MAT 03 - Responsible Sourcing	All timber and timber-based products must be procured in line with the UK Government Timber Procurement Policy.
WST 03 - Operational Waste	Provide sufficient space for storing recyclable waste both internally and externally.

2.0 BREEAM UK New Construction V6 Methodology

2.1 Methodology

This BREEAM assessment utilises a BREEAM UK New Construction V6 online Pre-Assessment Tool to evaluate the building's performance under the 'Industrial' assessment.

2.2 Environmental Sections

BREEAM UK New Construction V6 is split into nine assessment sections or categories, stretching across a broad range of environmental issues, summarised in the table below:

Table 2.0: Assessment Categories	
Category	Objectives
Management	This category encourages the adoption of sustainable management practices in connection with design, construction, commissioning, handover and aftercare activities to ensure that robust sustainability objectives are set and implemented in the operation of the building.
Health & Wellbeing	This category encourages the increased comfort, health and safety of building occupants, visitors and others within the vicinity.
Energy	This category encourages the specification and design of energy efficient building solutions, systems and equipment that support the sustainable use of energy in the building and sustainable management in the building's operation.
Transport	This category encourages better access to sustainable means of transport for building users through alternative transport solutions and access to amenities to support reductions in car journeys.
Water	This category encourages sustainable water use in the operation of the building and its site by identifying means of reducing potable water consumption over the life time of the building and minimising losses through leakage.
Materials	This category encourages projects to focus on the procurement of materials that are sourced in a responsible way and have a low embodied impact over their life, including extraction, processing and manufacture and recycling.
Waste	This category encourages the sustainable management (and reuse where feasible) of construction and operational as well as waste through future maintenance and repairs associated with the building structure.
Land Use & Ecology	This category encourages sustainable land use, habitat protection and creation, and improvement of long term biodiversity for the building's site and surrounding land.
Pollution	This category aims to reduce the building's impact on surrounding communities and environments arising from light-pollution, noise, flooding and emissions to air, land and water.

2.3 Assessment Process

The BREEAM assessment is split into two stages, with a Design Stage Assessment (DSA) carried out on the intentions of the project, and a final, Post Construction Review (PCR) carried out at project completion. Once the DSA has been compiled, submitted and interim certified, it will be necessary for the BREEAM Assessor to make a site inspection in order to view the as built specification for compliance. The PCR assessment will then be carried out, which will again be submitted and certified by the BRE, providing the final certified rating for the project.

For the purposes of the submission to the BRE, the assessor will ask the project team to provide supporting evidence. The supporting information is required in order to achieve the appropriate credits. The assessor will not be able to award credits without the necessary supporting documentation and evidence being provided.

Where the project is carrying out a Post Construction Stage (PCS) assessment only, it will still be necessary to provide the DSA supporting evidence required for a two-stage assessment, in order to confirm full compliance with the BREEAM criteria.

2.4 Weighting

Within this report credits are awarded throughout based upon the guidance manual. However a weighting is applied to each credit within the final assessment tool. Therefore, the credit displayed against the issue is not always the actual value to the overall rating. The credit summary within Section 4.0 details the approximate credit weightings based on the BREEAM Pre-Assessment tool.

The BRE Scoring and Reporting Tool is used to accurately predict the final scheme rating. Please note that the BRE will change the assessment tools periodically and this can alter the individual assessment of credits and therefore the final rating.

2.5 RIBA Stage Requirements

The BREEAM assessment process requires a number of credit areas to have the required evidence in place, or as a minimum the requirements considered, by certain RIBA Plan of Work stages (or equivalent). The full list of credits affected is contained within Appendix 2; however, details of the credits affected and the evidence required by RIBA Stage 2 are noted in the following table, to assist the project design team with the urgent requirements for the upcoming work stage.

Table 3.0: RIBA Stage Critical Credits

	Assessment Criteria	Evidence Required
MAN 01 - Project Brief and Design	<p>1. Stakeholder Consultation (project delivery). Prior to completion of the Concept Design, the project delivery stakeholders have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery.</p>	<p>Meeting minutes/project directory or similar confirming the following team members have been appointed and their role on the project confirmed:</p> <ul style="list-style-type: none"> Client Building occupier (where known) Design team Principal contractor or similar with construction management experience (e.g. construction project manager)
	<p>4. Stakeholder Consultation (third party). Prior to completion of the Concept Design stage, all relevant third party stakeholders have been consulted by the design team and this covers the minimum consultation content.</p>	<p>Consultation plan setting out the process and scope of the consultation (necessary for both design and post construction stages)</p>
HEA 06 - Safety and Security	<p>11. Security of Site and Building. A suitably qualified security specialist (SQSS) conducts an evidence based security needs assessment. From this assessment, the SQSS develops a set of recommendations or solutions for the building's design.</p>	<p>Correspondence with the SQSS (e.g. Police CPDA) confirming their advice has been sought at this stage, and a copy of their Security Needs Analysis</p>
MAT 01 - Building life cycle assessment (LCA)	<p>1. Life Cycle Assessment. Carry out a building LCA on of the superstructure design during the Concept Design, to demonstrate the environmental performance of the building.</p>	<p>Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for.</p>

Table 3.0: RIBA Stage Critical Credits

Assessment Criteria		Evidence Required
WST 05 - Adaptation to Climate Change	<p>1. Adaptation to Climate Change - Structural and Fabric Resilience. Conduct a climate change adaptation strategy appraisal for structural and fabric resilience by the end of Concept Design, in accordance with the following approach:</p> <ul style="list-style-type: none"> a. Carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate these impacts. The assessment should cover the following stages: <ul style="list-style-type: none"> i. Hazard identification ii. Hazard assessment iii. Risk estimation iv. Risk evaluation v. Risk management. 	Climate change adaptation strategy/ report
WST 06 - Functional Adaptability	<p>1. A building-specific functional adaptation strategy study has been undertaken by the client and design team by Concept Design, which includes recommendations for measures to be incorporated to facilitate future adaptation.</p>	Functional adaptation strategy and implementation plan report for the design stage

3.0 Review and Options

3.1 BREEAM Project Scope

The table below identifies the project scope input required to generate the BREEAM Projects online pre assessment tool. The inputs are based on information provided by the project team and discussions held at the pre assessment meeting.

Table 4.0: BREEAM Pre Assessment Scope Assumptions	
Criteria	Response
Project scope	Fully fitted
Building type (main description)	Industrial
Sub-group	Warehouse, Storage and distribution
Assessment stage	Design (interim)
Building floor area (GIA)	7963
Building floor area (NIFA)	7963
Is the building designed to be untreated?	No
Building services - heating system type	Wet 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?	No
Are building user escalators or moving walks present?	No
Are there any water demands present other than those assessed in Wat 01?	Yes
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 evaluation credits targeted in Ene 01 issue?	No
Are laboratories present?	No
Are there fume cupboard(s) and/or other containment devices present?	No

3.2 Summary Score

Based upon the BREEAM pre assessment meeting held and the credit summary found in Appendix 1, the scheme achieves an anticipated score of 58.72% which equates to a rating of 'Very Good'.

Additional optional credits have been provided within the next section for review in order to achieve the required 'Very Good' rating.

3.3 Optional Credits

Recommendations where possible are provided for improvement within each of the criteria under BREEAM assessment, detailed within the Evidence Tracker section of the report. Should the project team feel a credit targeted within the credit summary cannot be achieved, or wish to look at alternatives/credits to increase the score or rating, the table below details credits that could be considered for inclusion within the assessment.

Table 5.0: Optional Credits	
Credit	Comment
WAT 03 Water Leak Detection	An additional credit could be awarded where a compliant leak detection system is installed on the incoming mains water supply to the building.
POL 02 Local Air Quality	2 additional credits available with the installation of a heating and hot water system with low NOx emissions.



Appendix 1

Credit Summary

BREEAM NC V6 Credit Summary



CLIENT:	Carnell Management Services Ltd
PROJECT:	CMS Rockingham
DATE:	05.04.2023
REVISION:	1

Credit Issue		Credits Available	Credits Sought	Section Total	Total Available for Section	Approx Weighted Value of Each Credit	Contribution to Final Score (%)
MANAGEMENT							
MAN 01	Project Brief and Design	4	2	12	18	0.61	7.33
MAN 02	Life Cycle Cost and Service Life Planning	4	1				
MAN 03	Responsible Construction Practices	6	6				
MAN 04	Commissioning and Handover	4	3				
HEALTH AND WELLBEING							
HEA 01	Visual Comfort	4	3	12	17	0.82	9.88
HEA 02	Indoor Air Quality	4	2				
HEA 04	Thermal Comfort	3	2				
HEA 05	Acoustic Performance	3	3				
HEA 06	Security	1	1				
HEA 07	Safe & Healthy Surroundings	2	1				
ENERGY							
ENE 01	Reduction of CO ₂ Emissions and Energy Use	13	3	5	19	0.84	4.21
ENE 02	Energy Monitoring	2	1				
ENE 03	External Lighting	1	1				
ENE 04	Low Carbon Design	3	0				
TRANSPORT							
TRA 01	Transport Assessment & Travel Plan	2	2	7	12	0.83	5.83
TRA 02	Sustainable Transport Measures	10	5				
WATER							
WAT 01	Water Consumption	5	3	5	9	0.78	3.89
WAT 02	Water Monitoring	1	1				
WAT 03	Water Leak Detection and Prevention	2	0				
WAT 04	Water Efficient Equipment	1	1				
MATERIALS							
MAT 01	Life Cycle Impacts	7	4	8	14	1.07	8.57
MAT 02	Environmental impacts from construction products - Environmental Product Declarations (EPD)	1	0				
MAT 03	Responsible Sourcing of Materials	4	3				
MAT 05	Designing for Durability & Resilience	1	1				
MAT 06	Material Efficiency	1	0				
WASTE							
WST 01	Construction Site Waste Management	4	3	7	9	0.67	4.67
WST 02	Use of Recycled & Sustainably Sourced Aggregates	1	0				
WST 03	Operational Waste	1	1				
WST 05	Adaptation to Climate Change	1	1				
WST 06	Functional Adaptability	2	2				
LAND USE AND ECOLOGY							
LE 01	Site Selection	2	0	9	13	1.00	9.00
LE 02	Ecological Risks & Opportunities	2	2				
LE 03	Managing Negative Impacts on Ecology	3	2				
LE 04	Enhancing Site Ecology	4	3				
LE 05	Long Term Impact Ecology Management & Maintenance	2	2				
POLLUTION							
POL 01	Impact of Refrigerants	3	3	8	12	0.67	5.33
POL 02	Local Air Quality	2	0				
POL 03	Flood & Surface Water Management	5	3				
POL 04	Reduction of Night Time Light Pollution	1	1				

BREEAM NC V6 Credit Summary



CLIENT:	Carnell Management Services Ltd
PROJECT:	CMS Rockingham
DATE:	05.04.2023
REVISION:	1

Credit Issue		Credits Available	Credits Sought	Section Total	Total Available for Section	Approx Weighted Value of Each Credit	Contribution to Final Score (%)
POL 05	Noise attenuation	1	1				
INNOVATION							
MAN 03	Responsible Construction Practices - CCS Exemplary	1	0	0	18	1	0
HEA 01	Visual Comfort - Daylighting	1	0				
HEA 06	Security	1	0				
ENE 01	Reduction of Carbon Emissions and Energy Use	5	0				
WAT 01	Water Consumption	1	0				
MAT 01	Materials Specification	3	0				
MAT 03	Responsible Sourcing of Materials	1	0				
WST 01	Construction Site Waste Management	1	0				
WST 02	Recycled Aggregates	1	0				
WST 05	Adaption to Climate Change	1	0				
LE 02	Ecological Risks & Opportunities	1	0				
LE 04	Enhancing Site Ecology	1	0				
PROJECTED BREEAM SCORE		58.72					



Appendix 2

Design Stage Evidence Tracker



CLIENT:	Carnell Management Services Ltd.
PROJECT:	CMS Rockingham
DATE:	08.06.2023
REVISION:	2

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	

CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS
MANAGEMENT								
MAN 01	CLNT / PM	Meeting minutes or similar confirming project delivery stakeholders and roles identified during RIBA Stage 2 (or equivalent)	N/A	1	1	0	0	Meeting minutes (or equivalent) required to show that relevant members of the project team (developer, contractor, architect, M&E, engineer etc.) have determined their roles prior to Stage 2. Additional evidence required to demonstrate the changes that have been made to the project as a result of the consultation.
	CLNT / PM	Consultation plan setting out the process and scope of the consultation						
	CLNT / PM	Revised project brief/execution plan or similar detailing specific changes from stakeholder input						
	CLNT / PM	Updated consultation plan detailing third party stakeholders consulted prior to completion of RIBA Stage 2 (or equivalent)	N/A	1	1	0	0	Achieved where appropriate stakeholders were consulted with during design stage and feedback was incorporated into scheme.
	CLNT / PM	Documentary evidence (e.g design drawings, specification etc) detailing stakeholder feedback has been incorporated						
	AP	BREEAM AP/sustainability champion appointment letter	N/A	1	0	0	0	Initial confirmation of BREEAM requirement for the project
	CLNT / PM	Meeting minutes/similar confirming BREEAM target for project						
	Focus	Design stage assessment report						
		Guidance criteria 8-10 are achieved	N/A	1	0	0	0	Ongoing as DS progresses
	AP	BREEAM AP/sustainability champion reports issued throughout key project stages						
MAN 02	QS	Elemental life cycle cost plan	N/A	2	0	0	0	
	QS	Component level life cycle cost plan	N/A	1	0	0	0	
	QS	Formal letter confirming cost in £/m²	N/A	1	1	0	0	Confirmation of capital project cost per m2 required
MAN 03	CON	Design Stage specification/commitment confirming all site timber "legally harvested and traded timber"	MAN 03	N/A	Y	N	0	All site timber to be legally harvested and traded
	CON	Design Stage specification/commitment and/or copies of main contractor pollution prevention policy documents	N/A	1	1	0	0	Copy of EMS certificate and details of pollution prevention policies required
	AP	BREEAM AP/sustainability champion appointment letter	N/A	1	1	0	0	
	CLNT / PM	Contract documents confirming BREEAM target forms part of principal contractor's contract						
	CON	Design Stage specification/commitment confirming target score under CCS / completed Responsible Construction Management checklist target	EXCELLENT	2	2	0	0	
	CON	Exemplary Level Credit: additional confirmation that a score significantly beyond best practice will be achieved under the relevant scheme (e.g. 40 or better under CCS) / Completed Responsible Construction Management checklist for all points	N/A	1	0	0	0	
	CON	Design Stage specification/commitment confirming individual appointed or will be appointed to monitor, record and report construction impacts	MAN 03	N/A	Y	N	0	A specific on site individual will need to be nominated to collect site data before either of the below credits can be achieved.
	CON	Design Stage specification/commitment confirming site energy will be monitored throughout construction phase	N/A	1	1	0	0	Measure and record energy and water usage of construction site activities to achieve credit.
	CON	Design Stage specification/commitment confirming site water will be monitored throughout construction phase						
	Focus	BREEAM assessment scoring & reporting tool						
		Design Stage specification/commitment confirming site transport energy will be monitored throughout construction phase	N/A	1	1	0	0	Measure and record site transport to achieve credit.
	BREEAM assessment scoring & reporting tool							
MAN 04	M&E	Design Stage specification/commitment confirming commissioning will be carried out in line with relevant Building Regulations, BSRIA and CIBSE guidelines; details of commissioning manager appointed to monitor commissioning procedures	VERY GOOD	1	1	0	0	Construction programme/ commissioning schedule and BREEAM DS specification confirming commissioning will be carried out
	CON	Project programme required confirming testing and commissioning has been appropriately accounted for						
		Guidance criteria 1 - 2 are achieved	N/A	1	0	0	0	
	CON	Design stage specification/commitment confirming specialist commissioning manager is appointed during the design stage to review and provide input on commissioning procedures						
		Guidance criteria 1 - 2 are achieved						
	CON	Design Stage specification/commitment confirming commissioning of building fabric will be carried out, and any defects identified will be remediated	N/A	1	1	0	0	

BREEAM V6 Design Stage Evidence Tracker

CLIENT:	Carnell Management Services Ltd.
PROJECT:	CMS Rockingham
DATE:	08.06.2023
REVISION:	2

BREEAM Requirements

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	



CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS
	CON	Design Stage specification/commitment confirming a Building User Guide will be provided at handover and a training schedule will be prepared for the building occupier/manager	VERY GOOD	1	1	0	0	Confirmation required that a Building User Guide and handover training schedule will be provided
Total Credits				19	12	0	0	
Total Credits (Weighted)			0.61	12.00	7.33	0.00	0.00	
HEALTH & WELLBEING								
HEA 01	ARC	Design drawings/plans confirming glare control measures	N/A	1	1	0	0	Drawings and commentary of how glare has been designed out required
	ARC	Specification confirming glare control measures						
	SUB	Daylight Calculations	N/A	1	0	0	0	Daylight calculations/assessment required
	SUB	Exemplary Level Credit: daylight calculations confirming additional criteria is met	N/A	1	0	0	0	
	ARC	Design drawings/plans confirming room dimensions in relevant areas	N/A	1	1	0	0	Initial review indicated these credits cannot be achieved
	ARC	Window opening:wall area calcuations						
	M&E	Design Stage specification/commitment confirming internal and external lighting levels are in accordance with the relevant CIBSE Lighting Guides	N/A	1	1	0	0	Lighting to be specified in line with relevant CIBSE and BSRIA requirements
HEA 02	SUB	Copy of compliant Indoor Air Quality Plan	HEA 02	N/A	Y	N	0	Indoor air quality plan required to achieve credits
	M&E	Ventilation strategy report	N/A	1	0	0	0	
	M&E	Design Stage mechanical services/ventilation drawings						
	M&E	Design stage mechanical specification						
	CON	Design Stage specification/commitment confirming relevant products meet maximum VOC content levels detailed within guidance requirements	N/A	2	1	0	0	Confirmation that finishing products will be specified with low VOC content in line with guidance requirements
	CON	Exemplary Level Credit: Design Stage specification/commitment confirming additional VOC content requirements will be met	N/A	1	0	0	0	
	CON	Design Stage specification/commitment confirming pre-occupancy VOC content testing will be carried out	N/A	1	1	0	0	
HEA 04	SUB	Compliant thermal model report	N/A	1	1	0	0	Thermal modelling to be commissioned
		Guidance criteria 1 - 4 are achieved	N/A	1	1	0	0	Thermal model report to confirm that predicted climate change environment risks will be mitigated
	SUB	Compliant thermal model report demonstrating additional criteria OR Confirmation that the building is designed to be easily adapted using passive design measures to meet the project climate change environment requirements						
HEA 05	SUB	Design Stage specification/commitment detailing relevant performance standards will be met OR Acoustician's report	N/A	3	3	0	0	
HEA 06	SUB	Security Needs Assessment completed by end of RIBA Stage 2	N/A	1	1	0	0	Contact to be made with Police liasion officer to obtain their recommendations and determine if they can be feasibly incorporated into the scheme
	ARC	Written confirmation (e.g. letter/meeting minutes) that recommendations from SNA will be implemented						
	SUB	Exemplary Level Credit: security rating scheme report confirming additional criteria is met	N/A	1	0	0	0	
HEA 07	ARC	Site plan detailing pedestrian and cyclist access routes	N/A	1	0	0	0	Site plan required confirming pedestrian and cyclist routes; external lighting to be in line with guidance requirements
	M&E	Design Stage specification/commitment confirming compliant lighting strategy in line with relevant British Standards						
	ARC	Site plan detailing amenity space	N/A	1	1	0	0	
Total Credits				19	12	0	0	
Total Credits (Weighted)			0.82	16.18	9.88	0.00	0.00	

BREEAM V6 Design Stage Evidence Tracker

BREEAM Requirements

CLIENT:	Carnell Management Services Ltd.
PROJECT:	CMS Rockingham
DATE:	08.06.2023
REVISION:	2

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	



CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS
ENERGY								
ENE 01	ENE	A copy of the Building Regulations Output Document from the approved software. The output documents must be based on the design stage of analysis.	EXCELLENT	9	3	0	0	Credits are predicted based upon potential SBEM performance
	ENE	Design stage meeting minutes from preliminary design workshop on operational energy performance	OUTSTANDING	4	0	0	0	
	ENE	Design energy model and report with predicted operational energy consumption figures, including design assumptions input data reported						
	CLNT	Completed risk assessment highlighting any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.						
	ENE	Exemplary Level Credits: BRUKL as above, plus evidence confirming: 1. The total carbon neutral energy generation 2. The source of carbon neutral energy 3. Calculated Estimate of energy consumption from unregulated systems/process (kWH/yr) (only required if confirming zero regulated carbon or carbon negative exemplary credits). 4. Calculated estimate of exported energy surplus (only required if confirming carbon negative status). One or more of the appropriate evidence types listed in the BREEAM evidential requirements section can be used to demonstrate compliance with these criteria.	N/A	2	0	0	0	
	ENE	Energy generation from on-site and near-site LZC sources is sufficient to offset carbon emissions from regulated energy use plus a percentage of emissions from unregulated energy use.						
	ENE	Exemplary Level Credits: Confirmation that the building is deemed carbon negative where > 100% of carbon emissions from unregulated (and regulated) energy use are offset by energy generated from on-site and near-site LZC sources	N/A	3	0	0	0	
	CLNT	Exemplary Level Credits: Post-occupancy stage: appointment documentation confirming funds have been committed to carrying out post occupancy evaluation of operational energy targets	N/A	2	0	0	0	
	M&E	Confirmation that full credits are achieved under ENE 02						
ENE 02	M&E	Design Stage specification/commitment confirming compliant sub-metering strategy	VERY GOOD	1	1	0	0	DS specification confirming sub-metering will be installed for relevant systems. If building over 1,000m2 then a BMS will be required
	M&E	Healthcare, office, HE/FE, Industrial, retail, Relevant 'other buildings' only Design Stage specification/commitment confirming compliant sub-metering strategy for tenancy or high-load areas	N/A	1	0	0	0	
ENE 03	M&E	Design Stage specification/commitment confirming compliant external lighting strategy	N/A	1	1	0	0	External lighting levels should be specified in line with guidance requirements
ENE 04		Hea 04 criteria 1 - 4 are achieved	N/A	1	0	0	0	
	M&E	Passive Design Analysis Report						
		Guidance criteria 1 - 3 are achieved						
	M&E	Passive Design Analysis Report report including free cooling review	N/A	1	0	0	0	
	M&E	Design Stage specification/commitment confirming that the free cooling strategy will be adopted						
	M&E	LZCT feasibility study						
CON	Design Stage specification/commitment confirming that the recommended LZCT will be installed	N/A	1	0	0	0		
			Total Credits	26	5	0	0	
Total Credits (Weighted)			0.84	23.00	4.21	0.00	0.00	
TRANSPORT								
TRA 01	CLNT	Travel Plan completed at design and feasibility stages	N/A	2	2	0	0	
	CLNT	Transport statement completed at design and feasibility stages						
	CLNT	Confirmation of occupier's involvement in development of Travel Plan						
	CLNT	Confirmation that the Travel Plan will be implemented during occupation						

BREEAM V6 Design Stage Evidence Tracker

BREEAM Requirements

CLIENT:	Carnell Management Services Ltd.
PROJECT:	CMS Rockingham
DATE:	08.06.2023
REVISION:	2

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	



CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS
TRA 02		Confirmation that Tra 01 is achieved	N/A	10	5	0	0	TRA assessment carried out by FOCUS and no credits achieved for AI or amenities
		Confirmation of the building's Accessibility Index (AI)						
	CLNT / ARC	Schedule of the Sustainable Transport options implemented within the development (as detailed in Table 7.3 of the guidance manual)						
Total Credits				12	7	0	0	
Total Credits (Weighted)			0.83	10.00	5.83	0.00	0.00	

WATER

WAT 01	Focus	Completed copy of the BREEAM Wat 01 calculator	GOOD	5	3	0	0	Flow rates and volumes to be confirmed for sanitaryware facilities
	CON	Design Stage specification/commitment confirming sanitaryware/water usage equipment flow rate/volume specification						
	ARC	Design drawings confirming equipment locations						
	ENG	Engineers report confirming grey/rain water yield (ltr/day/person)						
	ENG	Design Stage specification/commitment confirming greywater/rainwater recycling system to be installed						
	CON	Exemplary Level Credits: Design Stage specification/commitment confirming sanitaryware/water usage equipment flow rate/volume specification						
	Focus	Completed copy of the BREEAM Wat 01 calculator						
		N/A	1	0	0	0	The water consumption (litres/person/day) for the assessed building achieves a 65% improvement over the baseline	
WAT 02	M&E	Design Stage specification/commitment confirming water meter to be installed	GOOD	1	1	0	0	Water meter with pulsed output to be installed on mains incoming supply
WAT 03	M&E	Design Stage specification/commitment confirming compliant water leak detection system to be installed	N/A	1	0	0	1	
	M&E	Design Stage specification/commitment confirming compliant water leak prevention system to be installed	N/A	1	0	0	0	
WAT 04	ARC	Design Stage specification/commitment of the identified unregulated water demands and confirmation of solution to reduce demand	N/A	1	1	0	0	Landscaping specification to incorporate plants that either thrive in hot and dry conditions, or that rely solely on natural precipitation
Total Credits				10	5	0	1	
Total Credits (Weighted)			0.78	8.00	3.89	0.00	0.78	

MATERIALS

MAT 01	SUB	Retail, Industrial and Offices ONLY: Results of the RIBA Stage 2 BREEAM Simplified or IMPACT compliant Life Cycle Assessment comparison of the superstructure against the BRE benchmark	N/A	6	3	0	0	Stage 4 life cycle assessment will be required for these credits
	SUB	RIBA Stage 2 LCA Options Appraisal of the superstructure						
	SUB	Confirmation that the LCA and MAT 01/02 calculator Tools have been submitted to BRE ahead of planning permission application						
	SUB	Retail, Industrial and Offices ONLY: Results of RIBA Stage 4 BREEAM Simplified or Impact compliant Life Cycle Assessment comparison of the superstructure against the BRE benchmark						
	SUB	RIBA Stage 4 LCA Options Appraisal of the superstructure						
	SUB	RIBA Stage 2 LCA Options Appraisal of the substructure and hard landscaping						
	SUB	Exemplary Level Credits: LCA Options Appraisal of at least 3 significantly different core building services design options; carried out at Concept Design stage						
	SUB	Exemplary Level Credits: Confirmation that Man 02 LCC elemental and component level assessment has been carried out						
	SUB	Confirmation that the LCA options appraisal is included within the assessment scope of the elemental LCC						
	SUB	Confirmation that the aligned LCC and LCA options appraisal has been integrated within the wider design decision making process						
SUB	Exemplary Level Credits: Confirmation that the LCA assessment has been verified by a suitably qualified third party	N/A	1	0	0	0		
MAT 02	ARC	Schedule of construction products and associated EPD certificates	N/A	1	0	0	0	
	ARC	Copies of EPD certificates						
	Focus	Completed Mat 01/02 Results Submission Tool						

CLIENT:	Carnell Management Services Ltd.
PROJECT:	CMS Rockingham
DATE:	08.06.2023
REVISION:	2

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	



CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS	
MAT 03	CON	Design Stage specification/commitment confirming all timber will be legally and responsibly sourced	MAN 03	N/A	Y	N	0	All timber used to be legally and responsibly sourced	
	CON	Sustainable procurement plan	N/A	1	1	0	0	Copy of sustainable materials procurement plan required	
	Focus	Completed copy of the Mat 03 calculator tool	N/A	3	2	0	0	Design specification required confirming materials will be sourced with environmental certification (eg. EMS, BES, PEFC, FSC etc.)	
	CON	Design Stage specification/commitment confirming construction materials will be sourced from suppliers with relevant certification							
	CON	Exemplary Level Credits: Certification for core building services installed, confirming these have been sourced from suppliers demonstrating responsible sourcing	N/A	1	0	0	0		
	Focus	Completed copy of the Mat 03 calculator tool, confirming minimum of 50% of responsible sourcing points are achieved							
MAT 05	ARC	Design drawings highlighting vulnerable building areas	N/A	1	1	0	0		
	ARC	Durability specification							
	ARC	Statement confirming consideration has been given to limiting material degradation due to environmental factors							
MAT 06	ARC	Material efficiency report/statement	N/A	1	0	0	0	Consideration required throughout RIBA stages of how use of materials can be as efficient as possible	
			Total Credits	18	8	0	0		
			Total Credits (Weighted)	1.07	19.00	8.57	0.00	0.00	

WASTE								
WST 01	CLNT	Pre-demolition audit	N/A	1	0	0	0	Audit/report of materials arising from the demolition
	CON	Copy of the Resource/Site Waste Management Plan /Design Stage specification/commitment confirming a compliant Plan will be produced to monitor waste arising	OUTSTANDING	3	2	0	0	Credit targeted for maximum waste generation of 6.5 tonnes/100m2 of floor area
	CON	Copy of the Resource/Site Waste Management Plan /Design Stage specification/commitment confirming a compliant Plan will be produced to monitor diversion from landfill		1	1	0	0	Credit targeted for diverting the following waste: non demolition - 80% demolition - 90%
	CON	Exemplary Level Credits: copy of the RMP/SWMP confirming points achieved	N/A	1	0	0	0	
WST 02	CLNT	Pre-demolition audit produced for Wst 01	WST 02	N/A	N	N	0	
	ENG	Schedule of amount and source of aggregates, confirming sustainable aggregates used where relevant	N/A	1	0	0	0	
	Focus	Completed Wst 02 calculator tool confirming the Project Sustainable Aggregate points achieved						
	ENG	Exemplary Level Credits: copy of the calculations confirming points achieved	N/A	1	0	0	0	
WST 03	ARC	Design drawings confirming location and dimensions of recyclable waste storage area	EXCELLENT	1	1	0	0	Site plan required highlighting location of recyclable waste storage area (2m2 per 1000m2 of floor areas); to be labelled as dedicated recycling
	CLNT	Design Stage specification/commitment confirming recyclable waste storage will be labelled						
WST 05		Climate change adaptation strategy appraisal	N/A	1	1	1	0	
		Exemplary Level Credit: credits Hea 04, Ene 01, Ene 04, Wat 01, Mat 05 and Pol 03 are achieved	N/A	1	0	0	0	
WST 06		Functional adaptation strategy and implementation recommendations report	N/A	1	1	1	0	
	ARC/ M&E/ ENG	Implementation plan and design drawings measures outline in the report are adopted	N/A	1	1	0	0	Functional adaptation strategy study identifies ways of making the building more adaptable by RIBA Stage 2 and these measures adopted into design by RIBA Stage 4
	ARC/ M&E/ ENG	Adaptability and disassembly guide provided to tenants						
			Total Credits	13	7	2	0	
			Total Credits (Weighted)	0.67	9.67	4.67	1.33	0.00

LAND USE & ECOLOGY								
LE 01	ARC	Existing site plans with previous development footprint	N/A	1	0	0	0	Existing site plan required confirming areas of developed land
	ARC	Proposed site plans with development footprint overlaid on existing						
	SUB	Contaminated Land report	N/A	1	0	0	0	Indicated that contamination was likely present on site; contamination report and remediation strategy required
	SUB	Copy of remediation strategy and implementation plan						

BREEAM V6 Design Stage Evidence Tracker

CLIENT:	Carnell Management Services Ltd.
PROJECT:	CMS Rockingham
DATE:	08.06.2023
REVISION:	2

BREEAM Requirements

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	



CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS
LE 02	CLNT	Confirmation that compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	LE02	N/A	Y	Y	0	Ecology report to be provided
	ECOL	Route 2: Suitably Qualified Ecologist's report	N/A	2	2	2	0	
	ECOL	Exemplary Level Credit: Wider site sustainability	N/A	1	0	0	0	
LE 03	CLNT	Confirmation that compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	LE03	N/A	Y	Y	0	
	CLNT	Meeting minutes/PEP/similar confirming roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief	N/A	1	1	1	0	
	CLNT	Confirmation that site preparation and construction works have been planned for and are implemented at an early project stage to optimise benefits and outputs						
	CLNT	Consultation with representative stakeholders and confirmation that data collated and shared, have implemented solutions, and measures have been selected						
	ECOL	Route 2: Suitably Qualified Ecologist's report	N/A	2	1	1	0	
LE 04		LE03 has been achieved	LE04	N/A	Y	Y	0	Change and enhancement credits targeted for off-site measures
	CLNT	Consultation with representative stakeholders and confirmation that data collated and shared, have implemented solutions, and measures to enhance ecology have been selected	N/A	1	1	1	0	
	ECOL	Route 2: Suitably Qualified Ecologist's report	N/A	3	2	0	0	
	ECOL	Ecologist to provide records to the local environmental records centre where relevant	N/A	1	0	0	0	
	ECOL	Exemplary Level Credit: Change in ecological value calculated confirms signifiant net gain has been achieved	N/A	1	0	0	0	
LE 05		LE03 and one credit under LE04 (item 5) have been achieved	LE05	N/A	Y	N	0	
	CLNT	Confirmation that compliance is being monitored against all ecology legislation						
	CLNT	Consultation with representative stakeholders and confirmation that data collated and shared, have implemented solutions, and measures to monitor/review effectiveness of plans for LE03 and LE04	N/A	1	1	1	0	
	CON	Confirmation that ecological mitigation and improvements will be monitored and maintained						
	CON	Confirmation that a section on ecology will be included in the manual provided to the building user at handover						
	ECOL	Landscape and ecology management plan	N/A	1	1	1	0	
			Total Credits	15	9	7	0	
Total Credits (Weighted)			1.00	16.00	9.00	8.00	0.00	
POLLUTION								
POL 01	M&E	Design Stage specification/commitment confirming refrigerants to be installed in line with the requirements of BS EN 378:2016 and where relevant, refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice	POL 01	N/A	Y	N	0	
	M&E	Where no refrigerants are specified, 3 credits achieved by default	N/A	3	3	0	0	
POL 02	M&E	Written confirmation of the installed heating and hot water strategy	N/A	2	0	0	2	Credits achieved by default where heating and hot water is provided solely by non-combustion systems
	M&E	Design Stage specification/commitment confirming NOx emissions of heating and hot water systems						
	M&E	Calculations confirming total average NOx emissions from heating and hot water						

BREEAM V6 Design Stage Evidence Tracker

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BREEAM Requirements

	%	BREEAM Rating
Target Rating	58.72	Very Good
Potential Rating	60.83	Very Good
Current Rating Achieved	9.33	Not Rated
Minimum Standards Met	Not Rated	



CREDIT	ACTION	EVIDENCE REQUIRED	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDITS TARGETED	CREDITS ACHIEVED	POTENTIAL CREDITS	COMMENTS
POL 03	ENG	Flood Risk Assessment	N/A	2	2	0	0	Flood Risk Assessment required
	ENG	Where flood risk is high/medium: Design Stage specification/commitment confirming flood resilience measures and design flood level will be adhered to						
	ENG	Drainage strategy report	N/A	2	0	0	Volume run-off credit achieved where there is no increase in impermeable area	
	ENG	Drainage drawings						
	ARC	Architectural drawings showing change in impermeable area						
	ENG	Drainage strategy report confirming first 5mm of rainfall is attenuated on site	N/A	1	1	0	0	Drainage strategy required confirming SUDs installed meet guidance criteria
	ENG	Drainage drawings						
	CON	Design Stage specification/commitment confirming pollution prevention systems have been design in accordance with PPG 3						
	CLNT	Design Stage specification/commitment confirming drainage plan will be made available to the building occupier						
POL 04	M&E	Design Stage specification/commitment confirming external lighting will be installed in accordance with relevant ILP guidance	N/A	1	1	0	0	Specification to be in line with ILP guidance notes on reduction of night time light pollution
	M&E	External lighting plan						
POL 05	ARC	Site location plan	N/A	1	1	0	0	
	SUB	Noise impact assessment						
	CON	Design Stage specification/commitment confirming any attenuation measures recommended will be installed						
			Total Credits	12	8	0	2	
			Total Credits (Weighted)	0.67	8.00	5.33	0.00	1.33

Optional Credits Summary

CREDIT	ACTION	CREDIT REQUIREMENTS	MINIUMUM REQUIREMENT	CREDITS AVAILABLE	CREDIT WEIGHTED VALUE	TOTAL % AVAILABLE
WAT 03	M&E	Design Stage specification/commitment confirming compliant water leak detection system to be installed	N/A	1	0.78	0.78
POL 02	M&E	Written confirmation of the installed heating and hot water strategy	N/A	2	0.67	1.33
	M&E	Design Stage specification/commitment confirming NOx emissions of heating and hot water systems				
	M&E	Calculations confirming total average NOx emissions from heating and hot water				



Appendix 3

BREEAM V6 New Construction Key RIBA Stage Requirements

BREEAM Guidance Requirements

New Construction V6

BREEAM New Construction V6 Key RIBA Stage Requirements

Issue	Credit	Assessment Criteria	Evidence Required
RIBA Stage 0			
No specific requirements at this stage			
RIBA Stage 1			
Transport	TRA 02 - Sustainable Transport Measures	Transport Options Implementation (option 6 only). The design team consults with the local authority on the state of the local cycling network and pedestrian routes, to focus improving those that the authority deems most relevant to the project	Written evidence of consultation with local authority or written confirmation that it occurred
Materials	MAT 03 - Responsible Sourcing of Construction Products	Enabling Sustainable Procurement. A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products and must be in place before concept design stage	Organisational level or project specific sustainable procurement plan
	MAT 06 - Material Efficiency	Set targets and report on opportunities and methods to optimise the use of materials	Materials Efficiency report/statement. To be reviewed at the following RIBA stages: 1 - Preparation & brief 2 - Concept design 3 - Developed design 4 - Technical design 5 - Construction
Land Use & Ecology	LE 02 - Ecological Risks and Opportunities	Survey and Evaluation (route 2 of assessment only). A Suitably Qualified Ecologist (SQE) carries out a survey and evaluation for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions (typically Preparation and brief stage)	Ecologist's report as well as appointment letter or similar, confirming they were engaged at the appropriate stage
RIBA Stage 2			
Management	MAN 01 - Project Brief and Design	Project Delivery Planning. Prior to completion of the concept design, the project delivery stakeholders meet to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery.	Meeting minutes/project directory or similar confirming the following team members have been appointed and their role, responsibilities and necessary contributions on the project confirmed: - Client - Building occupier (where known) - Design team - Principal contractor or similar with construction management experience (e.g. construction project manager)
		Stakeholder Consultation (interested parties). Prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content	Consultation plan setting out the process and scope of the consultation
		BREEAM AP (concept design). Involve a BREEAM AP (Advisory Professional) in the project and its design at an appropriate time and level	BREEAM AP appointment letter/documents and documented commitment to achieve BREEAM target (e.g. meeting minutes or performance specification etc)
	MAN 02 - Life Cycle Cost and Service Life Planning	Elemental LCC. An appropriate person is commissioned to carry out an outline, entire asset life cycle cost plan together with any design options appraisals	The life cycle cost report and confirmation that it has been undertaken at the appropriate stage

BREEAM Guidance Requirements

New Construction V6

BREEAM New Construction V6 Key RIBA Stage Requirements

Issue	Credit	Assessment Criteria	Evidence Required
Health & Wellbeing	HEA 06 - Security	Security of site and building. A suitably qualified security specialist (SQSS) conducts an evidence based security needs assessment. The SNA is used to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development	Correspondence with the SQSS (e.g. Police CPDA) confirming their advice has been sought at this stage and the completed SNA
Energy	ENE 04 - Low Carbon Design	Passive Design Analysis. The project team carries out an analysis of the proposed building design/development to influence decisions made during concept design stage and identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services.	Passive design analysis report
		Low Zero Carbon Feasibility Study. A feasibility study has been carried out by the completion of the concept design stage by an energy specialist to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development.	LZCT feasibility study report
	ENE 07 - Energy Efficient Laboratory Systems	Design Specification. Engage with the client during the preparation of the initial project brief to determine occupant requirements concerning laboratory systems.	Meeting minutes or other written evidence demonstrating consultation
Transport	TRA 01 - Transport Assessment and Travel Plan	Travel Plan. Develop a travel plan during the 'feasibility and design stages' based on a site specific travel assessment or statement.	Travel plan
Materials	MAT 01 - Environmental Impacts from Construction Products - Building Life Cycle Assessment	Superstructure - Comparison with BREEAM benchmark (Offices, Industrial and Retail buildings only). Carry out a building LCA and compare against the BREEAM benchmark.	LCA options appraisal summary document
		Superstructure - Options Appraisal (all building types). Carry out a building LCA including 2-4 significantly different superstructure options	LCA options appraisal summary document
	WST 01 - Construction Waste Management	Pre-demolition Audit. Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being demolished. This must be used to determine whether refurbishment or reuse is feasible and to maximise the recovery of materials where demolition occurs.	The pre-demolition audit

BREEAM Guidance Requirements

New Construction V6

BREEAM New Construction V6 Key RIBA Stage Requirements

Issue	Credit	Assessment Criteria	Evidence Required
Waste	WST 05 - Adaptation to Climate Change	Resilience of Structure, Fabric, Building Services and Renewables Installation. Conduct a climate change adaptation strategy appraisal for structural and fabric resilience by the end of concept design, in accordance with the following approach: a. Carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate these impacts. The assessment should cover the following stages: i. Hazard identification ii. Hazard assessment iii. Risk estimation iv. Risk evaluation v. Risk management.	Climate change adaptation strategy/report
	WST 06 - Design for Disassembly and Adaptability	Recommendations report. Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios	Disassembly and functional adaptability study
Land Use & Ecology	LE 02 - Identifying and Understanding the Risk and Opportunities for the Project	Determining the Ecological Outcomes (routes 1 and 2 of assessment). The project team liaise and collaborate with representative stakeholders early enough to influence key planning decisions (typically Concept Design stage)	Meeting minutes or similar written documentation of the consultation
	LE 03 - Managing Impacts on Ecology	Planning, Liaison, Implementation and Data. Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early stage to influence the concept design	Meeting minutes or similar written documentation of the consultation
RIBA Stage 3			
Management	MAN 01 - Project Brief and Design	BREEAM AP (developed design). Involve a BREEAM AP (Advisory Professional) in the project at this stage of design. The first BREEAM AP credit (see RIBA stage 2 section) must be achieved first	BREEAM AP appointment letter/documents and documented commitment to achieve BREEAM target (e.g. meeting minutes or performance specification etc)
Materials	MAT 06 - Material Efficiency	Set targets and report on opportunities and methods to optimise the use of materials	Materials Efficiency report/statement. To be reviewed at the following RIBA stages: 1 - Preparation & brief 2 - Concept design 3 - Developed design 4 - Technical design 5 - Construction

BREEAM Guidance Requirements

New Construction V6

BREEAM New Construction V6 Key RIBA Stage Requirements

Issue	Credit	Assessment Criteria	Evidence Required
RIBA Stage 4			
Management	MAN 02 - Life cycle cost and service life planning	Component Level LCC option appraisal. A component level LCC option appraisal has been developed in line with PD 156865:2008 and includes the following component types (where present): a. Envelope, e.g. cladding, windows, and/or roofing b. Services, e.g. heat source cooling source, and/or controls c. Finishes, e.g. walls, floors and/or ceilings d. External spaces, e.g. alternative hard landscaping, boundary protection.	Component level life cycle cost plan
	MAN 04 - Commissioning and Handover	Commissioning - Design and Preparation. The client or principal contractor appoints an appropriate project team member who is not involved in the installation of systems to undertake commissioning design reviews and management of the commissioning process	The commissioning manager's design reviews and confirmation that they are sufficiently independent from the installation works
Materials	MAT 01 - Environmental Impacts from Construction Products - Building Life Cycle Assessment	Options Appraisal During Technical Design (all building types). Carry out building LCA options appraisal of 2 to 3 significantly different superstructure design options. No requirement to achieve the associated credits under the RIBA stage 2 section	Updated LCA options appraisal summary document
Waste	WST 05 - Adaptation to Climate Change	Resilience of Structure, Fabric, Building Services and Renewables Installation. Update the appraisal carried out at RIBA stage 2 to confirm how the measures proposed have been implemented into the design	Updated climate change adaptation strategy/report
	WST 06 - Design for Disassembly and Adaptability	Implementation. Update the appraisal carried out at RIBA stage 2 to confirm how the measures proposed have been implemented into the design	Disassembly and functional adaptability implementation plan report
RIBA Stage 5			
Management	MAN 03 - Responsible Construction Practices	BREEAM AP (site). A BREEAM AP is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the construction stage. To do this, the AP will ideally be site based or will visit the site regularly to carry out spot checks, with the relevant authority to do so and require action to be taken to address shortcomings in compliance. The AP will monitor site activities with sufficient frequency to ensure that risks of non-compliance are minimised. They will report on progress at relevant project team meetings including identifying potential areas of non-compliance and any action needed to mitigate.	BREEAM AP appointment letter/documents and documented commitment to achieve BREEAM target (e.g. meeting minutes or performance specification etc)
RIBA Stage 6			
No specific requirements at this stage			
RIBA Stage 7			
No specific requirements at this stage			



Appendix 4

SBEM Calculations (Available on Request)