

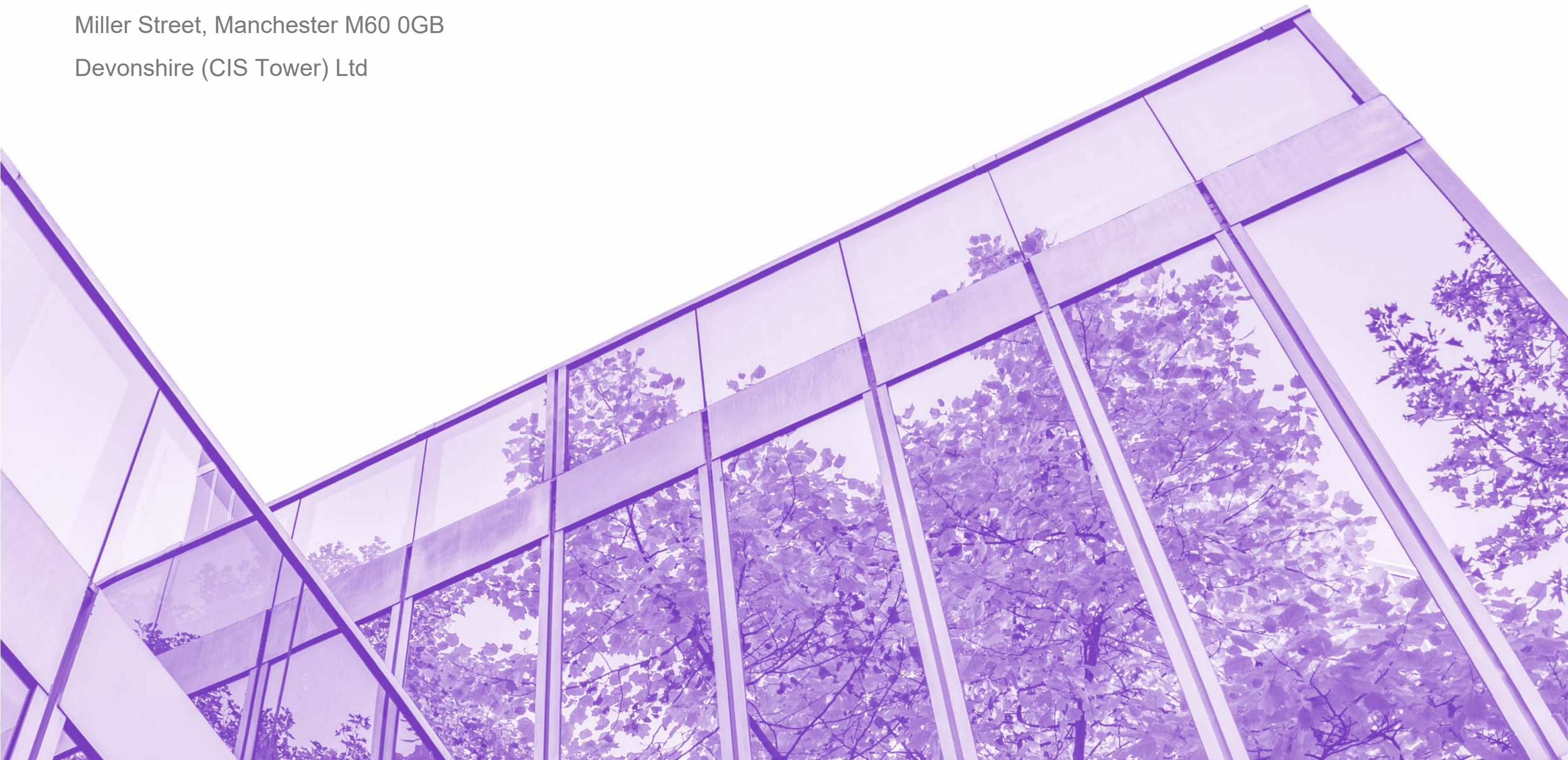


CIS Tower, Manchester

Environmental Standards Statement and BREEAM Pre-assessment

Miller Street, Manchester M60 0GB

Devonshire (CIS Tower) Ltd





Client	Devonshire (CIS Tower) Ltd
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1.0 Executive Summary

CIS Tower is a Grade II listed office building located in Manchester city centre, built in the 1960s and comprises twenty-eight storeys.

The description of development as stated on the application form for Full Planning Permission is as follows:

Planning permission for internal and external refurbishment of the CIS Tower for office accommodation on floors 1-23 (Use Class E c)); change of use to floor 24 and 25 from Use Class E c) (office) to Use Class E b) (F&B); change of use to basement and ground floor from Class E c) (office) to mixed uses (Use Class E a) (retail)/ Use Class E d) (gym) / Use Class E b) (F&B) / Sui generis (leisure); refurbishment of the external facade including replacement of the existing single glazed façade system and replacement of strip of solar panels on the service tower; removal of existing recreational space on the fifth floor and plant to facilitate the construction of a 3-storey extension to the Podium (Use Class Ec)) external alterations to ground floor façade including an alteration to the ground floor entrance lobby; creation of new entrances on Dantzic Street and on eastern elevation; hard landscaping and planting; removal of external signage; creation of 2x DDA parking spaces; new rooftop plant and screening at level 8; and other associated works.

The description of development as stated on the application form for Listed Building Consent is as follows:

Listed Building Consent for the wholesale internal and external refurbishment, refurbishment of the external facade including replacement of the existing single glazed façade system and replacement of strip of solar panels on the service tower; removal of existing recreational space on the fifth floor and plant to facilitate the construction of a 3-storey extension to the Podium; external alterations to ground floor façade including an alteration to the ground floor entrance lobby; creation of new entrances on Dantzic Street and eastern elevation; alternations to the existing public realm; new rooftop plant and screening at level 8; hard landscaping and planting; removal of external signage; and associated works.

The proposed design is based on the building being predominantly office use, incorporating some retail, leisure, and event space. A new three-storey extension is proposed for the podium, which will also be used as office space.

The proposal to replace significant elements of the facade has undergone extensive interrogation to ensure the proposals are proportionate and appropriate. The building is therefore considered to be a refurbishment scheme by Manchester City Council. The building is to undergo extensive works to improve its thermal and energy performance.

This report outlines the approach taken to address and meet Manchester City Council's key policies as detailed in its Core Strategy (CS) and Places for Everyone Joint Development Plan. The key policies that have been considered include:

Manchester Core Strategy Policies

- CS Policy DM 1 - Development Management
- CS Policy EN 4 - Reducing CO2 Emissions by Enabling Low and Zero Carbon Development
- CS Policy EN 6 - Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies
- CS Policy EN 8 - Adaptation to Climate Change

Places for People Replacement Policies

- JP-S2 - Carbon and Energy
- JP-S6 - Resource Efficiency

The applicant's vision for the proposed development is to create a highly sustainable building that addresses these and other relevant policies and to exceed minimum requirements wherever possible.

This Environmental Standards Statement and BREEAM Pre-assessment has been prepared to demonstrate how the proposed development meets the planning policies. In that context, the following attributes are of note:

- The existing poorly performing single-glazed façade will be replaced with a modern, double-glazed system which will not only reduce energy consumption but also carbon emissions over its lifetime.
- Certification wise, the development is targeting a BREEAM Excellent rating and a minimum of four credits under Ene 01.
- In energy performance terms, an Energy Performance Certificate (EPC) A rating is targeted.
- Whole Life Carbon assessment was undertaken at RIBA Stage 2 and provides an indication of the whole life carbon emissions of the development and potential measures that could reduce them further. The development will achieve the relevant UKNZCBS targets (2026 Office Retrofit Works). Refer to TFT's Whole Life-Cycle Carbon Assessment.
- NABERS UK Accreditation targeted.
- The building will be all-electric with highly efficient air source heat pumps providing heating and cooling, which will reduce energy demand and carbon emissions, and improve air quality.

- The wellbeing of occupants is a key consideration with WELL enabled certification being targeted together with the provision of high-quality indoor environment and extensive changing facilities.
- The proposals address resource efficiency through the application of circular economy principles. For example, by reusing the existing structure and designing for future disassembly.
- The proposals incorporate nature-based solutions, which will attain a minimum biodiversity net gain of 10%.
- Overheating is one of the main climate change risks, which has been addressed through improvements to thermal comfort and solar gain that the new façade provides and carefully designed cooling systems.



2.0 Introduction

2.1 The Applicant

The Applicant, Devonshire (CIS Tower) Ltd (hereafter referred to as 'The Applicant') has appointed Tuffin Ferraby Taylor (TFT) Ltd. to assess the sustainability performance of the proposed application against relevant sustainability planning policies.

2.2 Purpose

This Environmental Standards Statement and BREEAM Pre-assessment has been prepared to support the planning application for the redevelopment of CIS Tower in Manchester. This statement has been prepared on behalf of 'The Applicant' by TFT. This report seeks to outline the approach taken to incorporate and maximise sustainability within the design to address key sustainability policies alongside targeting a BREEAM Excellent rating for the building.

The Applicant's vision for the development involves a holistic sustainability approach which seeks to satisfy the local and regional policies and go beyond the standards set by Building Regulations.

2.3 Proposed Development

CIS Tower is a Grade II listed building located in Manchester city centre, built in the 1960s and comprises twenty-eight storeys. It was previously used predominantly as office space, with a canteen area and an event space.

The description of development as stated on the application form for Full Planning Permission is as follows:

Planning permission for internal and external refurbishment of the CIS Tower for office accommodation on floors 1-23 (Use Class E c)); change of use to floor 24 and 25 from Use Class E c) (office) to Use Class E b) (F&B); change of use to basement and ground floor from Class E c) (office) to mixed uses (Use Class E a) (retail)/ Use Class E d) (gym) / Use Class E b) (F&B) / Sui generis (leisure); refurbishment of the external facade including replacement of the existing single glazed façade system and replacement of strip of solar panels on the service tower; removal of existing recreational space on the fifth floor and plant to facilitate the construction of a 3-storey extension to the Podium (Use Class Ec)) external alterations to ground floor façade including an alteration to the ground floor entrance lobby; creation of new entrances on Dantzic Street and on eastern elevation; hard landscaping and planting; removal of external signage; creation of 2x DDA parking spaces; new rooftop plant and screening at level 8; and other associated works.

The description of development as stated on the application form for Listed Building Consent is as follows:

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The proposed design is based on the building being predominantly office use, incorporating some retail, leisure, and event space. A new three storey extension is also proposed for the podium, also to be used as office space.

The proposed scheme is described in full in the architect Simpson Haugh Architects' drawings and Design and Access Statement accompanying the application.



Figure 1- CIS Tower, Miller Street Manchester Redevelopment Location



3.0 Planning Policies

The following policies have been reviewed to identify the relevant sustainable development requirements that are applicable to the proposed development.

3.1 National Planning Policy Framework (December 2024)

The National Planning Policy Framework (NPPF) 2024 sets out the government’s approach to promoting sustainable development in England through the planning system and how these should be applied. The framework details that sustainable developments should consider economic, social, and environmental objectives, and outlines various aims to meet the challenges of climate change, flooding and coastal change.

The NPPF does not stipulate specific sustainability targets. The framework was revised in December 2024 and puts an emphasis on the pursuit of the 17 Global Goals for Sustainable Development.

3.2 Manchester Core Strategy (2012-2027) and Places for Everyone Joint Development Plan Document (2022 to 2039)

Manchester City Council’s Core Strategy (adopted in July 2012) covers a period of 15 years from 2012 to 2027 and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision including those that cover carbon emissions, renewable energy and climate adaptation.

The Greater Manchester Combined Authority Document- Places for Everyone Joint Development Plan Document (adopted in March 2024) is an addendum to the Core Strategy. As set out in the 'Addendum to Manchester Core Strategy 2024' some Core Strategy policies have been partially replaced by Places for Everyone (PfE) policies.

When assessing the proposals, we have considered the following policies:

Manchester Core Strategy Policies

- CS Policy DM 1 - Development Management
- CS Policy EN 4 - Reducing CO2 Emissions by Enabling Low and Zero Carbon Development
- CS Policy EN 6 - Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies
- CS Policy EN 8 - Adaptation to Climate Change

- CS Policy EN14 - Flood Risk
- CS Policy EN17 - Water Quality
- CS Policy EN 19 - Waste

Places for Everyone Replacement Policies

- JP-S2 - Carbon and Energy
- JP-S3 - Heat and Energy Networks
- JP-S4 - Flood Risk and the Water Environment
- JP-S6 - Resource Efficiency
- JP-G8 - A Net Enhancement of Biodiversity and Geodiversity

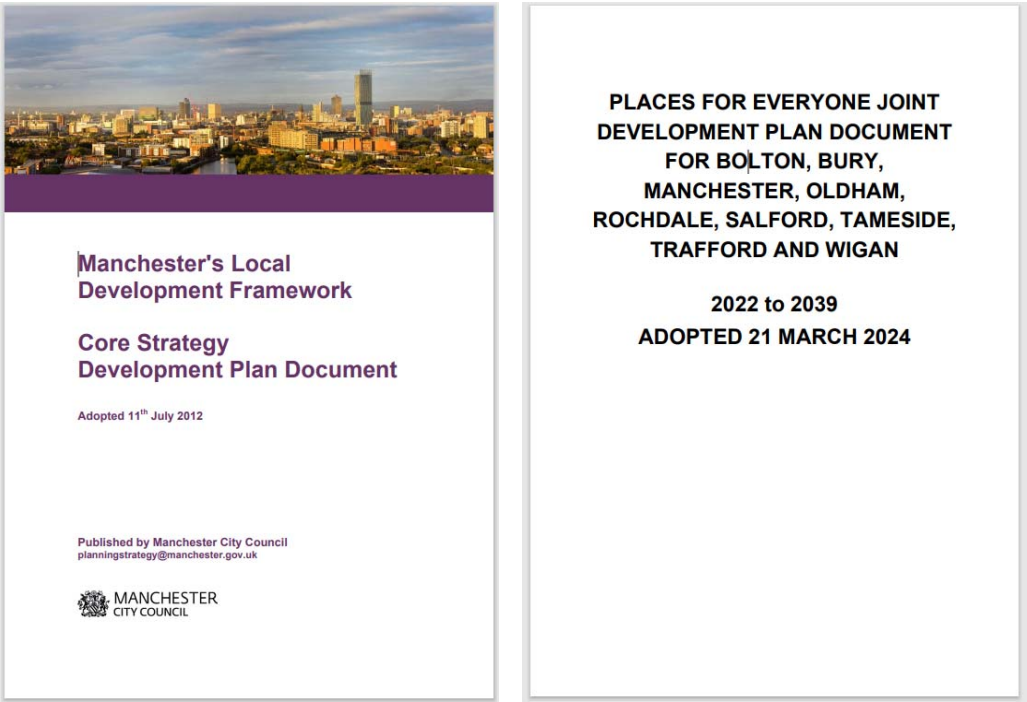


Figure 2- Manchester Core Strategy (2012-2027) & Places for Everyone Joint Development Plan Document (2022 to 2039)



4.0 Energy and Carbon Emissions

4.1 Background and policy context

The Climate Change Act 2008 was updated in 2019 to set the UK's legally binding greenhouse gas emission reduction targets to deliver a net zero carbon economy by 2050 (with an interim target of 26% by 2020).

The below Manchester PfE and Core Strategy Planning policies have been reviewed in connection with reducing energy and carbon:

- CS Policy EN 4 - Reducing CO2 Emissions by Enabling Low and Zero Carbon Development
- CS Policy EN 6 - Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies
- JP-S2 - Carbon and Energy
- JP-S3 - Heat and Energy Networks

4.2 Energy Strategy

An Energy Strategy has been developed by CWC in support of the planning application which demonstrates compliance with the above policies. See Energy Statement in Appendix B for more details.

The Manchester City Council Climate Change Emergency and the Manchester's Net Zero Carbon Strategy have also been considered during the early design stage for the CIS Tower development, by assessing the development against the UK Net Zero Carbon Buildings Standard and NABERS UK with the aim of improving the energy efficiency of the building and reducing operational carbon emissions.

The development meets the criteria stated in the Manchester City Council Core Strategy Policy EN6 Target Framework for Carbon Dioxide reductions from low or zero carbon energy supplies, by achieving a 70% improvement above the Approved Document Part L 2010.

The strategy adopts a hierarchical approach that prioritises demand reduction (be lean), then heating infrastructure (be clean) and finally, renewable energy (be green). This is explored in more detail below.

4.2.1 Demand reduction (Be Lean)

The design approach for the proposed development has prioritised passive design and energy efficiency measures to limit energy use, with extensive improvements to its thermal and energy performance, which includes:

- Existing single-glazed façade replaced with a new glazed curtain walling system compliant with current regulations and providing improved an air permeability target of 4 m3/h.m2 @ 50Pa.
- Replacement of gas-fired boilers, chillers and ventilation plant with modern high-efficiency air-to-water heat delivering heating and cooling.
- New air handling units with high efficiency heat recovery capability will deliver ventilation.
- High efficiency VRF systems and mechanical ventilation heat recovery units to serve all retail & leisure spaces.
- Lighting upgraded to high-efficiency LED fitting with presence detection and daylight dimming (where appropriate).
- Centralised domestic hot water via the gas-fired boilers will be replaced with point of use electric water heaters.

4.2.2 Heating Infrastructure (Be Clean)

There is no district heat or energy network within the vicinity of CIS Tower to which a connection can be made. However, there is space available within the basement for any future connection and associated equipment.

4.2.3 Renewable Energy (Be Green)

The final step in the energy hierarchy, 'Be Green' promotes the generation of energy from low and zero carbon sources (LZC). Air source heat pumps (ASHPs) and Photovoltaics (PV) was determined to be the most viable solution. The ASHPs provide space heating and cooling. This provides an electric based solution eliminating the need for use of fossil fuels to heat the building. The PVs enable the generation of power onsite.

4.3 Building Regulations Part L Compliance

A comparison of CO2 emissions of the building model based on Part L minimum requirements and the proposed performance, demonstrates the design exceeds the Part L minimum requirements. In addition, the carbon emissions reduction is 70% better than the Part L minimum 2010 requirement.

4.4 Overheating risks

The risk of overheating is firstly reduced by the development of the thermal properties of the façade with the balance of heat loss and heat gain through the facade to provide an optimum solution for both the risk of overheating and reduction in operational energy. Residual heat gain is then dealt with through the cooling circuits associated with the heat pumps. These heat pumps will be developed as central plant with heat recovery to enable recovered energy to be transferred to other parts of the building as required.

4.5 Energy Performance

The design is predicted to attain an Energy Performance Certificate (EPC) A rating, which is better than the current minimum energy efficiency standards' requirement of an EPC E rating and the future 2030 requirement of a B rating.

All scenarios achieve an energy use intensity below the UKNZCBS 2025 and 2026 'One-go Retrofit' targets for the office, retail, F&B with catering and sports and leisure facilities (see section 5.2 in the energy statement on details on breakdown of percentage improvements over the 2025 and 2026 EUI targets for each of the building uses noted above).

4.6 Whole Life-Cycle Carbon Assessment

In accordance with policy JP-S2, a Whole Life-Cycle Carbon Assessment (WLCA) has been undertaken in accordance with RICS's requirements, to assess the performance of the development against the UK Net Zero Carbon Buildings Standard (UKNZCBS) and other relevant benchmarks.

This assessment was undertaken at RIBA Stage 2 and provides an indication of the whole life carbon emissions of the development and potential measures that could reduce them further. The development will achieve the relevant UKNZCBS targets (2026 Office Retrofit Works).

It should be noted that the WLCA is an ongoing and iterative process that is refined and enhanced as project information becomes available during design, construction and on completion. As the design progresses, embodied carbon reduction opportunities will be investigated further, which will include the selection of materials and building services components that consider durability, cost and a carbon perspective.

More information can be found in TFT's Whole Life-Cycle Carbon Assessment.

4.7 BREEAM Ene 01 compliance

Energy modelling undertaken by CWC confirms the proposals will attain a minimum of four credits, which meets the requirements of policy JP-S2.



5.0 Other Sustainability Indicators

5.1 Optimisation of land use

CIS Tower occupies previously developed land and entails retaining the structural frame and basement. This strategy promotes the reuse of brownfield sites with low ecological value, mitigation and enhancement of ecology.

5.2 Climate change mitigation

As highlighted in section 4 earlier, the following climate change mitigation strategies have been implemented:

- The requirements on energy efficiency and renewables with respect to Climate Change mitigation from Manchester Core Strategy Policy EN 4 - Reducing CO2 Emissions by Enabling Low and Zero Carbon Development, CS Policy EN 6 - Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies and JP-S2 Carbon and Energy have been addressed as detailed in Section 4 of this document.
- The design achieves BREEAM Excellent or equivalent under Ene 01 reduction of energy use and carbon. Photovoltaics are required to achieve the required Ene01 credits to achieve BREEAM 'Excellent' (see Energy statement for more details).
- Energy metering will meet Part L 2021 requirements and sub-metering design will follow CIBSE's TM39 sub-metering guidance to allow high energy demands to be identified and addressed by building management.
- The building's energy consumption will be reduced through the specification of energy efficient external lighting.
- The building's energy consumption is reduced through the adoption of passive design solutions and low or zero carbon (LZC) energy sources including air source heat pumps.
- There is good proximity to public transport and provision of adequate cyclist facilities, which reduce congestion and transport emissions.
- The proposals include the introduction of smart building systems such as lighting and environmental controls to incorporate communication networks and intelligent systems into infrastructure and operations. This grants measurable improvements in sustainability, efficiency, comfort and informed

decision making for sustainable asset management and operations. Lighting controls and environmental controls will balance the use and demand of systems, thus ensuring appropriate use of energy within the building. Automatic metering will provide oversight of energy consumption by various end uses to enable real-time energy monitoring.

5.3 Water efficiency

The proposed building will include the following features:

- The proposed development aims to achieve 3 BREEAM credits under the 'Wat 01 – Water Consumption' category, representing a 40% improvement over the baseline performance. The baseline specification aligns with the water efficiency of standard industry components, as guided by the minimum requirements of the Water Supply (Water Fittings) Regulations and Part G of the Building Regulations
- Flow control devices will be installed in the WC areas to minimise water leaks and wastage from sanitary fittings.
- Meters will be provided to identify any consumption anomalies and opportunities to improve water efficiency.
- The landscaping will include native and adapted planting with drip-fed subsurface irrigation incorporating soil moisture sensors thus reducing unnecessary water consumption.

5.4 Climate change adaptation

Climate change adaptation seeks to reduce the risks posed by climate change, and to benefit from any associated opportunities. The following adaptation strategies address the requirements of CS Policy EN 8 Adaptation to Climate Change, CS Policy EN14 Flood Risk, CS Policy EN17 Water Quality and JP-S4 Flood Risk and the Water Environment:

- Curtins has assessed the flood risk (refer to Flood Risk Assessment and Drainage Strategy Report, dated March 2025 for further details) and confirmed the proposed development is in Flood Zone 1, and falls within Manchester City Council's critical drainage areas. Curtins has also confirmed the risk of flooding from groundwater, surface water, fluvial, tidal, reservoir, canal flooding, public sewers is very low.

- Mitigation measures will be implemented as per the recommendations provided in Curtins' report.
- As the proposed impermeable area is not expected to be greater than the existing the development and additional vegetational areas have been proposed, it is unlikely there will be any increase in the surface water flooding to nearby areas.
- SUDs features are considered not to be feasible due to the limited space on the site, the current ground conditions and the existing services within the site boundary. It is anticipated that the proposed system will utilise the existing drainage connections and outfall to the existing combined sewer network.
- Flow restriction will not be suitable as this could pose as an increased flood risk to the system and building. However, pipes will be sufficiently upgraded to accommodate flows and increase due to climate change where possible, and the existing system will be checked to understand if it has adequate capacity.
- The landscape strategy will help to mitigate external heat gain. For example, landscaping at ground level will help to mitigate urban heat island effects by shading building surfaces, deflecting radiation from the sun, and releasing moisture into the atmosphere.
- Overheating of buildings will be controlled through passive design and thermal comfort strategies.

5.5 Ecology and biodiversity

An ecologist, Penny Anderson Associates was appointed at an early stage and has actively collaborated with the rest of the team with the aim of optimising the ecological value of the site post-development. A preliminary ecological appraisal was completed in December 2024 and the recommendations such as planting trees have been embedded within the landscape proposals, achieving a 10% biodiversity net gain to meet the requirements of JP-G8: A Net Enhancement of Biodiversity and Geodiversity. Refer to the landscape strategy proposals from Re-form submitted in support of planning application for more details.

5.6 Material efficiency, waste management and circular economy

The design team is committed to specifying environmentally considerate materials and applying circular economy principles to reduce waste, promote longevity, facilitate adaptability and designing for disassembly. A whole life cycle design approach ensures the consideration of any environmental impacts during product manufacture, procurement, installation, in-use and at end-of-life. Strategies implemented by the team include:

Design

- The structural frame and basement will be retained thus meeting the principles of material efficiency, carbon reduction, waste reduction and circular economy.
- All timber and timber-based products will be procured from legal sustainable sources, using third party certification e.g., FSC /PEFC as verification evidence.

- Materials with recycled content will be specified where feasible.
- The building's environmental life cycle impacts will be reduced through conducting a life cycle assessment and integrating its outcomes in the design decision-making process.
- Materials with low environmental impact will be specified, where possible, and the team will seek to verify this through specifying materials with responsible certifications e.g. ISO 14001, BES 6001, etc.
- The specification of products that have environmental product declarations (EPDs) demonstrating their low environmental impact will be prioritised.
- A fabric-first building design approach has been taken, leading to the specification of materials with a high thermal performance.
- A guide will be created that encourages disassembly and reuse of materials.

Construction

- A resource management plan will be produced that details opportunities for reducing waste and maximising recycling and recovery rates. The appointed contractor will provide adequate space for and segregate construction waste and process it in accordance with the waste hierarchy, with the aim of maximising material recovery and diverting waste from landfill.
- A construction waste management plan will be in place that demonstrates how both construction and demolition waste would be minimised and recycled whenever possible.
- Materials will be sourced in accordance with the project's sustainable procurement plan and procured locally, wherever possible.
- Where feasible materials identified for reuse in the pre-refurbishment audit will be re-used on site.

Operation

- A suitably sized secure waste area will be provided that enables the segregation of different operational recycling and waste streams.
- A user guide will be provided for the occupants that encourages them to embrace circular economy principles with respect to their fitting-out of the spaces, future modification and waste management.

End of life

- The life span of the building will be increased through designing for durability and protection from degradation and specifying appropriate construction products.
- Manufacturer take back schemes and end of life certificates will be requested from the supply chain where feasible to retain the value of materials at the end of the building life cycle and reducing waste to achieve the circular economy objectives for the project.

5.7 Pollution Prevention

The below design strategies will be implemented to mitigate air pollution, noise pollution and light pollution.

- The appointed contractor(s) will be required to implement best practice pollution prevention policies (in accordance with PPG6: Pollution Prevention Guidelines) as part of their construction management plan to mitigate air, noise, dust and water pollution during the demolition and construction stages of the project.
- These will include use of dustsheets, regular sweeping of construction dust, damping down of the site during dry weather, wheel washes and covers to skips.
- ASHPs will be installed to generate heating, cooling, and hot water, which will be powered by electricity, and therefore eliminating flue gasses.
- There is good proximity to public transport and provision of adequate cyclist facilities which helps in reducing transport emissions and improving air quality.
- BREEAM Hea 05 and Pol 5 acoustics credits have been targeted to reduce noise pollution within the building.
- The external lighting strategy is to be designed to reduce light pollution in compliance with Table 2 (and its accompanying notes) of the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011.
- Automatic external lighting will be controlled by photocells and timers to ensure that lights do not operate during daylight hours.
- Where safety or security lighting is provided, this part of the lighting system will comply with the lower levels of lighting, recommended by the Institute of Lighting Professionals (ILP) guidance notes.

5.8 Health and Wellbeing

The development has been designed with the end-user's health and wellbeing in mind, which includes the following strategies:

- Occupants will be provided with the conditions that facilitate good visual comfort by designing out the potential for glare.
- Internal and external lighting systems will be designed to provide appropriate illuminance (lux) levels, and be zoned to allow for local control, thereby providing a more comfortable environment for occupants.
- Indoor air pollution has been considered in the early design stages so that a mitigation strategy can be put in place. An indoor air quality plan will be produced for the project.
- Harmful emissions from construction products will be managed by specifying finishes and products that have been tested in accordance with the appropriate standards for VOC and formaldehyde.

- Thermal modelling will inform the building design to provide a comfortable indoor environment and occupants will be given control over their environment through appropriate temperature control strategies and zoning.
- The design considers and addresses security needs to ensure occupants safety and wellbeing. A security assessment has been undertaken to meet the requirements of the BREEAM Hea 06 Security credit requirements. Recommendations for security control arising from the security needs assessment will be embedded in the design.
- As indicated earlier, BREEAM Hea 05 and Pol 5 acoustics credits have been targeted to reduce noise pollution.
- High quality materials will be used to create a thermally comfortable space for occupants.
- Design will be inclusive for all users and regular reviews will be undertaken as the design develops to ensure suitable access measures are in place.
- Facilities for active commuters, external spaces and amenity areas will support occupants' wellbeing.

5.9 Environmental Design

A BREEAM pre-assessment has been conducted to analyse the potential to achieve an 'Excellent' rating. See section 6 for more details.



6.0 BREEAM

6.1 Background

The Building Research Establishment’s Environmental Assessment Method (BREEAM) is the UK’s first and most widely used holistic sustainability rating scheme for the built environment and has contributed to the emerging focus in the UK on sustainability in building design, construction and use. Through its application and use BREEAM helps clients measure and reduce the environmental impacts of their buildings. The BREEAM assessment will be carried out for the office only.

6.2 Policy Requirements

As per CS Policy DM 1 - Development Management requires a minimum of BREEAM Very Good rating for non-domestic buildings.

6.3 BREEAM Assessment: BREEAM UK New Construction Version 6.1

A BREEAM pre-assessment has been conducted to analyse the potential to achieve a BREEAM ‘Excellent’ rating for the office spaces. BREEAM rating benchmarks for projects assessed using BREEAM UK New Construction Version 6.1 are as follows:

BREEAM Rating	% Score
Outstanding	≥ 85
Excellent	≥ 70
Very Good	≥ 55
Good	≥ 45
Pass	≥ 30
Unclassified	< 30

Table 2 – BREEAM Rating Benchmarks

BREEAM rating benchmarks enable a client and all other stakeholders to compare the performance of a newly constructed building with other BREEAM-rated buildings, and the typical sustainability performance of a stock of new non-domestic buildings in the UK.

6.3.1 BREEAM UK New Construction Version 6.1 Category Weightings

Category weightings are fundamental to any building environmental assessment method providing a means of defining and ranking the relative impact of environmental issues. BREEAM uses an explicit weighting system to determine the overall BREEAM score.

The proposed development will be assessed as a Shell and Core Office Building.

BREEAM Environmental Section	Weighting (Shell and Core)
Management	11%
Health and Wellbeing	8%
Energy	14%
Transport	11.5%
Water	7%
Materials	17.5%
Waste	7%
Land Use and Ecology	15%
Pollution	9%
Total	100%
Innovation (additional)	10%

Table 3– BREEAM Environmental section weightings

6.3.2 BREEAM UK New Construction Version 6.1 Minimum Standards

To ensure performance against fundamental environmental issues is not overlooked in pursuit of a particular rating, BREEAM sets minimum standards of performance in key areas, e.g. energy, water, waste etc. The majority of BREEAM credits can, however, be traded, so non-compliance in one area can be offset through compliance in another to achieve the target BREEAM rating.

The minimum acceptable levels of performance for each rating are summarised below:

BREEAM Issue	Minimum Standards by BREEAM Rating Level				
	Pass	Good	Very Good	Excellent	Outstanding
Man 03 Responsible Construction Practices	None	None	None	One credit (responsible construction management)	Two credits (responsible construction management)
Man 04 Commissioning and Handover	None	None	One credit (commissioning – test schedule and responsibilities)	One credit (commissioning – test schedule and responsibilities)	One credit (commissioning – test schedule and responsibilities)
Man 04 Commissioning and Handover	None	None	Criterion 11 (Building User Guide)	Criterion 11 (Building User Guide)	Criterion 11 (Building User Guide)
Man 05 Aftercare	None	None	None	One credit (commissioning – implementation)	One credit (commissioning – implementation)
Ene 01 Reduction of Energy Use and Carbon Emissions	None	None	None	Four credits (Energy performance or Prediction of operational energy consumption)	Six credits (Energy performance) and Four credits (Prediction of operational energy consumption)
Ene 02 Energy Monitoring	None	None	One credit (First sub-metering credit)	One credit (First sub-metering credit)	One credit (First sub-metering credit)
Wat 01 Water Consumption	None	One credit	One credit	One credit	Two credits
Wat 02 Water Monitoring	None	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Mat 03 Responsible Sourcing of Construction Products	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Wst 01 Construction	None	None	None	None	One credit

Waste Management					
Wst 03 Operational Waste	None	None	None	One credit	One credit

Table 4– Minimum BREEAM standards by rating level

As the Proposed Development is targeting a BREEAM Excellent rating, the requisite minimum standards, highlighted in Table 4 have been targeted in the BREEAM pre-assessment contained within Appendix A of this document.

6.3.3 Predicted performance

A BREEAM pre-assessment workshop for the office spaces was held with the client and design team in December 2024, and since then, regular meetings have been carried out to discuss early-stage actions and highlight further sustainable design opportunities. The current target score is **79.91% (Excellent)**. A copy of the current BREEAM assessment tracker is detailed in **Appendix A**.



7.0 Conclusion

This statement has been prepared in support of the planning application for the redevelopment of CIS Tower in Manchester.

All relevant sustainability and energy policy requirements from Manchester Core Strategy (2012-2027) and Manchester City Council's Places for Everyone Plan 2022 to 2039 have been addressed within the redevelopment proposals.

Section 4 summarises the Energy and Carbon strategies incorporated within the design proposals including Whole Life Carbon emissions to achieve compliance with the energy and carbon policies and targets detailed in Building Regulations Part L, Policy CS Policy EN 4 - Reducing CO2 Emissions by Enabling Low and Zero Carbon Development, CS Policy EN 6 - Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies and replacement PfE Policy JP-S2 Carbon and Energy.

Section 5 summarises proposed design measures to maximise sustainability to achieve compliance with Policy EN 8 Adaptation to Climate Change, CS Policy EN14 Flood Risk, CS Policy EN17 Water Quality and replacement PfE Policies JP -S1 Sustainable Development, JP-S2 Carbon and Energy, JP-S4 Flood Risk and the Water Environment, Policy JP-S6: Resource Efficiency and Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity. The proposals demonstrate how it will achieve the requirements with respect to environmental design, water management and weather resilience, waste management, construction management and biodiversity.

The current BREEAM pre-assessment (office) targeted score is 79.91% (Excellent). A copy of the BREEAM assessment tracker is provided in Appendix A.

APPENDIX A: BREEAM Pre-Assessment



CIS Tower (Office) Manchester

BREEAM Pre-assessment Summary Report

Pre-assessment

10 Apr 2025

Tuffin Ferraby Taylor (TFT) Ltd

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Introduction

This report is intended as a summary of the BREEAM pre-assessment review for the following project:

Project Name	CIS Tower (Office) Manchester
Version	BREEAM UK NC V6.1
Assessment stage	Pre Assessment
Lead Consultant	Supriya Kamath
Target Rating	(%)
Downloaded By	Supriya Kamath
Download Date	10/04/25
Download Time	15:08:12 (BST)

Scoring scenarios

It should be noted that the pre-assessment scores have been based on the following scoring scenarios;

- Current - The number currently achieved.
- Scenario 1 - Current, plus credits which can be easily gained.
- Scenario 2 - Scenario 1, plus credits which can be won but not so easily.

On this basis, the following scores are considered achievable under each scenario;

Scenario	Score	BREEAM Rating
Current	79.91%	Excellent
Scenario 1	0%	Unclassified
Scenario 2	15.88%	Unclassified

Minimum Standards

In addition performance against the minimum standards (required for the specified target rating) under each scenario is summarised below;

Issue	Current	Scenario 1	Scenario 2
Man 03 - Responsible construction practices	✓	✓	✓
Man 04 - Commissioning and handover	✓	✓	✓
Man 04 - Commissioning and handover	✓	✓	✓
Ene 01 - Reduction of energy use and carbon emissions	✓	✓	✓
Ene 02 - Energy monitoring	✓	✓	✓
Wat 01 - Water consumption	✓	✓	✓
Wat 02 - Water monitoring	✓	✓	✓
Mat 03 - Responsible sourcing of construction products	✓	✓	✓
Wst 01 - Construction waste management	✓	✓	✓
Wst 03 - Operational waste	✓	✓	✓

If the required minimum standards are not met then the target rating will not be achieved regardless of overall score.

The following is a list of all credits available for this project, along with the following:

Current	The number currently achieved.
Scenario 1	Current, plus credits which can be easily gained.
Scenario 2	Scenario 1, plus credits which can be won but not so easily.

Credit Progress Log

Management						
Man 01 - Project brief and design						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Project delivery planning	1	1	0	0	Criteria: Requirement 1 Prior to completion of the Concept Design, the project delivery stakeholders (see Definitions) meet to identify and define for each key phase of project delivery: 1. Roles 2. Responsibilities 3. Contributions. Requirement 2 Consider each one of the following items when defining roles, responsibilities and contributions for each key phase of the project: 1. End user requirements 2. Aims of the design and design strategy 3. Particular installation and construction requirements or limitations 4. Occupiers' budget and technical expertise in maintaining any proposed systems 5. Maintainability and adaptability of the proposals 6. Operational energy (see Assessment scope) 7. Requirements for the production of project and end user documentation 8. Requirements for commissioning, training and aftercare support. Where the building occupants are not known, the list of considerations above still applies. The appropriate project delivery stakeholder considers each item, based on likely scenarios of building occupancy. Requirement 3 The project team demonstrates how the project delivery stakeholders' contributions and the consultation process outcomes influence the following: 1. Initial Project Brief 2. Project Execution Plan (see Definitions) 3. Communication Strategy (see Definitions) 4. Concept Design. Responsibility: PM (Collier's) Architect (Simpson Haugh) Sustainability Consultant (TFT) Evidence required at design stage: 1. Completed and signed attached proforma 2. List in a responsibility matrix (or equivalent) who will be responsible for each role and specific responsibilities at each assessment stage. 3. Provide minutes of the key initial meeting to demonstrate that responsibilities were allocated and discussed. 4. Early stage Construction programme 5. Building contract / specification (if any?) 6. Project implementation plan 7. Meeting minutes 8. Client brief 9. Sustainability brief 10. DAS 11. Sustainability and Energy Statement 12. BREEAM pre-assessment Credit targeted
2	Stakeholder consultation (interested parties)	1	1	0	0	Criteria: 4. Prior to completion of the Concept Design, the design team consult with all interested parties (see Definitions on page 51) on matters that cover the minimum consultation content (see Methodology on the next page). 5. Demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design. 6. Prior to completion of the detailed design (RIBA Stage 4, Technical Design or equivalent), all interested parties (see Definitions on page 51) give and receive consultation feedback. Responsibility: PM (Collier's) Evidence required at design stage: List all interested parties consulted. Records of consultation, as per the minimum consultation content Documentary evidence or summary report on how the interested party stakeholder contributions and consultation outcomes influenced or changed the initial project brief and concept design Credit targeted
3	BREEAM AP (concept design)	1	1	0	0	Criteria: Requirement 8 Prerequisite for BREEAM Advisory Professional credits (Concept and Developed Design): The project team, including the client, formally agree strategic performance targets (see Definitions) early in the design process (with the support of the BREEAM AP where appointed). Requirement 9 Involve a BREEAM AP in the project at an appropriate time and level to: 1. Work with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the projects overall performance against BREEAM, from their appointment and throughout Concept Design 2. Monitor progress against the performance targets (see Definitions) agreed under criterion 8 throughout all stages after their appointment where decisions critically impact BREEAM performance 3. Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8 4. Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets 5. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team. Responsibility: Client BREEAM AP/Sustainability Consultant (TFT- Supriya Kamath) Evidence required at design stage: Client Brief /letter /email confirming BREEAM Excellent rating BREEAM AP letter BREEAM AP report at concept stage The BREEAM AP appointment letter and verification of their AP status. Relevant section or clauses of the building specification or contract or other formal documentation to confirm BREEAM performance target. Project programme or evidence indicating the dates for the key project design stages. Meeting minutes, communication records, formal notes of conversations or other statements reporting on discussions related to performance targets and maximising performance, to demonstrate ongoing involvement and AP attendance at key project meetings. BREEAM AP progress reports (for each work stage: Concept Design, Developed Design and Technical Design). Credit targeted

4	BREEAM AP (developed design)	1	1	0	0	Criteria: Requirement 10 Criteria 8 and 9 are achieved. Requirement 11 Involve the BREEAM AP in the project at an appropriate time and level to: 1. Work with the project team, including the client, to consider the links between BREEAM issues and to assist them in maximising the projects overall performance against BREEAM throughout Developed Design 2. Monitor progress against the performance targets agreed under criterion 8 throughout all stages where decisions critically impact the specification and tendering process and the BREEAM performance 3. Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8 4. Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 5. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team. Responsibility: BREEAM AP/Sustainability Consultant Client/PM (Colliers) Evidence required at design stage: BREEAM AP reports at design stage The BREEAM AP appointment letter and verification of their AP status. Relevant section or clauses of the building specification or contract or other formal documentation to confirm BREEAM performance target. Project programme or evidence indicating the dates for the key project design stages. Meeting minutes, communication records, formal notes of conversations or other statements reporting on discussions related to performance targets and maximising performance, to demonstrate ongoing involvement and AP attendance at key project meetings. BREEAM AP progress reports (for each work stage: Concept Design, Developed Design and Technical Design). Credit targeted
Man 02 - Life cycle cost and service planning						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Elemental LCC	2	2	0	0	Criteria: Requirement 1 A competent person (see Definitions) carries out an outline, entire asset LCC plan at Process Stage 2 (equivalent to Concept Design - RIBA Stage 2) together with any design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865: 2008. Requirement 2 The elemental LCC plan: 1. Provides an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years); 2. Includes service life, maintenance and operation cost estimates. The study period should ideally be agreed by the client, in line with the design life expectancy of the building. However, where the life expectancy of the building is not yet formally agreed (due to being at very early design stages), the default design life of 60 years should be used for modelling purposes (in line with the UK default). Requirement 3 Demonstrate, using appropriate examples provided by the design team, how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. Responsibility: Carbon/LCC consultant (TFT) Cost consultant (G&T) Design team (all) Evidence required at design stage: Elemental LCC report Confirmation from the design team as to how the LCC has influenced design/specification and drawings/specifications to support this. Two credits targeted
2	Component level LCC options appraisal	1	1	0	0	Criteria: Requirement 4 A competent person develops a component level LCC options appraisal by the end of Process Stage 4 (equivalent to Technical Design RIBA Stage 4) in line with PD 156865: 2008. The component level LCC includes (where present): 1. Envelope, e.g. cladding, windows, or roofing 2. Services, e.g. heat source cooling source, or controls 3. Finishes, e.g. walls, floors or ceilings 4. External spaces, e.g. alternative hard landscaping, boundary protection. The Component level LCC option appraisal should review all of the above component types (where present). However, you do not need to consider every single example cited under each component; only a selection of those most likely to draw valued comparisons. This is to ensure that a wide range of options are considered and help focus the analysis on components which would benefit the most from appraisal. Requirement 5: Demonstrate, using appropriate examples provided by the design team, how the component level LCC options appraisal has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. Responsibility: Carbon/LCC Consultant Cost consultant (G&T) Design team (all) Evidence required at design stage: Component level LCC options appraisal report Confirmation from the design team as to how the LCC has influenced design/specification and drawings/specifications to support this Credit targeted
3	Capital cost reporting	1	1	0	0	Criteria: Requirement 6 Report the capital cost for the building in pounds per square metre of gross internal floor area (£/m) as part of the submission to BRE. See also Methodology and Additional information. Responsibilities: Client/PM (Colliers) Evidence required at design stage: Signed predicted capital cost letter by Client Credit targeted
Man 03 - Responsible construction practices						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req 1	Prerequisite - Legally harvested and traded timber		✓	✓	✓	Criteria: Requirement 1 All timber and timber-based products used during the construction process of the project are 'legally harvested and traded timber' (see Definitions). For other materials there are no prerequisite requirements at this stage. Responsibility: Contractor Evidence required at design stage: BREEAM Contractor tender prelims/Relevant section or clauses of the building specification or contract. OR A signed and dated letter of commitment to meet the relevant criteria. Pre-requisite criteria must be met

1	Environmental management	1	1	0	0	Criteria: Requirement 3 All parties who at any stage manage the construction site (e.g. the principal contractor, the demolition contractor) operate an EMS covering their main operations. The EMS must: 1. Be third party certified, to ISO 14001: 2015, EMAS (EU Eco-Management and Audit Scheme) or equivalent standard; OR 2. In compliance with BS 8555: 2016 have: 1. Appropriate structure 2. Reached implementation stage phase four implementation and operation of the environmental management system 3. Completed defined phase audits one to four. Requirement 4 All parties who at any point manage the construction site (e.g. the principal contractor, the demolition contractor) implement best practice pollution prevention policies and procedures on-site in accordance with Working at construction and demolition sites: PPG6, Pollution Prevention Guidelines. Responsibility: Contractor Evidence required at design stage: BREEAM Contractor Tender prelims/Relevant section or clauses of the building specification or contract. OR A signed and dated letter of commitment to meet the relevant criteria. OR A copy of the principal contractor's EMS/EMAS certificate, where contractor appointed. Relevant section or clauses of the building specification or contract. OR A signed and dated letter of commitment to meet the relevant criteria. OR A signed copy of PPG6 and supporting evidence confirming the proposed measures and procedures against each section. Credit targeted
2	BREEAM AP (site)	1	1	0	0	Criteria: Requirement 5 The client and the contractor formally agree performance targets. Requirement 6 Involve a BREEAM AP in the project at an appropriate time and level to: 1. Work with the project team, including the client, to consider the links between BREEAM issues and assist them in achieving and if possible going beyond the design intent, to maximise the projects performance against the agreed performance targets throughout the Construction, Handover and Close Out stages 2. Monitor construction progress against the performance targets agreed under criterion 5 throughout all stages where decisions critically impact BREEAM performance 3. Proactively identify risks and opportunities related to the procurement and construction process and the achievement of the targets agreed under criterion 5 4. Provide feedback to the constructors and the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets 5. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team and the provision to the assessor. Responsibility: BREEAM AP/Sustainability Consultant Evidence required at design stage: Appointment letter from Client confirming appoint of BREEAM AP at construction stage Relevant section or clauses of the building specification, contract documents or formal agreement stating the required BREEAM performance rating Relevant section or clauses of the building specification or contract. OR A signed and dated letter of commitment to meet the relevant criteria Credit targeted
3	Responsible construction management	2	2	0	0	Criteria: Requirement 7 Achieve items listed as required for one credit in Table 4.1 Responsible construction management items. Requirement 8 Achieve criterion 7. Requirement 9 Achieve six additional items in Table 4.1 Responsible construction management items. Responsibility: Contractor Evidence required at design stage: BREEAM Contractor tender prelims/Relevant section or clauses of the building specification or contract. OR A signed and dated letter of commitment to meet the relevant criteria. Note: It must be clear which responsible construction management items within Table 4.1 are being targeted if CCS route is not pursued. Notes : CCS scoring below One credit requires a minimum of 9 points per section and 27 overall. Two credits require a minimum of 11 points per section and 35 overall. Exemplary credit requires a minimum of 13 points per section and 39 overall. Two credits targeted plus exemplary

4	Monitoring of construction site impacts	2	2	0	0	Criteria: Requirement 10 Assign responsibility to an individual for monitoring, recording and reporting energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing) throughout the build programme. To ensure the robust collection of information, this individual must have the appropriate authority and responsibility to request and access the data required. Where appointed, the BREEAM AP could perform this role. Requirement 11 First monitoring credit - Utility consumption Energy consumption Achieve criterion 10. Requirement 12 Set targets for the site energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation. Requirement 13 Monitor and record data for the energy consumption described in criterion 12. Requirement 14 Report the total carbon dioxide emissions (total kgCO₂/project value) from the construction process via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking). Requirement 15 Water consumption Achieve criterion 10. Requirement 16 Set targets for the potable water consumption (m) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation. Requirement 17 Monitor and record data for the potable water consumption described in criterion 16. Requirement 18 Use the collated data to report the total net water consumption (m), i.e. consumption minus any recycled water use from the construction process via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking). Requirement 19 Second monitoring credit - transportation of construction materials and waste Achieve criterion 10. Requirement 20 Set targets for transportation movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum cover: 1. Transportation of materials from the point of supply to the building site, including any transport, intermediate storage and point of supply (see Definitions). Monitor as a minimum: 1. Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)). 2. Ground works and landscaping materials. 2. Transportation of construction waste from the construction gate to waste disposal processing or recovery centre gate. This monitoring must cover the construction waste groups outlined in the project's resource management plan. Requirement 21 Monitor and record data for the transportation movements as described in criterion 20. Requirement 22 Using the collated data, report separately for materials and waste, the total transport-related carbon dioxide emissions (kgCO₂eq), plus total distance travelled (km) via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking). Responsibility Contractor Evidence required at design stage: BREEAM Contractor tender prelims confirmation of the targets that have been set for the project. AND Relevant section or clauses of the building specification or contract. OR A signed and dated letter of commitment to meet the relevant criteria Two credits targeted
e1	Responsible construction management	1	1	0	0	Exemplary CCS credit targeted. See responsible construction management criteria and evidence requirements above
Man 04 - Commissioning and handover						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite (Very Good to Outstanding)		✓	✓	✓	Criteria: Prior to handover, develop two building user guides (see Methodology) for the following users: 1. A non-technical user guide for distribution to the building occupiers 2. A technical user guide for the premises facilities managers. A draft copy is developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. Responsibility: Contractor MEP Evidence required at design stage: BREEAM Contractor tender prelims Pre-requisite requirement will be met

1	Commissioning - testing schedule and responsibilities	1	1	0	0	Criteria: Requirement 1 Prepare a schedule of commissioning and testing. The schedule identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. Requirement 2 The schedule identifies the appropriate standards for all commissioning activities to be conducted, where applicable, in accordance with: 1. Current Building Regulations 2. BSRIA guidelines 3. CIBSE guidelines 4. Other appropriate standards (see Methodology) Exclude from the assessment any process or manufacture-related equipment specified as part of the project. However, include such equipment in cases where they form an integral part of the building HVAC services, such as some heat recovery systems. Requirement 3 Where a building management system (BMS) is specified: 1. Carry out commissioning of air and water systems when all control devices are installed, wired and functional 2. Include physical measurements of room temperatures, off-coil temperatures and other key parameters, as appropriate, in commissioning results 3. The BMS or controls installation should be running in auto with satisfactory internal conditions prior to handover 4. All BMS schematics and graphics (if BMS is present) are fully installed and functional to user interface prior to handover 5. Fully train the occupier or facilities team in the operation of the system. Requirement 4 Appoint an appropriate project team member to monitor and programme pre-commissioning, commissioning and testing. Where necessary include re-commissioning activities on behalf of the client. Requirement 5 The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and the main programme of works. Allow the required time to complete all commissioning and testing activities prior to handover. Responsibility: MEP (CWC) Contractor Evidence required at design stage: MEP specifications BREEAM Contractor tender prelims/Relevant section or clauses of the building specification or contract. OR A letter of commitment from the client or developer Commissioning schedule where available One credit targeted
2	Commissioning - design and preparation	1	1	0	0	Criteria: Requirement 6 Achieve criteria 1-5. Requirement 7 During the design stage, the client or the principal contractor appoints an appropriate project team member (see criterion 4), provided they are not involved in the general installation works for the building services systems, with responsibility for: 1. Undertaking design reviews and giving advice on suitability for ease of commissioning 2. Providing commissioning management input to construction programming and during installation stages 3. Management of commissioning, performance testing and handover or post-handover stages. For buildings with complex building services and systems, this role needs to be carried out by a specialist commissioning manager (see Definitions). Responsibility: MEP (CWC) Client/Contractor Evidence required at design stage Appointment letter of specialist commissioning manager by Client/contractor Commissioning programme MEP specifications BREEAM Contractor tender prelims Letter of appointment for commissioning manager(s). Evidence of design reviews (where available). Where applicable, evidence that the specialist commissioning manager meets the definition for this role. One credit targeted
3	Testing and inspecting building fabric	1	1	0	0	Criteria: Requirement 8 Achieve criteria 1-5. Requirement 9 Complete 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 air tightness testing and a thermographic survey). A suitably qualified professional (see Definitions) undertakes the survey and testing in accordance with the appropriate standard. Requirement 10 Rectify any defects identified during post-construction testing and inspection prior to building handover and close out. Any remedial work meets the required performance characteristics for the building or element as defined at the design stage (see Methodology). Responsibility: Contractor Evidence required at design stage: BREEAM Contractor tender prelims /Relevant section or clauses of the building specification or contract. OR A letter of commitment from the client or developer Confirmation of appointment to Thermography survey specialist One credit targeted
4	Handover	1	1	0	0	Criteria: Requirement 11 Prior to handover, develop two building user guides (see Methodology) for the following users: 1. A non-technical user guide for distribution to the building occupiers 2. A technical user guide for the premises facilities managers. A draft copy is developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. Requirement 12 Prepare two training schedules timed appropriately around handover and proposed occupation plans for the following users: 1. A non-technical training schedule for the building occupiers 2. A technical training schedule for the premises facilities managers. Responsibility: Contractor Evidence required at design stage : BREEAM Contractor tender prelims /Relevant section or clauses of the building specification or contract. OR A letter of commitment from the client or developer which is specific for the project being assessed. OR Draft building or home user guides and training schedule, where available. One credit targeted
		18	18	0	0	Standard Management Credit Total
		1	1	0	0	Exemplary Management Credit Total

		11.98	11.98	0	0	% Management Total (Standard + Exemplary)
Health & Wellbeing						
Hea 01 - Visual comfort						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
2	Daylighting (building type dependent)	2	0	0	0	Criteria: Up to two credits – Daylighting (building type dependent) 4. Daylighting criteria have been met using either of the following options: . 4.a The relevant building areas meet good practice daylight factors and other criteria as outlined in Table 5.1 and Table 5.2 on page 89 of the technical manual OR 4.b The relevant building areas meet good practice average and minimum point daylight illuminance criteria as outlined in Table 5.3 on page 89 of the technical manual Responsibility: Daylight specialist Evidence required at design stage: Design drawings and daylight calculations. Credits not targeted
3	View out	1	0	0	0	Criteria: View out 5 95% of the floor area in 95% of spaces for each relevant building area provides an adequate view out Responsibility: Architect (Simpson Haugh) Evidence required at design stage: Design drawings, windows schedule, calculations. Credit not targeted (due to deep floor plans)
4	Internal and external lighting levels, zoning and control	1	1	0	0	Criteria: (External lighting in scope. Internal lighting not in scope) Requirement 9 External lighting All external lighting located within the construction zone is specified in accordance with BS 5489-1:2013 Code for the practice for the design of road lighting. Lighting of roads and public amenity areas⁽¹⁾ and BS EN 12464-2:2014⁽²⁾ Light and lighting - Lighting of work places - Part 2: Outdoor work places. External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. Requirement 10 Where no external light fittings are specified (either separate from or mounted on the external building faade or roof), the criteria relating to external lighting do not apply and the credit can be awarded on the basis of compliance with criteria 78.c above. If no internal lighting is specified, the credit cannot be awarded. Responsibility: MEP Engineer (CWC) Contractor Evidence required at design stage Electrical Spec covering BREEAM requirements A letter of formal confirmation of compliance from the relevant design team member Luminaire schedule and lighting schedule Design drawings or room data sheets or schedules. OR Relevant section or clauses of the building specification or contract. Credit targeted
e1	Daylighting (building type dependent)	1	0	0	0	Credit not targeted
Hea 02 - Indoor air quality						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite - Indoor air quality (IAQ) plan		✓	✓	✓	Criteria: Requirement 1 A site-specific indoor air quality plan has been produced and implemented in accordance with the guidance in Guidance Note GN06. 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. Removal of contaminant sources 2. Dilution and control of contaminant sources 3. Procedures for pre-occupancy flush out 4. Third party testing and analysis 5. Maintaining good indoor air quality in-use. 6. Any relevant local authority plans or policies (for example, Air Quality Management Areas or Local Air Quality Action Plans) Responsibility: MEP (CWC) Contractor Evidence required at design stage A copy of the Indoor Air Quality Plan BREEAM contractor tender prelims Pre-requisite will be met
1	Ventilation	1	0	0	1	Criteria: (Shell and Core buildings only). 2. The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building as follows: 2.a Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation Responsibility: MEP engineer (CWC) Evidence required at design stage: Design drawings, relevant sections of the building specification or contract clauses. Credit targeted as potential credit. MEP engineer to review and confirm if criteria for 2a can be met ?
Hea 04 - Thermal comfort						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Thermal modelling	1	1	0	0	Criteria: Requirement 1 Thermal modelling has been carried out using software in accordance with CIBSE AM11™ Building Energy and Performance Modelling. Requirement 2 The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11). Requirement 3 The modelling demonstrates that: 1. 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 designTM, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement or level for the building type); or the thermal environment in occupied spaces meet the Category B requirements for PPD, PMV and local discomfort set out in Table A.1 of Annex A of ISO 7730:2005. 2. For naturally ventilated buildings: 1. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5. Or other appropriate industry standard (where this sets a higher or more appropriate requirement or level for the building type). 2. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in either of the following standards as appropriate; CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildingsTM or CIBSE TM59: Design methodology for the assessment of overheating risk in homesTM. Requirement 4 For air-conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool. Responsibility: Energy specialist (CWC) Evidence required at design stage: Compliant thermal modelling report, measurements and evaluation results with confirmation that these are within the required limits. Confirmation that the modelling software is BREEAM compliant. Where applicable, PMV/PPD data from the design team. Credit targeted
2	Design for future thermal comfort	1	1	0	0	Criteria: Requirement 5 Criteria 1-4 are achieved. Requirement 6 The thermal modelling demonstrates that the relevant requirements set out in criterion 3 are achieved for a projected climate change environment (see Definitions). Requirement 7 Where criterion 6 above is not met, the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements under criterion 6. Requirement 8 For air-conditioned buildings, the PMV and PPD indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool. Responsibility: Energy specialist (CWC) Evidence required at design stage: Thermal comfort report (Design for future thermal comfort) Where the requirements are not met for the projected climate change environment provide evidence such as drawings or specifications to demonstrate how the building has been adapted or designed to be easily adapted using passive design solutions in order to comply. Credit targeted
Hea 05 - Acoustic performance						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Acoustic performance	1	1	0	0	Criteria (Shell and Core only) 1. The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant table below. These tables define criteria for the acoustic principles of: 1.b Indoor ambient noise level or 2. A suitably qualified acoustician (SQA) is appointed to define a bespoke set of performance requirements for all function areas in the building. The bespoke performance requirements use the three acoustic principles defined in criterion Hea 05 Acoustic performance - Criterion 1 above, setting out the performance requirements for each and the testing regime required. Responsibility: Client/PM (Collier's) Contractor Acoustician (Hann Tucker Associates-TBC) Architect (Simpson Haugh) MEP engineer (CWC) Evidence required at design stage: The relevant section of the building specification, clauses of the contract or a letter of commitment to meet the relevant acoustic performance standards, carry out all pre-completion testing using a compliant test body and complete remedial work where necessary. Where available, a report from a suitably qualified acoustician (SQA) may be used to confirm required performance standards will be achieved. Confirmation from the design team that they have read the report and the recommendations of the acoustic report are included within the design Bespoke- Professional report or study and calculations from the acoustician confirming the bespoke acoustic performance standards and testing regime. Evidence to verify that the acoustician meets the definition of a suitably qualified acoustician. The relevant section of the building specification, clauses of the contract or a letter of commitment to carry out all required pre-completion testing using a compliant test body and remedial works where necessary. One credit targeted
Hea 06 - Security						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Security of site and building	1	1	0	0	Criteria: Requirement 1 A Suitably Qualified Security Specialist (SQSS) conducts an evidence based Security needs Assessment (SNA) during or prior to Concept Design. 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. Requirement 2 The SQSS develops a set of security controls and recommendations for incorporation in to the proposals. Those controls shall directly relate to the threats and assets identified in the preceding SNA. Requirement 3 The recommendations shall be incorporated into proposals and implemented in the as-built development. Any deviation from those recommendations shall be justified and agreed with the SQSS. Responsibility: Security Consultant (TBC) PM (Colliers) Architect (Simpson Haugh) Engineer (CWC) Evidence required at design stage: Security needs assessment (SNA) /SABRE report carried out at RIBA Stage 2 Qualifications of suitably qualified security specialist Design drawings and specifications to confirm recommendations from SNA report are included Contractor tender preims Copy of a compliant security needs assessment and recommendations from a SQSS. Evidence to demonstrate the SQSS meets the definition of a suitably qualified security specialist. Design drawings, relevant section of the building specification, contract clauses or letter of commitment to confirm the recommendations from the SQSS will be implemented within the final design. Where SABRE is pursued, copy of the design stage certificate. Action : Architect/PM to confirm engagement with security consultant at RIBA Stage 2. One credit targeted
e1	Security of site and building	1	0	0	1	Exemplary level criteria To achieve an exemplary performance credit: 4. A compliant risk based security rating scheme such as SABRE has been used. The performance against the scheme has been confirmed by independent assessment and verification. Evidence required at design stage. Where SABRE is pursued, copy of the design stage certificate. Credit targeted as potential
Hea 07 - Safe and healthy surroundings						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Safe access	1	1	0	0	Criteria. Where external site areas form part of the assessed development the following apply: 1. Dedicated and safe cycle paths are provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable. 2. Dedicated and safe footpaths are provided on and around the site providing suitable links for the following: 2.a The site entrance to the building entrance 2.b Car parks (where present) to the building entrance 2.c The building to outdoor space 2.d Connecting to off-site paths where applicable. 3. Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths. Where vehicle delivery access and drop-off areas form part of the assessed development, the following apply: 4. Delivery areas are not accessed through general parking areas and do not cross or share the following: 4.a pedestrian and cyclist paths 4.b outside amenity areas accessible to building users and general public. 5. There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. 6. Parking and turning areas are designed for simple manoeuvring according to the type of delivery vehicle likely to access the site, thus avoiding the need for repeated shunting Responsibility. Architect (Simpson Haugh) Transport Consultant (Curtins) Evidence required at design stage. Design drawings (including a scaled site layout plan) highlighting safe pedestrian and cycle routes and other compliant features and dimensions. Where required, relevant sections of the building specification. Notes: GA's to be reviewed to check if this credit can be achieved. Likely to be achieved Credit targeted
2	Outside space	1	1	0	0	Criteria. 7. There is an outside space providing building users with an external amenity area. The space 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 predominantly intended for building staff, but can be used by other building users where relevant and beneficial to the building users. The outside space must: - be an outdoor landscaped area, for example a garden, balcony or terrace; the majority of the space should be open to the sky - have appropriate seating areas and be non-smoking, - be 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.). Responsibility Landscape Architect (Reform) Evidence required at design stage. Design drawings (including a scaled site layout plan) showing provision of an adequate external space. Where required, relevant sections of the building specification or letter of commitment confirming the outside space will be in line with the Definition - Outside space. Notes: Terraced gardens and groundfloor space to be reviewed. Likely to be achieved as discussed in the BREEAM meeting Jan 2025 Credit targeted
		11	7	0	1	Standard Health & Wellbeing Credit Total
		2	0	0	1	Exemplary Health & Wellbeing Credit Total
		10.03	5.11	0	1.73	% Health & Wellbeing Total (Standard + Exemplary)
Energy						
Ene 01 - Reduction of energy use and carbon emissions						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Energy performance	9	4	0	5	Criteria Calculate an Energy Performance Ratio for New Constructions (EPR NC). Compare the EPR NC achieved with the benchmarks in Table 6.1 and award the corresponding number of BREEAM credits. Responsibility: Energy specialist (CWC) Evidence required at design stage Inp files and as designed BRUKL reports Confirmation of the expertise and experience of the individual carrying out the modelling that they are accredited energy assessors Four credits targeted. Five credits targeted as potential.
2	Prediction of operational energy consumption	4	4	0	0	Criteria: Requirement 2 Involve relevant members of the design team in an energy design workshop focusing on operational energy performance (see Methodology). Requirement 3 Undertake additional energy modelling during the design and post-construction stage to generate predicted operational energy consumption figures (see Prediction of operational energy consumption). Requirement 4 Report predicted energy consumption targets by end use, design assumptions and input data (with justifications). Requirement 5 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. Responsibility: MEP engineer (CWC) Evidence required at design stage: Workshop minutes Agreed outcomes Operational Energy Report/ Model Predicted energy consumption values, design assumptions, input data and risk assessments report. Confirmation of suitably qualified energy modeller's qualifications and experience. Credit targeted.
e1	Beyond zero net regulated carbon - - Exemplary level criteria	3	0	0	0	Up to three exemplary credits - Beyond zero net regulated carbon 10. The building achieves an EPR NC ≤ 0.9 and zero net regulated CO₂-eq emissions (see Definitions on page 155). 11. Energy generation from on-site and near-site LZC sources is sufficient to offset 100% of carbon emissions from regulated energy use plus a percentage of emissions from unregulated energy use 12. Award the exemplary credits based on the percentage of emissions from unregulated energy use that are offset by energy generated from on-site and near-site LZC sources (see Table 6.2 below and Definitions on page 155). 13 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 (see Exemplary performance credits for 'Beyond zero net regulated carbon' below and Definitions on page 155). Credit not targeted
e2	Post-occupancy evaluation of operational energy consumption - Exemplary level criteria	2	2	0	0	Criteria Two exemplary credits - Post-occupancy evaluation of operational energy consumption 14 Achieve 'Four credits - Prediction of operational energy consumption' (criteria 2 to 9). 15 Achieve maximum available credits in Ene 02 Energy monitoring on page 159. In addition, preschools, primary schools, law courts, prisons and multi-residential buildings must meet the requirements of the second credit for sub-metering of high energy load and tenancy areas. 16 The client or building occupier commits funds to pay for the post-occupancy evaluation. 16.a Where performance targets are set in relation to external rating schemes (e.g. a DEC, UK NABERS energy for offices, or BREEAM In-Use rating), confirm that an assessor will be appointed to report on the actual energy consumption compared with the target set in criterion 8 or 9, OR 16.b Where the energy performance target is project specific, the funds committed to pay for the post occupancy evaluation explicitly include provision for third party verification of the operational energy performance. 17 The energy model (criterion 4 on the previous page) is saved so that it can be rerun post occupancy. This can be achieved by either: 17.a Submitting the model to BRE, OR 17.b Reporting the building owner, or named third party, who has access to the model and can grant permission to use or share it. Evidence. Evidence of commitment to proceed to the post occupancy evaluation and report the building energy consumption in use. Responsibility Client /PM (Collier's) Two credits targeted
Ene 02 - Energy monitoring						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Sub-metering of end use categories	1	1	0	0	Criteria: Requirement 1 Install energy metering systems so that at least 90% of the estimated annual energy consumption of each fuel is assigned to the end-use categories (see Methodology). Requirement 2 Meter the energy consumption in buildings according to the total useful floor area: 1. If the area is greater than 1,000m, by end-use category with an appropriate energy monitoring and management system 2. If the area is less than 1,000m, use either: 1. an energy monitoring and management system or 2. separate accessible energy sub-meters with pulsed or other open protocol communication outputs, for future connection to an energy monitoring and management system (see Definitions). Requirement 3 Building users can identify the energy consuming end uses, for example through labelling or data outputs. Responsibility: MEP engineer Contractor Evidence required at design stage: The metering schedule or metering strategy document. Floor plans showing functional or tenanted areas, where applicable Specification for the energy monitoring system and/or meters. The metering schedule or metering strategy document MEP specification Schematics showing energy sub metering locations Letter of compliance signed by the MEP engineer BREEAM Contractor tender prelims One credit targeted

2	Sub-metering of high energy load and tenancy areas	1	1	0	0	Criteria: Requirement 4 Monitor a significant majority of the energy supply with: 1. An accessible energy monitoring and management system for: 1. tenanted areas or 2. relevant function areas or departments in single occupancy buildings. OR 2. Separate accessible energy sub-meters with pulsed or other open protocol communication outputs for future connection to an energy monitoring and management system for: 1. tenanted areas or 2. relevant function areas or departments in single occupancy buildings. Requirement 5 Sub-meter per floor plate in large single occupancy or single tenancy buildings with one homogeneous function, for example hotel bedrooms, offices. Responsibility: MEP engineer Contractor Evidence required at design stage: The metering schedule or metering strategy document. Floor plans showing functional or tenanted areas, where applicable Specification for the energy monitoring system and/or meters. The metering schedule or metering strategy document MEP specification Schematics showing energy sub metering locations Letter of compliance signed by the MEP engineer BREEAM Contractor tender prelims One credit targeted
Ene 03 - External Lighting						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	External lighting	1	1	0	0	Criteria: Requirement 1 No external lighting (which includes lighting on the building, at entrances and signs). Requirement 2 External light fittings within the construction zone with: 1. Average initial luminous efficacy of no less than 70 luminaire lumens per circuit Watt 2. Automatic control to prevent operation during daylight hours 3. Presence detection in areas of intermittent pedestrian traffic. Responsibility: Electrical engineer Evidence required at design stage: Electrical specification Luminaire schedule Lighting drawings Letter of compliance signed by engineer Contractor tender prelims One credit targeted
Ene 04 - Low carbon design						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Passive design	2	1	0	0	One credit - Passive design analysis 1. Achieve the first credit: Hea 04 Thermal comfort: One credit - Thermal modelling to demonstrate that the building design delivers appropriate thermal comfort levels in occupied spaces. 2. The project team analyses the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures (see Passive design analysis). 3. 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. 4. Quantify the reduced total energy demand and carbon dioxide (CO₂-eq) emissions resulting from the passive design measures. Evidence required at design stage: Passive design analysis report Thermal comfort report This credits is required to achieve the four credits targeted under Ene 01 - Prediction of operational energy consumption Credit targeted Free cooling credit not targeted
2	Low and zero carbon technologies	1	1	0	0	Criteria: Requirement 9 An energy specialist (see Definitions) completes a feasibility study (see Low and zero carbon feasibility study) by the end of the Concept Design. Requirement 10 Establish the most appropriate recognised local (on site or near site) low or zero carbon (LZC) energy sources for the building or development (see Scope of LZC systems and how they are assessed), based on the feasibility study. Requirement 11 Specify local LZC technologies for the building or development in line with the feasibility study recommendations. Requirement 12 Quantify the reduced regulated carbon dioxide (CO) emissions resulting from the feasibility study. Evidence required at design stage: BREEAM compliant LZC Report BREEAM Contractor tender prelims Note: LZC report for BREEAM compliance report in progress One credit targeted
Ene 06 - Energy efficient transportation systems						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Energy consumption	1	1	0	0	Criteria: Requirement 1 For specified lifts, escalators or moving walks (transportation types): 1. Analyse the transportation demand and usage patterns for the building to determine the optimum number and size of lifts, escalators or moving walks 2. Calculate the energy consumption in accordance with BS EN ISO 25745 Part 2⁽¹⁹⁾ or Part 3⁽¹⁹⁾ for one of the following: 1. At least two options for each transportation type (e.g. for lifts, hydraulic, traction or machine roomless (MRL) OR 2. At least two options considering different system arrangements and control strategies. 3. Consider the use of regenerative drives, subject to the requirements in Regenerative drives on the next page 4. Specify the transportation system with the lowest energy consumption. Responsibility: Lift engineer (Cundall) Evidence Required: Transportation Analysis determining the optimum number and size of equipment. Lift specifications. Manufacturer's literature. Contractor tender prelims One credit targeted
2	Energy efficient features	1	1	0	0	Criteria: Requirement 2 Achieve criteria 1. Requirement 3 Specify the following three energy efficient features for each lift: 1. A standby condition for off-peak periods 2. 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 3. Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. Requirement 4 Specify regenerative drives where their use is demonstrated to save energy. Responsibility: Lift engineer (Cundall) Evidence Required at design stage: Contractor tender prelims BREEAM compliance statement from lift engineer confirming the criteria for energy efficient features will be met. Manufacturer's product details. OR Formal letter of commitment from the system(s) manufacturer or supplier One credit targeted
3	Energy efficient features	1	1	0	0	One credit - Escalators or moving walks 5 Specify at least one of the following for each escalator or moving walk: 5.a A load-sensing device that synchronises motor output to passenger demand through a variable speed drive OR 5.b A passenger-sensing device for automated operation (auto walk), so the escalator operates in auto start mode when there is no passenger demand. Responsibility: Lift engineer (Cundall) Evidence Required at design stage: Contractor tender prelims BREEAM compliance statement from lift engineer confirming the criteria for energy efficient features will be met. Manufacturer's product details. OR Formal letter of commitment from the system(s) manufacturer or supplier One credit targeted
		22	16	0	5	Standard Energy Credit Total
		5	2	0	0	Exemplary Energy Credit Total
		19.08	12.24	0	3.20	% Energy Total (Standard + Exemplary)
Transport						
Tra 01 - Transport assessment and travel plan						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Travel plan	2	2	0	0	Criteria: Requirement 1 No later than Concept Design stage, undertake a site-specific transport assessment (or develop a travel statement) and draft travel plan, which can demonstrably be used to influence the site layout and built form; see Methodology. Requirement 2 The site-specific travel assessment (or statement) shall cover as a minimum: 1. 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. Predicted travel patterns and transport impact of future building or site users. 3. Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors. 4. Reporting of the number and type of existing accessible amenities, see Table 7.1 below, within 500m of the site. 5. Disabled access accounting for varying levels and types of disability, including visual impairment. 6. Calculation of the existing public transport Accessibility Index (AI), see Methodology on the facing page. 7. Current facilities for cyclists. Requirement 3 Following a transport assessment (in accordance with the requirements set out in requirement 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 see Methodology. Requirement 4 If the occupier is known, involve them in the development of the travel plan. Requirement 5 Demonstrate that the travel plan will be implemented and supported by the building's management in operation. Responsibility: Transport Consultant (Curtins) Evidence required at design stage: Transport Assessment/ Statement Travel Plan Where the building occupier is known documentation confirming the building occupier's involvement in the Travel Plan. Where the building user is not known, documentation confirming that the Travel Plan will be handed by the developer to the building owner. Note: Transport assessment submitted for planning in 2020 to be updated to include BREEAM requirements for travel plan. Jan 2025- Draft Transport assessment and Travel Plan received from Curtins (Dec 2024). Criteria is met. Two credits targeted
Tra 02 - Sustainable transport measures						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

Pre-req	Pre-requisite		✓	✓	✓	Criteria: Requirement 1 Achieve requirements 3-5 in the Tra 01 Transport assessment and travel plan credit. Responsibility: Transport Consultant (Curtins) Evidence required at design stage: Transport Assessment/ Statement Travel Plan Transport assessment and Travel plan will be submitted as planning deliverable. Pre-requisite criteria is met
1	Transport options implementation	10	6	0	2	Criteria: Requirement 2 Identify the sustainable transport measures, see Table 7.4. Requirement 3 Award credits according to the Accessible Index (AI) of the project, and the total number of points achieved for the options implemented, see Table 7.3. Responsibility: Transport Consultant (Curtins) Architect (Simpson Haugh) PM (Colliers) Install compliant cycle storage spaces and facilities to meet the requirements of point 7 and 8 Other options to be reviewed in detail at a later stage Evidence required at design stage: Supporting evidence of drawings and specifications etc Notes: Jan 2025- Draft Transport assessment and Travel Plan received from Curtins (Dec 2024). Criteria is met. 6 to 8 credits likely to be achieved Two points targeted
		12	8	0	2	Standard Transport Credit Total
		0	0	0	0	Exemplary Transport Credit Total
		11.52	7.68	0	1.92	% Transport Total (Standard + Exemplary)
Water						
Wat 01 - Water consumption						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Water consumption	5	3	0	0	Criteria: Requirement 1 Use the BREEAM Wat 01 calculator to assess the efficiency of the domestic water-consuming components. Requirement 2 Use the standard Wat 01 method (see Methodology) to compare the water consumption (L/person/day) for the assessed building against a baseline performance. Award BREEAM credits based upon Table 8.1. Where it is not possible to use the standard method, complete the assessment using the alternative Wat 01 method (see Methodology). Requirement 3 If a greywater or rainwater system (see Definitions) is specified, use its yield in L/person/day to offset potable water demand from components. Requirement 4 If a greywater or rainwater system is specified and installed: 1. Greywater systems in compliance with BS 8525-1:2010 Greywater Systems - Part 1 Code of Practice 2. Rainwater systems in compliance with BS 8515:2009+A1:2013 Rainwater Harvesting Systems - Code of practice or for BREEAM NC 2018 V2.0 use BS EN 16941-1:2018. Achieve Wat 02 criterion 6, if you intend to pursue a post occupancy stage certification. Requirement 5 and 6 not applicable. Responsibility: MEP (CWC) Architect (Simpson Haugh) Evidence required at design stage: Sanitaryware Schedule complete with flow rates and flush volumes. Manufacturer's literature for all sanitary ware Contractor tender prelims Architecture specifications Wat 01 proforma Wat 01 calculator tool Three credits targeted
e1	Water consumption	1	0	0	0	Credit not targeted
Wat 02 - Water monitoring						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite (Good to Outstanding)		✓	✓	✓	Criteria: Requirement 0 Specify a water meter on the mains water supply to each building. This includes instances where water is supplied via a borehole or other private source. Responsibility: MEP (CWC) Notes- There is no water consuming systems which consumes more than 10% of the water demand Evidence Required: Signed compliance letter by engineer Schematics Specifications Contractor tender prelims Pre-requisite will be met

1	Water monitoring	1	1	0	0	Criteria: Requirement 1 Specify a water meter on the mains water supply to each building. This includes instances where water is supplied via a borehole or other private source. Requirement 2 For water-consuming plant or building areas consuming 10% or more of the buildings total water demand: 1. Fit easily accessible sub-meters, OR 2. Install water monitoring equipment integral to the plant or area. Requirement 3 For each meter (main and sub): 1. Install a pulsed or other open protocol communication output, AND 2. Connect it to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption. If there is no BMS system in operation at Post-Construction stage, award credits provided that the system used enables connection when the BMS becomes operational. Requirement 4 In buildings with swimming pools, or large water tanks and aquariums, fit separate sub-meters on the water supply of the above and any associated changing facilities (toilets, showers etc.) irrespective of their water consumption levels. Requirement 5 In buildings containing laboratories, fit a separate water meter on the water supply to any process or cooling loop for plumbed-in laboratory process equipment, irrespective of their water consumption levels. Requirement 6 (If pursuing a post-occupancy stage certification) The water monitoring strategy used enables the identification of all water consumption for sanitary uses as assessed under Wat 01 (L/person/day), if a post occupancy stage certification is sought. Responsibility: MEP (CWC) Notes- There is no water consuming systems which consumes more than 10% of the water demand Evidence Required: Signed compliance letter by engineer Schematics Specifications Contractor tender prelims Calculations and justification relating to selection of significant water demands Where available, manufacturer's product details. One credit targeted
Wat 03 - Water leak detection						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Leak detection system	1	1	0	0	Criteria: Requirement 1 Install a leak detection system capable of detecting a major water leak: 1. On the utilities water supply within the buildings, to detect any major leaks within the buildings AND 2. Between the buildings and the utilities water supply, to detect any major leaks between the utilities supply and the buildings under assessment. Requirement 2 The leak detection system is: 1. A permanent automated water leak detection system that alerts the building occupants to the leak OR an inbuilt automated diagnostic procedure for detecting leaks 2. Activated when the flow of water passing through the water meter or data logger is at a flow rate above a pre-set maximum for a pre-set period of time. This usually involves installing a system which detects higher than normal flow rates at meters or sub-meters. It does not necessarily require a system that directly detects water leakage along part or the whole length of the water supply system 3. Able to identify different flow and therefore leakage rates, e.g. continuous, high or low level, over set time periods. Although high and low level leakage rates are not specified, the leak detection equipment installed must have the flexibility to distinguish between different flow rates to enable it to be programmed to suit the building type and owner's or occupier's usage patterns 4. Programmable to suit the owner's or occupier's water consumption criteria 5. Where applicable, designed to avoid false alarms caused by normal operation of large water consuming plant such as chillers. Where there is physically no space for a leak detection system between the utilities water meter and the building, alternative solutions can be used, provided that a major leak can still be detected. Responsibility: MEP (CWC) Evidence Required: Signed compliance letter by engineer Schematics Specifications Contractor tender prelims One credit targeted
2	Flow control devices	1	1	0	0	Criteria: Requirement 3 Install flow control devices that regulate the supply of water to each WC area or facility according to demand, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework. Responsibility: MEP (CWC) Evidence Required: Signed compliance letter by engineer Schematics Specifications Contractor tender prelims Where available, manufacturer's product details. One credit targeted
Wat 04 - Water efficient equipment						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Water efficient equipment	1	1	0	0	1 Identify all water demands from uses other than those listed under Wat 01 Water consumption: Calculation of water efficiency performance that could be realistically mitigated or reduced. Where there is no water demand from uses other than domestic-scale, sanitary use components in the building, this issue is not applicable. 2 Identify systems or processes to reduce the relevant water demand (criterion 1), and establish, through either good practice design or specification, a demonstrable reduction in the total water demand of the building. Non-domestic scale, non-sanitary water uses For the purposes of this BREEAM Issue, non-domestic scale, non- sanitary water uses refer to any building [integrated water uses not assessed under Wat 01. This includes, but is not limited to the following: - - Swimming pools - - Recreational hot tubs and hydrotherapy pools - - Equipment used for irrigation - - Vehicle wash equipment - - Project-specific industrial processes - - Water filtration and treatment processes - - Building services (e.g. cooling towers and humidification systems) Confirm which of the below irrigation strategies are specified 1. Drip-fed subsurface irrigation incorporating soil moisture sensors. The irrigation control should be zoned to permit variable irrigation to different planting assemblages. 2. Reclaimed/recovered water from a rainwater collection or waste water recovery system, with appropriate storage, i.e. greywater collection from building functions or processes that use potable water, e.g. vehicle wash, training water in fire stations, sanitary facilities, irrigation etc. This should take into account the Government Buying Standards¹ where appropriate to the building type. 3. External landscaping and planting that relies solely on precipitation, during all seasons of the year. 4. All planting specified is restricted to contextually appropriate species that thrive without irrigation and will continue to do so in the future Responsibility Landscape Architect (Reform Architecture) MEP (CWC) Evidence Letter confirming irrigation strategy, drawings, specs etc Credit targeted
		9	7	0	0	Standard Water Credit Total
		1	0	0	0	Exemplary Water Credit Total
		8.02	5.46	0	0	% Water Total (Standard + Exemplary)
Materials						
Mat 01 - Environmental impacts from construction products - Building life cycle assessment (LCA)						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Superstructure	6	4	0	2	Criteria: Requirement 1 Comparison with the BREEAM LCA benchmark during Concept Design (offices, industrial and retail buildings only) Superstructure (offices, industrial and retail buildings (except for Simple Buildings and where Notes 1.1 and 1.2 apply) During the Concept Design, demonstrate the environmental performance of the building as follows: 1. Carry out a building LCA on of the superstructure design using either the BREEAM Simplified building LCA tool or an IMPACT Compliant LCA tool according to the methodology (see Methodology). 2. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications). Requirement 2 Comparison with the BREEAM LCA benchmark during Technical Design (offices, industrial and retail buildings only) During Technical Design, demonstrate the environmental performance of the building as follows: 1. As requirement 1.a 2. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design. Where a project has not achieved requirement 1, requirement 2 may still be achieved. Requirement 3 Option appraisal during Concept Design (all building types) For offices, industrial and retail building types, achieve criterion 1 (except where Notes 1.0, 1.1 and 1.2 apply). Requirement 4 During Concept design, identify opportunities for reducing environmental impacts as follows: 1. Carry out building LCA options appraisal of 2 to 4 significantly different superstructure design options (applicable to the Concept Design stage, see Methodology). 2. Use a building LCA tool that is recognized by BREEAM (as suitable for assessing superstructure during Concept Design) according to the methodology (see Methodology). 3. For each design option, fulfil the same functional requirements specified by the client and all statutory requirements (to ensure functional equivalency). 4. Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. 5. Record the following in the Mat 01/2 Results Submission Tool: The differences between the design options; the design option selected by the client to be progressed beyond Concept Design; the reasons for selecting it and the reasons for not selecting the other design options. 6. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications). If the building LCA tool recognised by BREEAM used for requirements 3 to 5 (and 6 to 9, if pursued) is not an IMPACT Compliant LCA tool and requirements 1 to 2 are applicable, then the BREEAM Simplified building LCA tool (or an IMPACT Compliant LCA tool) shall be used for requirements 1 to 2. Requirement 5 Options appraisal during Technical Design (all building types) During Technical Design identify opportunities for reducing environmental impacts as follows: 1. Carry out building LCA options appraisal of 2 to 3 significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage, see Methodology). 2. Use a building LCA tool that is recognized by BREEAM (as suitable for assessing superstructure during Technical Design) according to the methodology (see Methodology). 3. As requirements 4.c to 4.e above. Where an options appraisal summary document was produced during Concept Design, update it to include the Technical Design options. 4. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design. Where a project has not achieved requirements 3 and 4, requirement 5 may still be achieved. Responsibility: Carbon consultant (TFT) Architect (Simpson Haugh) Structural engineer (Curtins) MEP (CWC) Landscape Architect (Reform Architecture) Cost consultant (G&T) Evidence required at concept and design stage: The Mat 01/02 Results submission tool- date stamped with BRE at concept stage The options appraisal summary document Evidence that the LCA options appraisal summary document has been received by the design team and client (meeting minutes, letter of acknowledgement). Evidence of how the LCA design options have informed the decision-making process (e.g. meeting minutes, documented design develop showing how the LCA options have affected the design). Four credits targeted. Two credits targeted as potential.

2	Substructure and hard landscaping options appraisal during Concept Design (all building types)	1	1	0	0	Criteria: Requirement 6 Requirements 3 and 4 are achieved. Requirement 7 During Concept Design identify opportunities for reducing environmental impacts as follows: 1. Carry out building LCA options appraisal of a combined total of at least six significantly different substructure or hard landscaping design options (at least two shall be substructure and at least two shall be hard landscaping) 2. Using a building LCA tool that is recognized by BREEAM (as suitable for assessing substructure and hard landscaping during Concept Design) according to the methodology (see Methodology). 3. As requirements 4.c to 4.f above. Responsibility: Architect/Landscape architect Carbon Consultant- TFT consultant Evidence required at concept and design stage: The LCA options appraisal summary document includes substructure and hard landscaping according to the requirements. The Mat 01/02 Results submission tool- date stamped with BRE at concept stage Evidence that the LCA options appraisal summary document has been received by the design team and client (meeting minutes, letter of acknowledgement). Evidence of how the LCA design options have informed the decision-making process (e.g. meeting minutes, documented design develop showing how the LCA options have affected the design). Credit targeted
e1	Core building services options appraisal during Concept Design (all building types)	1	1	0	0	One credit - Core building services options appraisal during Concept Design (all building types) 8 Criteria 3 to 4 are achieved. 9 During Concept Design identify opportunities for reducing environmental impacts as follows: 9.a Carry out building LCA options appraisal of at least 3 significantly different core building services design options. 9.b Use a building LCA tool that is recognised by BREEAM (as suitable for assessing core building services during Concept Design) according to the methodology (see Methodology below). 9.c As criteria 4.c to 4.f on the previous page. Credit targeted
e2	LCA and LCC alignment (all building types)	1	1	0	0	One credit - LCA and LCC alignment (all building types) 10. Achieve criteria 3 to 5. 11. Achieve Elemental LCC plan and Component Level LCC options appraisal credits (Man 02 Life cycle cost and service life planning on page 54). 12. Include design options appraisal for criteria 3 to 4 (and 6 to 7 and 8 to 9, if pursued) during Concept Design in - The Elemental LCC plan; on page 55. 13. Include the design options appraisal for criterion 5 during Technical Design in the 'Component level LCC option appraisal' (in Man 02 Life cycle cost and service life planning on page 54). 14. Integrate the aligned LCA and LCC options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document including the relevant cost information from the 'elemental LCC plan' and 'Component level LCC option appraisal'. Responsibility: Carbon consultant- TFT Design team Evidence required at design stage LCA and LCC alignment report One credit targeted
e3	Third party verification (all building types) - Exemplary level criteria	1	0	0	0	One credit - Third party verification (all building types) 15. Criteria 1 to 7 (as applicable to the building type) are achieved. 16. A suitably qualified third party (see Definitions on page 252) either carries out the building LCA work or verifies the building LCA work (if by others), and produces a report describing how they have checked the building LCA work accurately represent the designs under consideration during Concept Design and Technical Design with reference to the requirements of criteria 1 to 7 (and 8 to 14 if pursued). 17. For each LCA option, itemise in the report the checks made by the suitably qualified third party including, as a minimum, the quality requirements shown in Table 9.4 on page 255. 18. Include details of the suitably qualified third party's relevant skills and experience and a declaration of their third party independence from the project client and design team in the report. Responsibility: PM Third party LCA /Carbon consultant Evidence required at design stage: The third party's report - Verifying that building LCAs accurately represent the designs under consideration. - Itemising the findings of their verification checks. - Evidence that the requirements of a suitably qualified third party are fulfilled. Credit not targeted
Mat 02 - Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Specification of products with a recognised environmental product declaration (EPD)	1	1	0	0	Criteria: Requirement 1 Specify construction products with EPD that achieve a total EPD points score of at least 20, according to the methodology. Requirement 2 Enter the details of each EPD into the Mat 01/02 Results Submission Tool, including the material category classification. The Mat 01/02 Results Submission Tool will verify the EPD points score and credit award. Responsibility: Contractor Evidence required at design stage: The Mat 01/02 Results Submission tool. Copies of EPD certificates. Contractor tender prelims Credit targeted
Mat 03 - Responsible sourcing of construction products						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite		✓	✓	✓	Criteria: Requirement 1 All timber and timber-based products used on the project are legally harvested and traded timber as per the UK government's Timber Procurement Policy (TPP) (189) (see Definitions). Compliance with requirement 1 is a minimum requirement for achieving any BREEAM rating. There are no prerequisite requirements for other materials. Responsibility: Contractor Architect Notes : Timber is specified in the partitions installed in the reception area . All timber will be FSC certified. Evidence required at design stage: Contractor tender prelims Pre-requisite criteria will be met

1	Enabling sustainable procurement	1	1	0	0	Criteria: Requirement 2 A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products. The plan must: 1. Be in place before Concept Design. 2. Include sustainability aims, objectives and strategic targets to guide procurement activities. Note: targets do not need to be achieved for the credit to be awarded but justification must be provided for targets that are not achieved. 3. Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. 4. Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. In addition, if the plan is applied to several sites or adopted at an organisational level it must: 5. Identify the risks and opportunities of procurement against a broad range of social, environmental and economic issues following the process set out in BS ISO20400:2017⁽¹⁰⁾. Responsibility: Contractor / Client Evidence required at design stage: Sustainable Procurement Plan from Client One credit targeted
2	Measuring responsible sourcing	3	1	0	1	Criteria Up to three credits – Measuring responsible sourcing 3 Use the Mat 03 calculator tool and methodology to determine the number of credits achieved for the construction products specified or procured. Credits are awarded in proportion to the scope of the assessment and the number of points achieved, as set out in Table 9.10. Responsibility: Design team Contractor Evidence required at design stage: Relevant sections of the building specification, summary or schedule confirming all materials within the project, those to be responsibly sourced and to what level. Where products are specified at design stage, copies of responsible sourcing certificates to be provided. Completed copy of the Mat 03 calculator tool, including evidence to show how the tool has been completed. BREEM Contractor tender prelims Mat 03 proforma Mat 03 calculator tool Responsible sourcing certificates One credit targeted
e1	Measuring responsible sourcing	1	0	0	0	Credit not targeted
Mat 05 - Designing for durability and resilience						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Protecting vulnerable parts of the building from damage/material degradation	1	1	0	0	Criteria: Requirement 1 Protecting vulnerable parts of the building from damage Protection measures are incorporated into the building's design and construction to reduce damage to the buildings fabric or materials in case of accidental or malicious damage occurring. These measures must provide protection against: 1. Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). 2. Damage from any vehicle or trolley movements within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. 3. External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building faade and where delivery areas or routes are within 2 metres of the faade, i.e. specifying bollards or protection rails. 4. Potential malicious damage to building materials and finishes, in public and common areas where appropriate. Requirement 2 Protecting exposed parts of the building from material degradation Key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through one of the following: 1. The element or product achieving an appropriate quality or durability standard or design guide. See Table 9.14. If none are available, use BS 7543:2015⁽¹⁷⁾ as the default appropriate standard OR 2. A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. Requirement 3 Include convenient access to the roof and faade for cost effective cleaning, replacement and repair in the building's design. Requirement 4 Design the roof and faade to prevent water damage, ingress and detrimental ponding. See Table 9.14 for an example list of relevant industry durability and quality standards. Responsibility: Architect (Simpson Haugh) Evidence required at design stage: Criteria 1: Design drawings illustrating vulnerable areas or parts of the building. Design drawings or specification confirming the durability of the measures specified. Criteria 2: Design drawings confirming the applicable elements. Documentary evidence for the environmental factors and material degradation effects considered relevant to the building. Design and specification measures in place to limit degradation effects. Where relevant, manufacturer's technical details confirming the material degradation effect mitigated by the specified product. Criteria 3: Roof and faade access strategy Criteria 4: Design drawings and specification showing measures to prevent water damage, ingress and ponding. Marked up plans and drawings identifying vulnerable areas of the building internally and externally. Drawings showing protection measures incorporated to protect damage. Schedule or proforma identifying measures to protect from material degradation One credit targeted
Mat 06 - Material efficiency						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Material efficiency	1	1	0	0	Criteria: Requirement 1 At the Preparation and Brief and Concept Design stages, set targets and report on opportunities and methods to optimise the use of materials. These must be done for each of the following stages. See Table 9.15. 1. Preparation and Brief 2. Concept Design 3. Developed Design 4. Technical Design 5. Construction Requirement 2 Develop and record the implementation of material efficiency, see Table 9.15, during 1. Developed Design 2. Technical Design 3. Construction Requirement 3 Report the targets and actual material efficiencies achieved. Responsibility: Architect (Simpson Haugh) Structural engineer (Curtins) MEP engineer (CWC) Evidence required at design stage: Contractor tender prelims Completed Mat 06 proforma to record material efficiency targets and opportunities at all RIBA Stages Supporting evidence such as specifications, reports, drawings, sketches etc Credit targeted
		14	10	0	3	Standard Materials Credit Total
		4	2	0	0	Exemplary Materials Credit Total
		21.50	14.50	0	3.75	% Materials Total (Standard + Exemplary)
Waste						
Wst 01 - Construction waste management						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Pre-demolition audit	1	1	0	0	Criteria: Requirement 1 Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. The audit must cover the content of Pre-demolition audit scope on page 262 and: 1. Be carried out at Concept Design stage by a competent person (see Definitions) prior to strip-out or demolition works 2. Guide the design, consider materials for reuse and set targets for waste management 3. Engage all contractors in the process of maximising high grade reuse and recycling opportunities. Requirement 2 Make reference to the audit in the resource management plan (RMP) (see Definitions). Requirement 3 Compare actual waste arisings and waste management routes used with those forecast and investigate significant deviations from planned targets. Responsibility: PM (Collier's) Evidence required at design stage: Contractor tender prelims Pre Demolition Audit: to be completed at concept stage Resource management plan from demolition contractor recording actual waste One credit targeted
2	Construction resource efficiency	3	2	0	1	Criteria: Requirement 4 Prepare a compliant Resource Management Plan (RMP) covering: 1. Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication, see Definitions), including demolition and excavation waste 2. Accurate data records on waste arisings and waste management routes. Requirement 5 Meet or improve upon the benchmarks in Table 10.1 for non-hazardous construction waste, excluding demolition and excavation waste. Responsibility: Contractor Evidence required at design stage: Contractor tender prelims Resource Management Plan to include the Wst 01 resource efficiency targets Two credits targeted . One credit targeted as potential.
3	Diversion of resources from landfill	1	1	0	0	Criteria: Requirement 6 Meet, where applicable, the diversion from landfill benchmarks in Table 10.2 for non-hazardous construction waste and demolition and excavation waste generated. Requirement 7 Sort waste materials into separate key waste groups as per Table 10.35, either on-site or through a licensed contractor for recovery. Responsibility: Contractor Evidence required at design stage: Contractor tender prelims Resource Management Plan to include the Wst 01 diversion of waste from landfill targets One credit targeted (90% diversion for demolition waste and 80% diversion for non demolition waste)
e1	Construction resource efficiency/Diversion of resources from landfill	1	0	0	0	Credit not targeted
Wst 02 - Use of recycled and sustainably sourced aggregates						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

Pre-req	Prerequisite		✗	✗	✗	Prerequisite Criteria: 1. If demolition occurs on site, to encourage the reuse of site-won material on site, complete a pre-demolition audit of any existing buildings, structures or hard surfaces in accordance with - Criterion 1 on page 285 and - Criterion 2 on page 285. This issue is not targeted at the pre-assessment stage. Targeted as potential. To be reviewed once the predemolition audit is completed
1	Project Sustainable Aggregate points	1	0	0	1	One credit – Project Sustainable Aggregate Points 2. Identify all aggregate uses and types on the project (see Table 10.5 on the next page and Table 10.6 on the next page). 3. Determine the quantity in tonnes for each identified use and aggregate type. 4. Identify the region in which the aggregate source is located. 5. Calculate the distance in kilometres travelled by all aggregates by transport type. 6. Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points. The corresponding number of BREEAM credits will be awarded as shown in Table 10.4. This issue is not targeted at the pre-assessment stage. To be reviewed once the predemolition audit is completed. Targeted as potential
e1	Project Sustainable Aggregate points	1	0	0	0	Credit not targeted
Wst 03 - Operational waste						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Operational waste	1	1	0	0	Criteria: Requirement 1 Provide a dedicated space for the segregation and storage of operational recyclable waste generated. The space is: - Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams - Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors - Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates. Requirement 2 For consistent and large amounts of operational waste generated, provide: - Static waste compactors or bales; situated in a service area or dedicated waste management space - Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility - A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. Responsibility: Client Architect (Simpson Haugh) Curtins Evidence required at design stage: Drawings demonstrating the location of the waste storage Confirmation of type and volume of waste streams Labelling of bins on drawings to show waste streams Drawing showing water outlet in waste area Waste deposition and collection strategy One credit targeted
Wst 04 - Speculative finishes (Offices only)						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Speculative floor and ceiling finishes	1	0	0	1	Criteria: Office building types only - For tenanted areas, where the future occupant is not known and carpets or other floor or ceiling finishes are installed, these must be limited to a show area only. - Only install floor and ceiling finishes selected by the known occupant of a development. Alternatively, where only ceiling finishes and no carpets are installed, the building owner confirms that the first tenants will not be permitted to make substantial alterations to the ceiling finishes. Note: Listed status on ceilings to be reviewed Credit targeted as potential
Wst 05 - Adaptation to climate change						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Resilience of structure, fabric, building services and renewables installation	1	1	0	0	Criteria: Requirement 1 Conduct a climate change adaptation strategy appraisal using: - A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes (see Methodology): - Hazard assessment - Risk estimation - Risk evaluation - Risk management. Requirement 2 Develop recommendations or solutions based on the climate change adaptation strategy appraisal, during or prior to Concept Design, that aim to mitigate the identified impact. Requirement 3 Provide an update during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor. Responsibility: Architect (Simpson Haugh) Structural engineer (Curtins) MEP engineer (CWC) Evidence Required: Climate Change Adaption Strategy Appraisal Stage 2 and propose recommendations for implementation at design stage Climate Change Adaption Strategy Appraisal Stage 4- Demonstrate how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor. Supporting reports, drawings etc One credit targeted
e1	Responding to climate change	1	0	0	0	Credit not targeted at this stage. To be revisited at a later stage if the Pol 03 Surface Water runoff two credits are achieved.
Wst 06 - Design for disassembly and adaptability						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Design for disassembly and functional adaptability - recommendations	1	1	0	0	Criteria: Requirement 1 Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios (see Methodology) by Concept Design. Requirement 2 Develop recommendations or solutions (see Functional adaptation implementation) based on the study (criterion 1 above), during or prior to Concept Design, that aim to enable and facilitate disassembly and functional adaptation. Responsibility: Architect (Simpson Haugh) Structural engineer (Curtins) MEP engineer (CWC) Evidence required at RIBA Stage 2: Disassembly and Functional Adaptability Study. Develop recommendations or solutions that aim to enable and facilitate disassembly and functional adaptation. Supporting drawings, specifications and reports Credit targeted
2	Disassembly and functional adaptability - implementation	1	1	0	0	Criteria: Requirement 3 Achieve requirements 1 and 2. Requirement 4 Provide an update, during Technical Design, on: 1. How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. 2. Changes to the recommendations and solutions during the development of the Technical Design. Requirement 5 Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants. Responsibility Architect (Simpson Haugh) Structural engineer (Curtins) MEP engineer (CWC) Evidence required at RIBA Stage 4: Confirmation that the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. Changes to the recommendations and solutions during the development of the Technical Design. Building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants. Supporting drawings, reports and specifications Credit targeted
		11	8	0	3	Standard Waste Credit Total
		3	0	0	0	Exemplary Waste Credit Total
		10.04	5.12	0	1.92	% Waste Total (Standard + Exemplary)
Land Use & Ecology						
LE 01 - Site selection						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Previously occupied land	1	1	0	0	Criteria: Requirement 1 At least 75% of the proposed development is on previously occupied land (see Definitions). Responsibility: Architect (Simpson Haugh) Evidence required at design stage Existing Site Drawing Proposed Site Drawing One credit targeted
2	Contaminated land	1	0	0	0	Criteria: One credit - Contaminated land 2. A contaminated land professional undertakes a site investigation, risk assessment and appraisal, which deems that land within the development footprint to be affected by contamination. This report identifies: 2.a The degree of contamination 2.b The contaminant sources or types 2.c The options for remediating sources of contamination which present an unacceptable risk. 3. The client or principal contractor confirms that a remediation strategy will be implemented, in line with the report Evidence required: A copy of the contaminated-land professional's report which confirms the degree and type of contamination present and remediation strategy. Evidence to confirm the author meets the definition of a contaminated land professional. Existing site plans showing contaminated areas to be remediated in relation to any proposed development A letter from the principal contractor or remediation contractor confirming: - The remediation strategy for the site - Summary details of the implementation plan. If a contractor has not yet been appointed, a letter from the client or their representative confirming that the appointed contractor will undertake necessary remediation works to mitigate the risks identified in the report. Credit not targeted currently. To be confirmed if the site has any contamination?
LE 02 - Ecological risks and opportunities						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

Pre-req	Prerequisite - Statutory obligations		✓	✓	✓	Criteria: Requirement 1 The client or contractor confirms compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site. Responsibility: Ecologist Landscape architect Client Evidence required at design stage: Ecology report (Baseline 2020 ecology report from planning to be updated) Pre-requisite criteria will be met
1	Survey and evaluation/Determining ecological outcomes	2	2	0	0	Criteria: Requirement 2 Foundation route (Route 1) The site is evaluated using the BREEAM Ecological Risk Evaluation Checklist (Guidance Note 34) confirming that the Foundation route can be used (see Methodology and Definitions). Requirement 3 Comprehensive route (Route 2) A Suitably Qualified Ecologist (SQE) carries out a survey and evaluation (see Methodology) for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions (typically Preparation and brief stage) (see Definitions). Requirement 4 The SQEs survey and evaluation determines the sites ecological baseline (see Definitions), including: 1. Current and potential ecological value and condition of the site and related areas within the Zone of Influence. 2. Direct and indirect risks to current ecological value from the project. 3. Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the Zone of Influence. Requirement 5 Recommendations and data collected from the survey and evaluation are shared with appropriate project team members to influence decisions made for activities during site preparation, design and construction works, which can support ecological features (see Methodology and Definitions). Requirement 6 Foundation and Comprehensive routes (Routes 1 and 2) Survey and evaluation criteria relevant to the chosen route (criterion 2 if following the Foundation route or Criteria 35 above for the Comprehensive route). Requirement 7 The project team liaise and collaborate with representative stakeholders (see Methodology) early enough to influence key planning decisions (typically Concept Design stage), to: 1. Identify the optimal ecological outcomes for the site. 2. Identify, appraise and select measures to meet the optimal ecological outcomes for the site (criterion a), in line with the mitigation hierarchy of action, according to the route being used (see Definitions). Responsibility: Ecologist Client Landscape Architect Evidence required at design stage A copy of the Ecological Survey and Evaluation document (PEA for planning completed)- Received as part of planning deliverable BREEAM compliant ecologist report Proposed landscape plan Proposed planting schedule Two credits targeted
e1	Wider site sustainability - Exemplary level criteria	1	0	0	0	Credit not targeted
LE 03 - Managing impacts on ecology						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite - Ecological risks and opportunities		✓	✓	✓	Criteria: Requirement 1 LE 02's 'Survey and evaluation and Determining ecological outcomes criteria have been achieved using the Foundation route (Route 1) or the Comprehensive route (Route 2). Responsibility: Ecologist Evidence required at design stage BREEAM compliant ecology report Pre-requisite criteria will be met
1	Planning and measures on-site	1	1	0	0	Criteria: Requirement 2 Foundation and comprehensive route (Routes 1 and 2) Further planning to avoid and manage negative ecological impacts on-site is carried out (see Methodology) early enough to influence the concept design and design brief as well as site preparation planning (typically Concept Design stage). Requirement 3 On-site measures for managing negative ecological impacts during site preparation and construction are implemented in-practice (e.g. mitigation measures to protect existing ecological features) (see Methodology). Requirement 4 Criteria 2-3 are based on input from the project team in collaboration with representative stakeholders and data collated as part of the Determining ecological outcomes in LE 02 Ecological risks and opportunities (see Methodology). Responsibility: Landscape Architect Contractor Ecologist Evidence required at design stage BREEAM compliant ecology report Landscape proposals One credit targeted

2	Managing negative impacts	2	2	0	0	Criteria: Requirement 5 Foundation route (Route 1) (one credit) Criteria 2 and 3 have been achieved. Requirement 6 Negative impacts from site preparation and construction works are managed according to the mitigation hierarchy (see Methodology on the facing page) and no overall loss (see Definitions) of ecological value has occurred. Requirement 7 Comprehensive route (Route 2) (up to two credits) Criteria 2-4 have been achieved. Requirement 8 Negative impacts from site preparation and construction works have been managed according to the mitigation hierarchy, in line with the SQE's recommendations (see Methodology) and, either: 1. No overall loss of (see Definitions) ecological value has occurred (two credits). OR where criterion a is not possible: 2. The loss of ecological value has been minimised (Minimising Loss) (one credit) Responsibility: Contractor Ecologist Landscape Architect Evidence required at design stage: BREEAM compliant Ecologist Calculations and report Two credits targeted
LE 04 - Ecological change and enhancement						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite - Managing negative impacts on ecology		✓	✓	✓	Criteria: Requirement 1 Criterion 6 (for Foundation route) or 8 (for Comprehensive route) in LE 03 has been achieved. Requirement 2 The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site. Responsibility: Ecologist Client Contractor Evidence required at design stage: BREEAM compliant Ecologist report Pre-requisite criteria will be met
1	Change and enhancement of ecology / Ecological enhancement	1	1	0	0	Comprehensive route (Route 2) only 4. Measures have been implemented that enhance ecological value, which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of the "Determining ecological outcomes" in LE 02 (see Methodology). Measures are implemented in the following order: 4.a: On site, and where this is not feasible, 4.b: Off site within the Zone of Influence. 5. Data collated are analysed and where potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site. Responsibility: Ecologist Landscape Architect (Re-Form Architecture) Client/PM (Colliers) Contractor Evidence required at design stage: BREEAM compliant Ecologist report Landscape proposals and drawings One credit targeted
2	Change and enhancement of ecology	3	2	0	1	Criteria: Requirement 6 Comprehensive route (Route 2) only Up to three credits are awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology Route 2. Credits are awarded in line with the Reward Scale table in GN36 where there are no residual impacts on protected sites or irreplaceable habitats. Responsibility: Ecologist Landscape Architect (Re-Form Architecture) Client/PM (Colliers) Contractor Evidence required at design stage: BREEAM compliant Ecologist report Landscape proposals and drawings Two credits targeted. One credit targeted as potential credit.
e1	Change and enhancement of ecology - Exemplary level criteria	1	0	0	0	Credit not targeted
LE 05 - Long term ecological management and maintenance						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

Pre-req	Prerequisite - Statutory obligations, planning and site implementation		✓	✓	✓	Criteria: Requirement 1 The client or contractor has confirmed that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. Requirement 2 The following must be achieved, according to the route being assessed: 1. Foundation route (Route 1) - Criterion 6 in LE 03 has been achieved. 2. Comprehensive route (Route 2) - Criterion 8 in LE 03 has been achieved, and at least one credit under LE 04 for 'Change and Enhancement of Ecology' has been awarded. Responsibility: Client Contractor Ecologist Evidence required at design stage: BREEAM compliant ecologist report Contractor tender prelims Landscape drawings Pre-requisite criteria will be met
1	Management and maintenance throughout the project / Landscape and ecology management plan	2	2	0	0	Criteria: Requirement 3 Measures have been implemented to manage and maintain ecology throughout the project. These measures are based on input from the project team in collaboration with representative stakeholders and data collated as part of the Determining ecological outcomes in LE 02 (see Methodology). To ensure the optimal ecological outcomes agreed in LE 02 are met in practice, these measures must monitor and review the effectiveness of the mitigation and enhancement measures in place for LE 03 & LE 04 to ensure they are implemented. Requirement 4 A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site (see Methodology). This should include detailed management and maintenance plans as required by landscape and asset managers as well as relevant parts of the handover information for occupiers written in a format that encourages understanding and supportive behaviours. Requirement 5 A Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1 covering at least the first five years after project completion as a minimum and including: 1. Actions and responsibilities of relevant individuals prior to handover 2. The ecological value and condition of the site at handover and how this is expected to develop and change over time 3. Identification of opportunities for ongoing alignment with activities beyond the development project, which support the aims of BREEAM's Strategic Ecology Framework 4. Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts 5. Clearly defined and allocated roles and responsibilities for delivering the plan Requirement 6 The landscape and management plan or similar will be updated to support maintenance of the ecological value of the site (see sections relating to Maintenance and Monitoring in CIEEM, CIRIA, IEMA, for helpful guidance). Responsibility: Ecologist Client/PM (Collier's) Contractor Evidence required at design stage: Landscape and ecology management plan BREEAM compliant ecologist report Contractor tender prelims Landscape drawings Two credits targeted
		13	11	0	1	Standard Land Use & Ecology Credit Total
		2	0	0	0	Exemplary Land Use & Ecology Credit Total
		16.95	12.65	0	1.15	% Land Use & Ecology Total (Standard + Exemplary)
Pollution						
Pol 01 - Impact of refrigerants						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments

1	Impact of refrigerants	3	1	0	1	<u>Criteria:</u> Requirement 1 Three credits - No refrigerant use No refrigerant use within the installed plant or systems. OR alternatively, where the building does use refrigerants, the three credits can be awarded as follows: Requirement 2 Prerequisite All systems with electric compressors comply with the requirements of BS EN 378:2008⁽²⁾⁽³⁾ (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice⁽²⁾⁽³⁾. Requirement 3 Impact of refrigerant Two credits The direct effect life cycle CO equivalent emissions (DELCC) of 100 kgCO₂/kW. For systems which provide cooling and heating, the worst performing output based on the lower of kW cooling output and kW heating output is used to complete the calculation. To calculate the DELCC refer to the relevant definitions in the Methodology below and Additional information sections. OR Requirement 4 4 Refrigerants used have a Global Warming Potential (GWP) 10. OR Requirement 5 One credit Systems using refrigerants have DELCC of 1000 kgCO₂/kW cooling and heating capacity. Requirement 6 One credit - Leak detection All systems are hermetically sealed or only use environmentally benign refrigerants. See Leak detection and Hermetically sealed systems OR Requirement 7 Where the systems are not hermetically sealed. 1. Systems have: 1. A permanent automated refrigerant leak detection system, that is robust and tested and capable of continuously monitoring for leaks. OR 2. An inbuilt automated diagnostic procedure for detecting leakage is enabled. 2. In the event of a leak, the system must be capable of automatically responding and managing the remaining refrigerant charge to limit loss of refrigerant (see Automatic isolation and containment of refrigerant on) <u>Responsibility:</u> MEP (CWC) Contractor <u>Evidence required at design stage:</u> Mechanical/Services Spec Statement from Mechanical/Services Engineer Manufacturers technical data sheet Completed copy of the Pol 01 Calculator tool. Documentary evidence supporting the data used to complete the calculator tool. Manufacturers technical data sheet for installed units Contractor tender prelims One credit targeted (Impact of refrigerant). One credit targeted as potential (Refrigerant leak detection)
Pol 02 - Local air quality						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Local air quality	2	2	0	0	<u>Criteria:</u> Requirement 1 All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity. OR alternatively; Requirement 2 Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in Table 12.4 and Table 12.5. <u>Responsibility:</u> MEP (CWC) Contractor <u>Evidence Required:</u> Contractor tender prelims Mechanical Specification M&E drawings Manufacturers technical data sheet Two credits targeted (All electric strategy)
Pol 03 - Flood and surface water management						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Flood resilience	2	2	0	0	<u>Criteria:</u> Requirement 1 Prerequisite An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria. Requirement 2 Two credits - Low flood risk A site-specific flood risk assessment (FRA) confirms the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA takes all current and future sources of flooding into consideration (see Sources of flooding). Requirement 3 One credit - Medium or high flood risk A site-specific FRA confirms the development is in a flood zone that is defined as having a medium or high annual probability of flooding and is not in a functional floodplain. . The FRA must take all current and future sources of flooding into consideration (see Sources of flooding). For smaller sites refer to Level of detail required in the FRA for smaller sites, which overrides requirement 2. Requirement 4 To increase the resilience and resistance of the development to flooding, one of the following must be achieved: 1. The ground level of the building and access to both the building and the site, are designed (or zoned) so they are at least 600mm above the design flood level of the site's flood zone (see 600mm threshold). 2. The final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlined in section 5 of BS5853:2017⁽²⁾⁽³⁾. <u>Responsibility:</u> Drainage/ Flood Risk Consultant (Curtins) <u>Evidence required at design stage</u> Flood risk report Two credits targeted (Site in low flood risk zone 1 as confirmed by Curtins)

2	Surface water run-off	2	0	0	2	Criteria: Requirement 5 Prerequisite for surface water run-off credits Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed in the Methodology must be followed, with justification given by the appropriate consultant where water is allowed to leave the site. Requirement 6 One credit - Surface Water Run-Off - Rate For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. Requirement 7 For Greenfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events. Requirement 8 Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Requirement 9 Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance (see Definitions). Requirement 10 One credit - Surface Water Run-Off - Volume Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND EITHER Requirement 11 Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed sites development. This must be for the 100-year 6-hour event, including an allowance for climate change (see requirement 15). Requirement 12 Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques. OR (only where requirements 11 and 12 cannot be achieved): Requirement 13 Justification from the appropriate consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. Requirement 14 Drainage design measures are specified so that the post-development peak rate of run off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: 1. The pre-development one-year peak flow rate 2. The mean annual flow rate (Qbar) 3. 2L/s/ha. Requirement 15 For the one-year peak flow rate, the one-year return period event criterion applies. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. Requirement 16 For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance. Responsibility: Flood Risk/ Drainage Consultant (Curtins) Evidence required at design stage: BREEAM compliant surface water run-off report One credit targeted as potential credit Criteria: Requirement 5 Prerequisite for surface water run-off credits Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed in the Methodology must be followed, with justification given by the appropriate consultant where water is allowed to leave the site. Requirement 6 One credit - Surface Water Run-Off - Rate For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. 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Requirement 10 One credit - Surface Water Run-Off - Volume Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND EITHER Requirement 11 Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed sites development. This must be for the 100-year 6-hour event, including an allowance for climate change (see requirement 15). Requirement 12 Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques. OR (only where requirements 11 and 12 cannot be achieved): Requirement 13 Justification from the appropriate consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. Requirement 14 Drainage design measures are specified so that the post-development peak rate of run off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: 1. The pre-development one-year peak flow rate 2. The mean annual flow rate (Qbar) 3. 2L/s/ha. Requirement 15 For the one-year peak flow rate, the one-year return period event criterion applies. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. Requirement 16 For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance. Responsibility: Drainage Consultant Evidence required at design stage: BREEAM compliant surface water run-off report Contractor tender prelims One credit targeted as potential credit
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3	Minimising watercourse pollution	1	0	0	0	Credit not targeted
Pol 04 - Reduction of night time light pollution						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Reduction of night time light pollution	1	1	0	0	Criteria: Requirement 1 External lighting pollution has been eliminated through effective design that removes the need for external lighting. This does not adversely affect the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows: Requirement 2 The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the Institute of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011⁽¹⁷⁾. Requirement 3 All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. Requirement 4 If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP guidance notes. Requirement 5 Illuminated advertisements are designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements⁽¹⁸⁾. Responsibility: MEP (CWC) Evidence Required: Electrical Specification Signed letter of compliance Drawing showing location of all external lighting Contractor tender prelims Notes: CWC to review limitations and advise One credit targeted
Pol 05 - Reduction of noise pollution						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Reduction of noise pollution	1	1	0	0	Where there are noise-sensitive areas within the assessed building or noise-sensitive areas within 800 m radius of the assessed site, a noise impact assessment compliant with BS 4142:20141 is commissioned. Noise levels must be measured or determined for: 2.a: Existing background noise levels: 2.a.i at the nearest or most exposed noise-sensitive development to the proposed assessed site 2.a.ii including existing plant on a building, where the assessed development is an extension to the building 2.b: Noise rating level from the assessed building. 3 The noise impact assessment must be carried out by a suitably qualified acoustic consultant. 4. The noise level from the assessed building, as measured in the locality of the nearest or most exposed noise-sensitive development, must be at least 5 dB lower than the background noise throughout the day and night. 5. If the noise sources from the assessed building are greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with the criterion. Responsibility: Acoustician (Hann Tucker) Evidence required at design stage Pol 5 Noise report One credit targeted
		12	7	0	3	Standard Pollution Credit Total
		0	0	0	0	Exemplary Pollution Credit Total
		9	5.25	0	2.25	% Pollution Total (Standard + Exemplary)
Innovation						
AI - Approved Innovation						
	Credit	Available	Current	Scenario 1	Scenario 2	Comments
e1	Approved innovations	1	0	0	0	
		0	0	0	0	Standard Innovation Credit Total
		1	0	0	0	Exemplary Innovation Credit Total
		1	0	0	0	% Innovation Total (Standard + Exemplary)

Appendix - Site assumptions (Project Info details)

Assessment Information	Selection
Building type (main description)	Office
Building Type sub-group	Office - General office building
Assessment stage	Design (Interim)
Project scope	Shell and Core
Building Net internal floor area m ²	30,855
Building Gross internal floor area m ²	41,462
Is the building designed to be untreated?	No
Building services - heating system type	Air system
Building services - cooling system type	Air-conditioning
Are commercial or industrial-sized refrigeration and storage systems specified?	No
Are building user lifts present?	Yes
Are building user transportation systems (escalators or moving walkways) present?	Yes
Are laboratories present?	No
Fume cupboard(s) and/or other containment devices	No
Are there any water demands present other than those assessed in Wat 01?	Yes
Does the building have external areas within the boundary of the assessed development?	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 the Post-occupancy stage credits targeted in Ene 01 issue?	Yes
Is demolition occurring under the developer's ownership for the purpose of enabling the assessed development?	Yes
Are WC facilities only provided within the residential areas of a long-term residential accommodation?	N/A
Is the project required to connect to a District Heating system, and it supplies all heating and hot water demands to the building?	No

APPENDIX B: CIS Tower Energy Statement



CWC

crookes walker
consulting

CIS Tower, Manchester

Energy Statement

Date: 25/04/2025

Ref: 3292-CWC-XX-RP-N-7015

Crookes Walker Consulting Limited is registered in England & Wales | 05011466 |
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Revision Record

Date	Reference	Revision	Prepared	Checked	Authorised
25/04/2025	3292-CWC-XX-RP-N-7015	7	Mohammad Elsarraj	Simon Woods	Simon Woods
			ME	SW	SW

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1.0 Executive Summary

The purpose of this Energy Statement is to demonstrate compliance with the following sustainability targets, and illustrates how the proposed refurbishment incorporates a range of sustainable technologies to achieve these targets:

- Manchester City Council Core Strategy, Policy EN 6 Target Framework for CO₂ reductions from low or zero carbon energy supplies, for non-domestic development:
 - Target 1 – Network development area applies, the minimum requirement is CHP/district heating anchor, or connection or where not feasible, a 15% increase on Part L 2010. Although there is a district heating system in the Town Hall vicinity of Manchester, there are no plans to extend this to this area of the city, which is a significant distance away. However, if the opportunity arises in the future, adequate space has been allocated within the basement plant room to accommodate potential future connections.
- Energy-efficient HVAC equipment, including Air Source Heat Pumps (ASHP), provides effective heating and cooling to mitigate overheating risks. Additionally, Scenario 1 (Table 11) evaluated energy performance using a 2050 heatwave weather file, confirming the resilience of the design against overheating.
- EPC 'A' Rating.
- 'BREEAM Excellent' from the BREEAM UK framework.
- UK Net Zero Carbon Buildings Standard (UKNZCBS) 2050 compliant / Operational Net Zero Carbon, with the following Energy Use Intensity targets for existing buildings ('One-go Retrofit'), for works commencing in 2026:
 - 122 kWh/m²/annum (GIA) to meet UKNZCBS Offices targets.
 - 224 kWh/m²/annum (GIA) to meet UKNZCBS Retail: Supermarket targets.
 - 438 kWh/m²/annum (GIA) to meet UKNZCBS Retail: F&B with Catering targets.
- NABERS UK accreditation.

This report will summarise each of the above criteria and demonstrate how the proposed development can achieve each target.

2.0 Introduction

The CIS Tower is a Grade II listed building located in Manchester city centre, built in the 1960s. It was previously used as office space, with a canteen area and an event space. The proposed design is based on the building being office use, incorporating some retail, restaurant/bar, and event space. A new build three-storey extension is also proposed for the podium, also to be used as office space.

2.1 Modelling Disclaimer

The building has been modelled with accredited software package IESVE accredited software Version 2024.1.0.0 which is approved for the purpose of demonstrating compliance with the energy efficiency and carbon emission requirements of the building regulations.

These assessments were undertaken by an Energy Specialist; an individual who has acquired substantial expertise or a recognised qualification for undertaking assessments within the residential sector and is not professionally connected to a single technology or manufacturer.

It should be noted that the data generated by this work is obtained using computer calculations. These calculations are the best means of predicting the performance of the building at this stage. Full certainty can only be achieved by measuring the performance of the building and associated systems after a period of use.

Whilst the calculations have been undertaken in good faith using reasonable skill and care, Crookes Walker Consulting Limited can take no responsibility for differences between the computer calculations and the actual performance of the completed building due to the inherent complexity and variability of the physics in a building and its environment.

2.2 Thermal Model

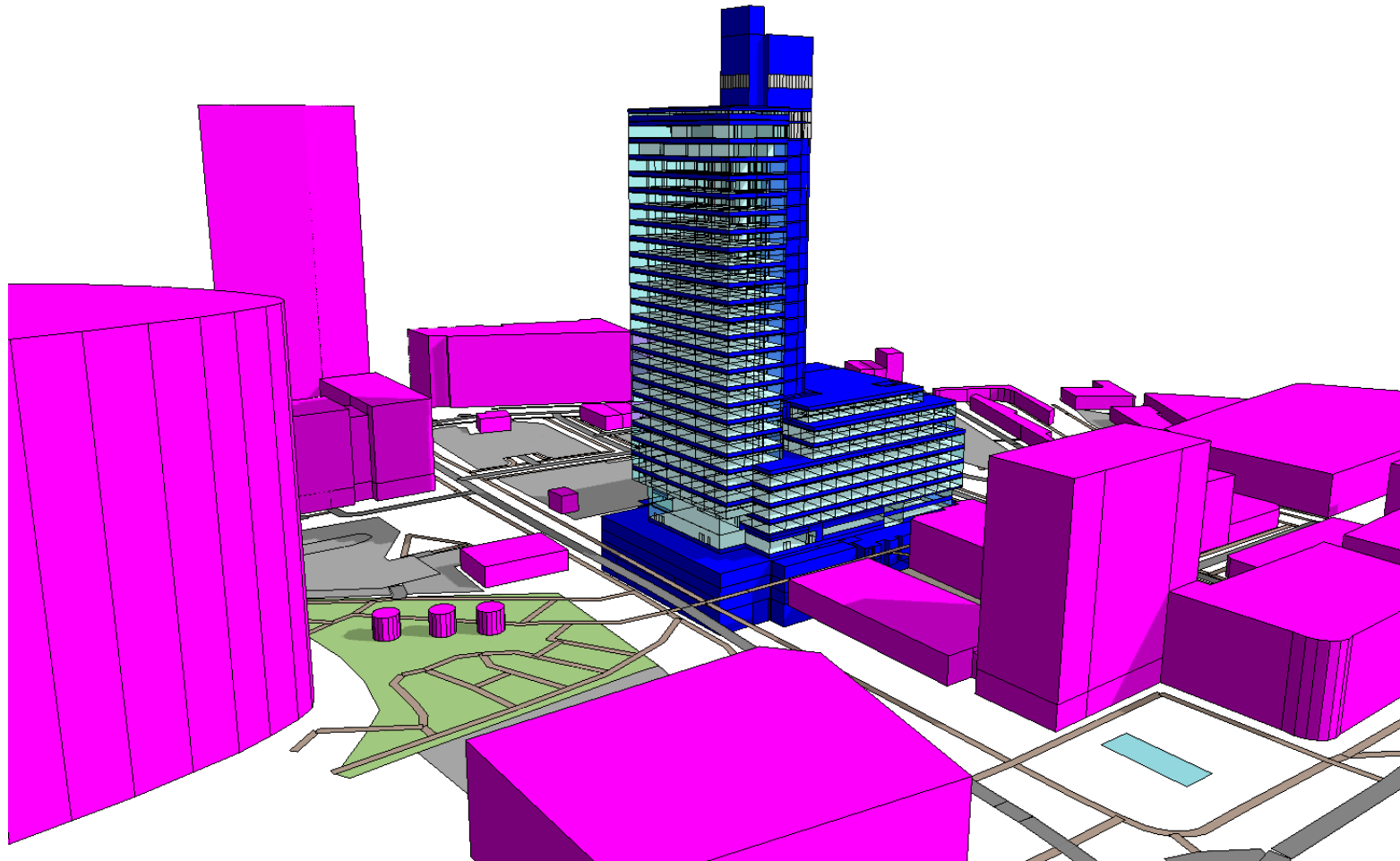


Figure 1. Thermal Model

3.0 Energy Strategy/Methodology

To achieve the stated requirements the proposals have been assessed as per the following, with this methodology to be followed as the design progresses:

- The consideration and incorporation of passive design solutions where feasible
- The incorporation of energy efficiency measures through improved fabric performance and services
- Calculation of the predicted design energy consumption rates and associated annual CO₂ emissions for the development, in comparison with the Building Regulations
- Assessment of viability incorporating Low and Zero Carbon technologies (LZC)

The following bullet points outline the proposed design solutions for the proposed CIS Tower refurbishment and new build extension, which will respond to the energy requirements of the Greater Manchester Authority and the Manchester City Council requirement. An Energy and Sustainability Strategy will be created which will expand on the following details for the development:

- A fabric first approach by replacing the existing poorly performing glazed façade to reduce the building's heat losses.
- Air tightness will be prioritised with optimised levels of permeability preventing heat loss via uncontrolled infiltration.
- Good solar control will be provided by the selection of glazing to avoid the risk of overheating during the summer months and increase the solar gains in the winter months.
- Natural daylighting will improve occupant comfort and reduce the requirement for artificial lighting, saving energy.

At this stage, an initial energy model has been developed for the building to estimate the building performance against each of the requirements.

3.1 Energy Efficient Services

A fabric first approach has been taken for the CIS Tower refurbishment and extension, by replacing the façade. The environmental and energy benefits of this are discussed in a separate dedicated part of this Planning Application.

To support this efficient mechanical and electrical systems have been chosen, with the aim to reduce the energy consumption and carbon emissions with appropriate controls to manage the energy used during operation.

The following principles have been used in the development of the building services strategies:

3.1.1 Mechanical Ventilation with Heat Recovery (MVHR)

The existing ventilation system for the CIS is as per the original design in the 1960's with supply air handling plant without heat recovery. As the building is to have a new sealed faced without openings replicating the existing arrangement it is proposed to retain the mechanical ventilation strategy, introduce new central plant with heat recovery. This will transfer heat from the exhaust air to preheat the supply air.

The mechanical ventilation system is to incorporate high efficiency heat recovery with a target efficiency more than 75%.

3.1.2 Building Services Insulation

Thermal insulation is to be provided in accordance with BS 5422: 2001 (Method for specifying thermal insulation materials for pipes, tanks, vessels, ductwork, and equipment operating within the temperature range, -40°C to +700°C) for the following:

- Reduce heat loss and hence conserve energy on all heated water and air systems.
- Prevent the formation of condensation on pipework and ductwork of equipment.
- All thermal insulation will be made from materials with zero ozone depletion potential (CF) and HCFC free)
- Insulation may also be used for acoustic reasons, particularly on rainwater and foul drainage systems.

- Where LTHW or DHW services run along corridors, these services will be provided with 20% more insulation, over and above the British Standard, to prevent nuisance heat gains into the corridors.

3.1.3 Motor Efficiency

All pumps and fans are to be provided with high efficiency motors to reduce energy consumption and energy costs.

Where variable speed pumps and fans are provided, the flow volumes are to be set during the commissioning period by varying the fan / pump speed rather than by increasing the system resistance by means of regulating valves or balancing dampers.

3.1.4 Low and Zero Carbon Technologies

The following LZC technology has been proposed for the CIS Tower development:

- Air Source Heat Pump for space heating and cooling to replace the existing gas fired heating, chillers, and cooling towers.
- New PV system to generate 40MWh per annum to serve the new-build extension only. This can be via a new system (Appendix 4) or the existing panels. At present, the energy analysis has not taken into account the reuse of the existing PV panels; however, the condition and viability for the reuse of the panels and associated equipment is to be determined at the next design stage.

This provides an electric based solution eliminating the need for use of fossil fuels to heat the building and complies with the UK Net Zero Building Standard as discussed later in this statement. The PVs enable the generation of power onsite.

3.1.5 Efficient Lighting Installations

Artificial lighting will be installed that will include the following:

- Energy efficient LED fittings.
- Daylight dimming controls.
- Presence and detection.

4.0 Model Inputs

4.1 NCM Building Types

The CIS Tower development has been assessed under the following NCM building types:

- A1: Retail and Financial/Professional Services
- A3: Restaurant and Cafes/Drinking Establishments and Hot Food Takeaways
- B1: Offices and Workshop businesses

The inputs detailed over the following pages have been taken from CIBSE Guide A, BSRIA Rules of Thumb (2024) 'Mechanical Criteria', NABERS Design for Performance (DFP), the current Building Council of Offices (BCO) recommendations and (for operational profiles) the expected use of the building once occupied.

4.2 Fabric

Fabric Element	u-value (W/m ² K)
Curtain Wall (Existing replaced)	1.44 0.40 g-value LT 0.70
Curtain Wall (Proposed Extension)	1.40 0.40 g-value 0.70
Exposed Floor	0.45
Roof (Existing)	1.42

Fabric Element	u-value (W/m ² K)
Roof (Proposed Extension)	0.18
Roof Light	1.44 0.90 g-value LT 0.90
Air Permeability	4 m ³ /h.m ² @ 50Pa

Table 1. Input Parameters – Fabrics

4.3 HVAC Systems

Energy-efficient HVAC equipment, including Air Source Heat Pumps (ASHP), provides effective heating and cooling to mitigate overheating risks.

HVAC 1: Circulation	
Heating	Electric Panel Heater
Heat Generator Seasonal Efficiency	1.00
Ventilation Type	Natural
Automatic monitoring and targeting	Yes
Set Points	Winter 18°C
HVAC 2: Kitchen (Commercial)	
Heating	Electric Panel Heater

Heat Generator Seasonal Efficiency	1.00
Ventilation Type	Mechanical Supply & Extract
SFP	1.10 Supply 0.50 Extract
Automatic monitoring and targeting	Yes
Set Points	Winter 15°C
HVAC 3: Changing (Showers)	
Heating	Electric Panel Heater
Heat Generator Seasonal Efficiency	1.00
Ventilation Type	Balanced Supply & Extract (MVHR)
SFP	1.60
Heat Recovery Efficiency	75%
Automatic monitoring and targeting	Yes
Set Points	Winter 21°C
HVAC 4: Gym, Yoga, Offices & Reception	
Heating/Cooling Type	VRF from Air Source Heat Pump
Heat Generator Seasonal Efficiency	3.30

Cooling Seasonal Efficiency	5.51
Ventilation Type	Balanced Supply & Extract (Central AHU)
SFP	1.80
Heat Recovery Efficiency	75%
Automatic monitoring and targeting	Yes
Set Points	Gym Summer 16°C Winter 16°C Yoga Summer 18°C Winter 18°C Office & Reception Summer 24°C Winter 21°C
HVAC 5: Function Space (Events), Bar, Retail Unit & Restaurant	
Heating/Cooling Type	VRF from Air Source Heat Pump
Heat Generator Seasonal Efficiency	4.00
Cooling Seasonal Efficiency	5.50
Ventilation Type	Balanced Supply & Extract (MVHR)
SFP	1.60
Heat Recovery Efficiency	80%
Automatic monitoring and targeting	Yes
Set Points	Summer 24°C Winter 21°C

HVAC 6: Comms	
Heating/Cooling Type	DX Cooling
Heat Generator Seasonal Efficiency	4.00
Cooling Seasonal Efficiency	6.50
Ventilation Type	N/A
Automatic monitoring and targeting	Yes
Set Points	Summer 24°C Winter 24°C

Table 2. HVAC System Details

Ventilation is set to activate when the zonal carbon dioxide concentration exceeds 600ppm, gradually increasing airflow to supply the full flow rate upon reaching 800ppm.

Night purge ventilation during summer has been included in the model to operate overnight at 20% of the design flow rate when the outside temperature is below the room air temperature, with the aim of reducing the cooling load.

Zone Type	Flow Rate	CO ₂ Demand Control Ventilation	Night Purge (Summer)
Bar	10 ACH ⁻¹	Yes	Yes
Changing (Showers)	10 ACH ⁻¹	-	-
Circulation	-	-	-

Zone Type	Flow Rate	CO ₂ Demand Control Ventilation	Night Purge (Summer)
Comms	-	-	-
Function Space (Events)	12 l/s/p	Yes	Yes
Gym	6 ACH ⁻¹	Yes	Yes
Kitchen (Commercial)	40 ACH ⁻¹	-	Yes
Office	14 l/s/p	Yes	Yes
Reception	12 l/s/p	Yes	Yes
Retail Unit	10 l/s/p	Yes	Yes
Restaurant	15 ACH ⁻¹	Yes	Yes
WC	6 ACH ⁻¹	-	-
Store	-	-	-
Plant	-	-	-

Table 3. Ventilation Strategy

4.4 Domestic Hot Water

The hot water demand has been taken from the NABERS UK DFP UK Guide and BSRIA.

Domestic Hot Water	
DHW Type	Electric Water Heaters
Efficiency	100%
Storage Storage Losses	1,500 litres 0.0567kWh/l/day

Table 4. Domestic Hot Water Details

Domestic Hot Water Daily Demand (litres/person)	
Bar	2
Gym	20
Office	4
Retail Unit	1.28

Restaurant	6
------------	---

Table 5. Domestic Hot Water Daily Demand

4.5 HVAC Operation

Zone Type	Heating Operation Weekday Profile	Heating Operation Weekend Profile	Cooling Operation Weekday Profile	Cooling Operation Weekend Profile
Bar	11:00-24:00 100%	12:00-24:00 100%	11:00-24:00 100%	12:00-24:00 24%
Changing (Showers)	07:00-18:00 100%	-	-	-
Circulation	07:00-18:00 100%	08:00-17:00 10%	-	-
Comms	-	-	On Continuously	
Function Space (Events)	2 hrs 3 times per week 100%	-	2 hrs 3 times per week 100%	
Gym	06:00-22:00 100%			
Kitchen (Commercial)	07:00-22:00 100%	07:00-22:00	-	-
Office	07:00-22:00 100%	09:00-12:00 100%	07:00-18:00 100%	09:00-12:00 100%
Office (L01 after hours zones)		Saturdays 09:00-12:00 100%		Saturdays 09:00-12:00 100%
Reception	07:00-18:00 100%	-	07:00-18:00 100%	-

Zone Type	Heating Operation Weekday Profile	Heating Operation Weekend Profile	Cooling Operation Weekday Profile	Cooling Operation Weekend Profile
Retail Unit	07:00-22:00 100%	Saturdays 10:00-22:00 100% Sundays & Holidays 10:00-16:00 100%	07:00-22:00 100%	Saturdays 10:00-22:00 100% Sundays & Holidays 10:00-16:00 100%
Restaurant (Dining)		07:00-22:00 100%		07:00-22:00 100%
Toilet	07:00-18:00 100%	09:00-12:00 100%	-	-
Store	-	-	-	-
Plant	-	-	-	-

Table 6. HVAC Operation

4.6 Lighting

Zone Type	Energy (W/m ²)	Controls	Weekday Profile	Weekend Profile
Bar	15	PIRs	10:00-22:00 100% 22:00-24:00 50% 24:00-10:00 20%	10:00-23:00 100% 23:00-24:00 50% 24:00-10:00 20%
Changing (Showers)	8	PIRs	07:00-09:00 100% 12:00-13:00 100% 16:00-17:00 100%	-
Circulation		PIRs & Daylight Dimming	07:00-09:00 100%	08:00-17:00 10%

Zone Type	Energy (W/m ²)	Controls	Weekday Profile	Weekend Profile
			12:00-13:00 100% 16:00-17:00 100%	
Comms		PIRs	1 hr/day	-
Function Space (Events)		PIRs	2hrs 3 times a week 100%	-
Gym		PIRs	00:00-05:00 10% 05:00-06:00 30% 06:00-07:00 70% 07:00-21:00 100% 21:00-22:00 70% 22:00-23:00 40% 23:00-24:00 20%	00:00-05:00 10% 05:00-06:00 30% 06:00-07:00 70% 07:00-08:00 50% 08:00-14:00 90% 14:00-16:00 90% 16:00-18:00 80% 18:00-20:00 70% 20:00-22:00 50% 22:00-23:00 30% 23:00-24:00 20%
Kitchen (Commercial)	15	PIRs	07:00-22:00 100%	07:00-22:00 100%
Office	2.55	PIRs & Daylight Dimming	00:00-07:00 5% 07:00-08:00 30% 08:00-09:00 75% 09:00-17:00 100% 17:00-18:00 75% 18:00-19:00 25% 19:00-21:00 15%	00:00-08:00 5% 08:00-17:00 15% 17:00-24:00 5%

Zone Type	Energy (W/m ²)	Controls	Weekday Profile	Weekend Profile
			21:00-24:00 5%	
Office (L01 after hours zones)	2.55	PIRs & Daylight Dimming	00:00-07:00 5% 07:00-08:00 30% 08:00-09:00 75% 09:00-17:00 100% 17:00-18:00 75% 18:00-19:00 25% 19:00-21:00 15% 21:00-24:00 5%	Saturdays 00:00-08:00 5% 08:00-12:00 40% 12:00-17:00 15% 17:00-24:00 5% Sundays & Holidays 00:00-08:00 5% 08:00-17:00 15% 17:00-24:00 5%
Reception	10	PIRs & Daylight Dimming	09:00-17:00 100%	08:00-17:00 10%
Retail Unit	15	PIRs	10:00-22:00 100%	Saturdays 10:00-22:00 100% Sundays & Holidays 10:00-16:00
Restaurant (Dining)	15	PIRs	07:00-22:00 100%	07:00-22:00 100%
Toilet	8	PIRs & Daylight Dimming	07:00-17:00 100%	08:00-17:00 10%
Store	8	PIRs	1 hr/day	-
Plant	8	PIRs	1 hr/day	-

Table 7. Lighting Operation Details

4.7 Occupancy

Zone	Occupancy (m ² /person)	Sensible Gain Latent Gain (per person)	Weekday Profile	Weekend Profile
Bar	3	90 50	11:00-12:00 15% 12:00-14:00 40% 14:00-17:00 25% 17:00-19:00 60% 19:00-20:00 70% 20:00-21:00 50% 21:00-23:00 25% 23:00-24:00 10%	12:00-14:00 30% 14:00-17:00 60% 17:00-19:00 90% 19:00-22:00 100% 23:00-24:00 50%
Changing (Showers)	15	90 50	07:00-09:00 100% 12:00-13:00 50% 17:00-18:00 35%	-
Circulation	15	100 60	07:00-18:00 100%	08:00-17:00 10%
Comms	1 person	90 50	1 hr/day	-
Function Space (Events)	6	90 50	2 hrs 3 times per week 100%	-
Gym	6	165 275	00:00-05:00 5% 05:00-06:00 10% 06:00-07:00 40% 07:00-08:00 50% 08:00-09:00 45%	00:00-05:00 5% 05:00-06:00 10% 06:00-07:00 8% 07:00-08:00 13% 08:00-09:00 25%

Zone	Occupancy (m ² /person)	Sensible Gain Latent Gain (per person)	Weekday Profile	Weekend Profile
			09:00-10:00 35% 10:00-11:00 45% 11:00-12:00 50% 12:00-14:00 60% 17:00-18:00 65% 18:00-19:00 85% 19:00-20:00 100% 20:00-21:00 80% 21:00-22:00 60% 22:00-23:00 45% 23:00-24:00 25%	09:00-10:00 42% 10:00-11:00 58% 11:00-13:00 70% 13:00-14:00 68% 14:00-16:00 65% 16:00-17:00 63% 17:00-18:00 60% 18:00-19:00 58% 19:00-20:00 55% 20:00-21:00 50% 21:00-22:00 45% 22:00-23:00 25% 23:00-24:00 10%
Kitchen (Commercial)	3	100 60	07:00-09:00 80% 09:00-10:00 70% 10:00-12:00 50% 12:00-13:00 80% 13:00-14:00 50% 14:00-16:00 25% 16:00-17:00 50% 17:00-21:00 80% 21:00-22:00 35%	07:00-22:00 80%
Office (Podium)	8	90 50	07:00-08:00 10%	08:00-17:00 5%

Zone	Occupancy (m ² /person)	Sensible Gain Latent Gain (per person)	Weekday Profile	Weekend Profile
Office (Tower)	10	90 50	08:00-09:00 20% 19:00-17:00 70% 17:00-18:00 35% 18:00-19:00 10% 19:00-21:00 5%	
Office (L01 after hours zones)	8	90 50		Saturdays 08:00-09:00 5% 09:00-12:00 15% 12:00-17:00 5% Sundays & Holidays 08:00-17:00 5%
Reception	8	90 50	09:00-17:00 100%	08:00-17:00 10%
Retail Unit	8	100 60	07:00-09:00 80% 09:00-10:00 70% 10:00-12:00 50% 12:00-13:00 80% 13:00-14:00 50% 14:00-16:00 25% 16:00-17:00 50% 17:00-21:00 80% 21:00-22:00 35%	Saturdays 10:00-22:00 80% Sundays & Holidays 10:00-16:00 80%
Restaurant (Dining)	3			
Toilet	8	90 50	07:00-09:00 20% 09:00-10:00 80% 10:00-13:00 20% 13:00-14:00 50% 14:00-18:00 20%	08:00-17:00 10%

Zone	Occupancy (m ² /person)	Sensible Gain Latent Gain (per person)	Weekday Profile	Weekend Profile
Store	1 person	90 50	1 hr/day	-
Plant	1 person	90 50	1 hr/day	-

Table 8. Occupancy Details

Zone	Equipment Energy (W/m ²)	Weekday Profile	Weekend Profile
Bar	20	00:00-10:00 20% 10:00-11:00 30% 11:00-12:00 50% 12:00-17:00 60% 17:00-20:00 80% 20:00-21:00 60% 21:00-23:00 40% 23:00-24:00 50%	00:00-10:00 20% 10:00-11:00 30% 11:00-12:00 50% 12:00-17:00 70% 17:00-22:00 100% 22:00-23:00 90% 23:00-24:00 50%
Changing (Showers)	5	1 hr/day	-
Circulation	-	-	-
Comms	250	On Continuously	On Continuously
Function Space (Events)	10	2 hrs 3 times per week 100% Else 20%	-
Gym	20	00:00-06:00 20%	00:00-06:00 20%

Zone	Equipment Energy (W/m ²)	Weekday Profile	Weekend Profile
		06:00-07:00 50% 07:00-08:00 60% 08:00-09:00 70% 09:00-12:00 80% 12:00-17:00 90% 17:00-19:00 100% 19:00-20:00 90% 20:00-21:00 70% 21:00-22:00 50% 22:00-23:00 30% 23:00-24:00 20%	06:00-07:00 30% 07:00-08:00 50% 08:00-09:00 70% 09:00-12:00 90% 12:00-14:00 100% 14:00-16:00 90% 16:00-18:00 80% 18:00-19:00 60% 19:00-20:00 50% 20:00-22:00 30% 22:00-24:00 20%
Kitchen (Commercial)	40	07:00-22:00 100% Else 25%	07:00-22:00 Else 25%
Office (Podium)	7.5	00:00-07:00 25% 07:00-08:00 65% 08:00-09:00 80% 09:00-17:00 80% 17:00-18:00 65% 19:00-20:00 55% 20:00-24:00 25%	00:00-24:00 25%
Office (Tower)	6		Saturdays 00:00-24:00 25% Sundays & Holidays 00:00-24:00 25%
Office (L01 after hours zones)	7.5		
Reception	15	00:00-09:00 20% 09:00-17:00 100% 17:00-24:00 20%	08:00-17:00 25%

Zone	Equipment Energy (W/m ²)	Weekday Profile	Weekend Profile
Retail Unit	25	10:00-22:00 100% Else 25%	Saturdays 10:00-22:00 100% Sundays & Holidays 10:00-16:00 100%
Restaurant (Dining)	5	07:00-22:00 100% Else 25%	07:00-22:00 100% Else 25%
Toilet	1400W (Hand dryer)	1 hr/day	1 hr/day
Store	-	-	-
Plant	-	-	-

Table 9. Zonal Equipment Details

Equipment Type	Equipment Energy	Operation
External Lighting (Building Mounted)	30 x 0.25 kW fittings	Summer 21:00-06:00 Winter 17:00-09:00
Passenger Lifts	206,670 kWh	Total annual consumption

Table 10. Other Equipment Energy Consumption

4.8 Modelled Scenarios

The design proposals were evaluated for their impact on energy consumption. In addition to this 'baseline', additional scenarios were assessed. These are given in the table below.

Scenario	Details
Baseline (Planning design)	As per the inputs stated in the Input Parameters in this report
01	As per the Baseline, with: A future weather file representing a short and intense heatwave (Manchester DSY2 2050 High 50 th Percentile)
02	As per the Baseline, with: An increased equipment load in all Offices of 11 W/m ²
03	As per the Baseline, with: 25% of Offices (Offices on levels 02 – 05) operating for longer hours (07:00-20:00) for three months of the year
04	As per the Baseline, with: No daylight dimming controls
05	As per the Baseline, with: MVHR SFPs reduced to 1.10 W/l/s. AHU SFP reduced to 1.50 W/l/s. Heat Recovery efficiency enhanced to 85% for both MVHR and AHU
06	As per the Baseline, with: Heating set point in Circulation areas set to 12°C (unheated)

Scenario	Details
	Glazing g-value increased to 0.50
07	As per the Baseline, with: Basement external walls and thermal lining at the ceiling of B2 set to a U-value of 0.26 W/m ² K
08	Optimised model combining Scenarios 05, 06 & 07

Table 11. Modelled Scenarios

5.0 Results

5.1 Manchester City Council Core Strategy

The CIS Tower development meets the criteria stated in the Manchester City Council Core Strategy Policy EN6 Target Framework for Carbon Dioxide reductions from low or zero carbon energy supplies, by achieving a 70% improvement above the Approved Document Part L 2010. This result has been calculated using the input parameters stated in this report, using the Scenario 8 optimised model.

The Manchester City Council Climate Change Emergency and the Manchester's Net Zero Carbon Strategy have also been considered during the early design stage for the CIS Tower development, by assessing the development against the UKNZCBS and NABERS, with the aim of improving the energy efficiency of the building and reducing the Carbon Dioxide emissions.

5.2 Energy Performance Certificate

The CIS Tower development surpasses the target EPC rating of 'C', achieving an estimated EPC 'A' rating with an asset rating of '20'. This outcome is based on calculations using the input parameters outlined in this report and the Baseline (planning design) model. Table 12 highlights the significant reduction in operational carbon emissions achieved by the proposed design. Specifically, the Building Emission Rate (kgCO_2/m^2) demonstrates a 75.2% reduction compared to the existing building with current systems under the Baseline model, and a 77.8% reduction under the Scenario 08 optimised model.

Appendix 2 contains a draft EPC for the Be Lean + Be Clean + Be Green strategy, while Appendix 3 provides a draft EPC for the Be Lean + Be Clean (Optimised) + Be Green approach. The Be Green strategy includes 40 MWh of photovoltaic (PV) energy generation.

Iteration	Building Emission Rate (kgCO ₂ /m ² per year) *	vs. Existing BER (%)	Primary Energy (kWh _{PE} /m ² per year)	vs. Existing Primary Energy (%)	EPC Rating	Asset Rating	vs. Existing Asset Rating
Existing Building Existing Systems	33.18	-	220.46	-	E	125	-
Be Lean	28.99	-12.6	203.54	-7.7	D	118	-7
Be Clean	9.94	-70.0	105.81	-52.0	A	25	-100
Be Green	32.31	-2.6	211.61	-4.0	E	123	-2
Be Lean + Be Clean + Be Green	8.22	-75.2	87.87	-60.1	A	20	-105
Be Lean + Be Clean (Optimised) + Be Green	7.35	-77.8	79.02	-64.2	A	18	-107

Table 12. Improvements on EPC Rating, NCM Energy & NCM Carbon Emissions

5.1 BREEAM UK

The targeted 'BREEAM Excellent' classification requires the building to be assessed in its new build and existing components.

To achieve the BREEAM Ene 01 credits, the proposed fabric and servicing strategies, combined with the inclusion of a nominal PV system (serving the new build extension only) will achieve all four credits (Appendix 4).

A Low Zero Carbon (LZC) Study was undertaken for the BREEAM Ene 04 credit, concluding Air Source Heat Pump (ASHP) and PVs are the most feasible LZC technologies that may be included in the proposals. Modelling shows that heat pumps use almost 8.5% of the total energy that will be consumed to service the building.

The following feasibility matrix is based on assumptions of size, output, use and cost and therefore should not be used as a basis for design. They are used to compare the potential impact of each technology.

Technology	Annual CO ₂ Reduction (%)	Result	Capital Cost (£)	Result	Payback Period	Result	Recommendation
Photovoltaics	10	High	1,060,438	High	7.3	Medium	High
Solar Thermal	0.3	Low	156,319	Low	11.5	High	Low
Wind Turbine	0.9	Medium	250,000	Low	19	High	Low
ASHP	6.8	High	3,071,480	High	20.9	High	High
GSHP	2.5	Low	5,681,569	High	29	High	Low
CHP	13.6	Medium	3,787,713	High	11.4	High	Low
Biomass	5.1	High	4,261,177	High	127	High	Low

Table 13. LZC Feasibility Matrix.

Where the following applies:

Result	Annual CO2 Reduction (%)	Capital Cost (£)	Payback (Years)
High	>8	>750,000	>8
Medium	3 - 8	250,000 - 750,000	3 – 8
Low	<3	< 250,000	<3

Table 14. LZC Feasibility Matrix

The following LZC technologies were not include in the proposed CIS Tower design due to the following:

Hydropower

Reason for omission: No moving water in the vicinity of the site.

Combined Heat & Power (CHP)

Reason for omission: The use of the building is not expected to generate a sufficient base load to enable the use of CHP.

Ground Source Heat Pumps (GSHP)

Reason for omission: Not financially viable.

Wind-power

Reason for omission: Site is unlikely to have sufficient exposure.

Biomass

Reason for omission: The existing site does not have sufficient space available for Biomass installation.

Photovoltaic Panels

PVs to deliver an annual yield of 40MWh to achieve BREEAM 'Excellent'. PV system to serve the new-build extension only. This can be via the existing panels or a new system (Appendix 4). At present, the energy analysis has not considered the reuse of the existing PV panels; however, the condition and viability for the reuse of the panels and associated equipment is to be determined at the next design stage.

5.2 UK Net Zero Carbon Buildings Standard

The UKNZCBS offers energy performance targets. The following are energy usage targets for 'one-go' retrofit refurbishment works and assumes that the refurbishment works will commence in 2025:

- Offices: 125 kWh/m²/annum
- Retail - Supermarkets: 230 kWh/m²/annum
- Retail - F&B with Catering: 450 kWh/m²/annum

If the refurbishment works have not started on site in 2025, and works commence in 2026, the following targets must be achieved:

- Offices: 122 kWh/m²/annum
- Retail - Supermarkets: 224 kWh/m²/annum
- Retail - F&B with Catering 438 kWh/m²/annum

Figure 2 displays the Energy Use Intensity results for the Offices, demonstrated through numerous scenarios as described in Table 11 above. All scenarios achieve an Energy Use Intensity below the UKNZCBS 2025 and 2026 targets, with a minimum improvement of 30% over the 2025 target, and a minimum improvement of 28% over the 2026 target.

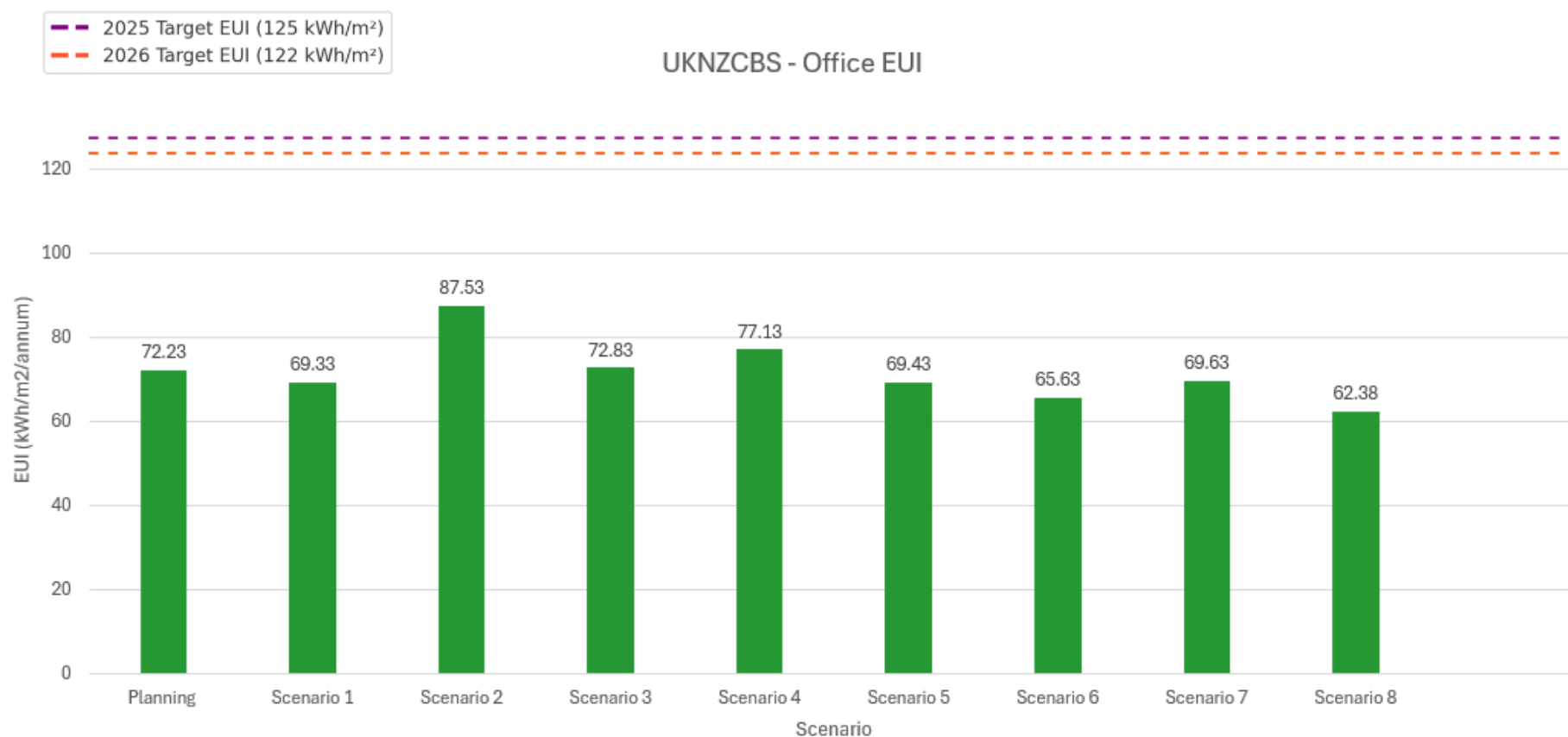


Figure 2. UKNZCBS – Office Energy Use Intensity

The NCM building type for the Retail units is unknown at this time, therefore the worst-case scenario has been assigned at this time, as Retail: Supermarket, which has the highest Energy Use Intensity for the 'Retail' type.

Figure 3 displays the Energy Use Intensity for the 'Retail: Supermarket' units, with an Energy Use Intensity over the UKNZCBS 2025 and 2026 targets, including a 9% improvement over the 2025 target and a 6% improvement over the 2026 target.

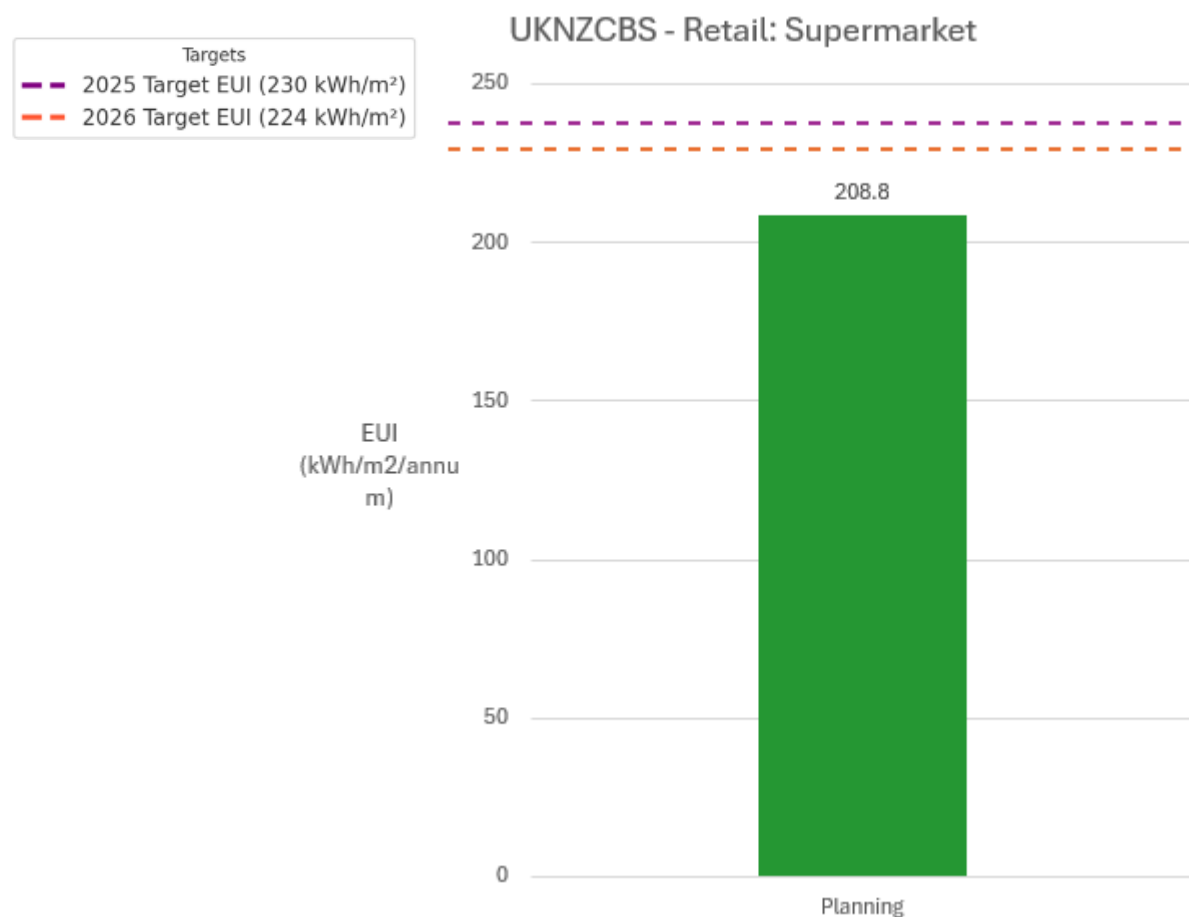


Figure 3. UKNZCBS – Retail: Supermarket Energy Use Intensity

Figure 4 displays the Energy Use Intensity for the 'Retail: F&B with Catering', assessing the Restaurant, Kitchen, Bar and Leisure zones, with an Energy Use Intensity over the UKNZCBS 2025 and 2026 targets, including a 48% improvement over the 2025 target and a 47% improvement over the 2026 target.

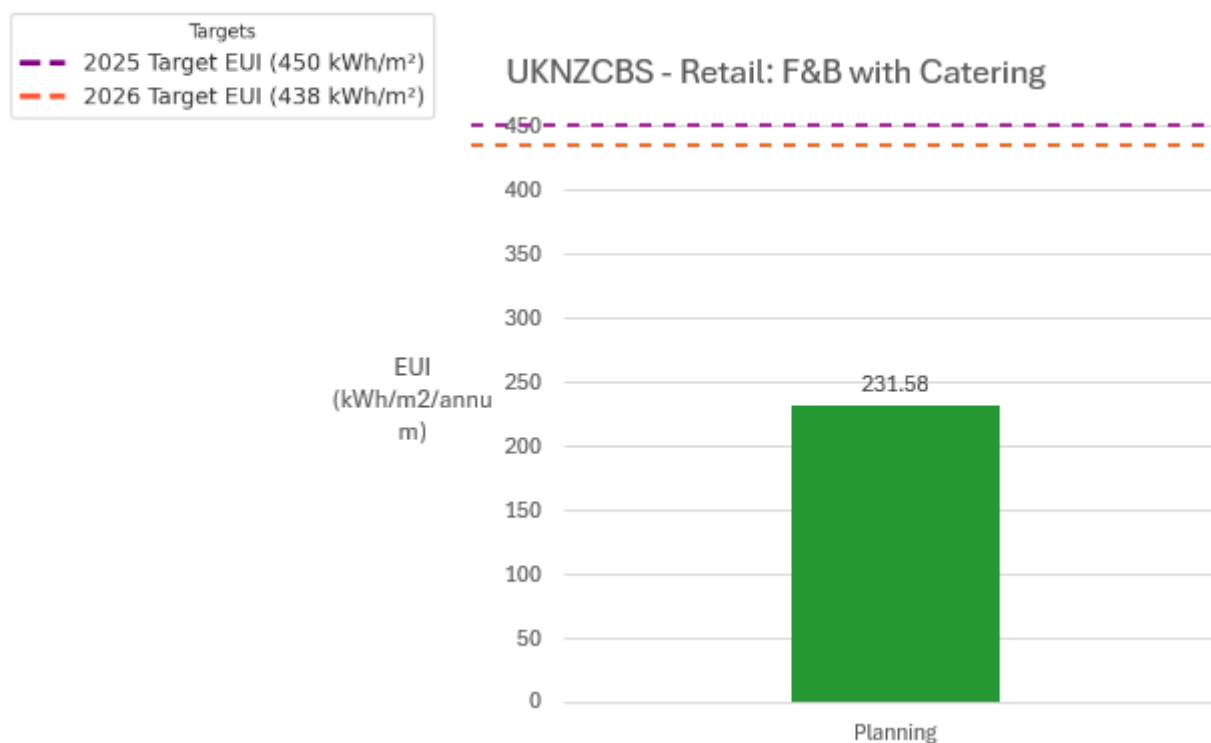


Figure 4. UKNZCBS – Retail: F&B with Catering Energy Use Intensity

Figure 5 displays the Energy Use Intensity for the 'Sports & Leisure: Fitness', assessing the Gym, Yoga and Archive Room, with an Energy Use Intensity over the UKNZCBS 2025 and 2026 targets, including a 12% improvement over the 2025 target and a 10% improvement over the 2026 target.

The 'Sports & Leisure: Fitness' zones have been assessed as full fit out 24/7 occupied gym areas.

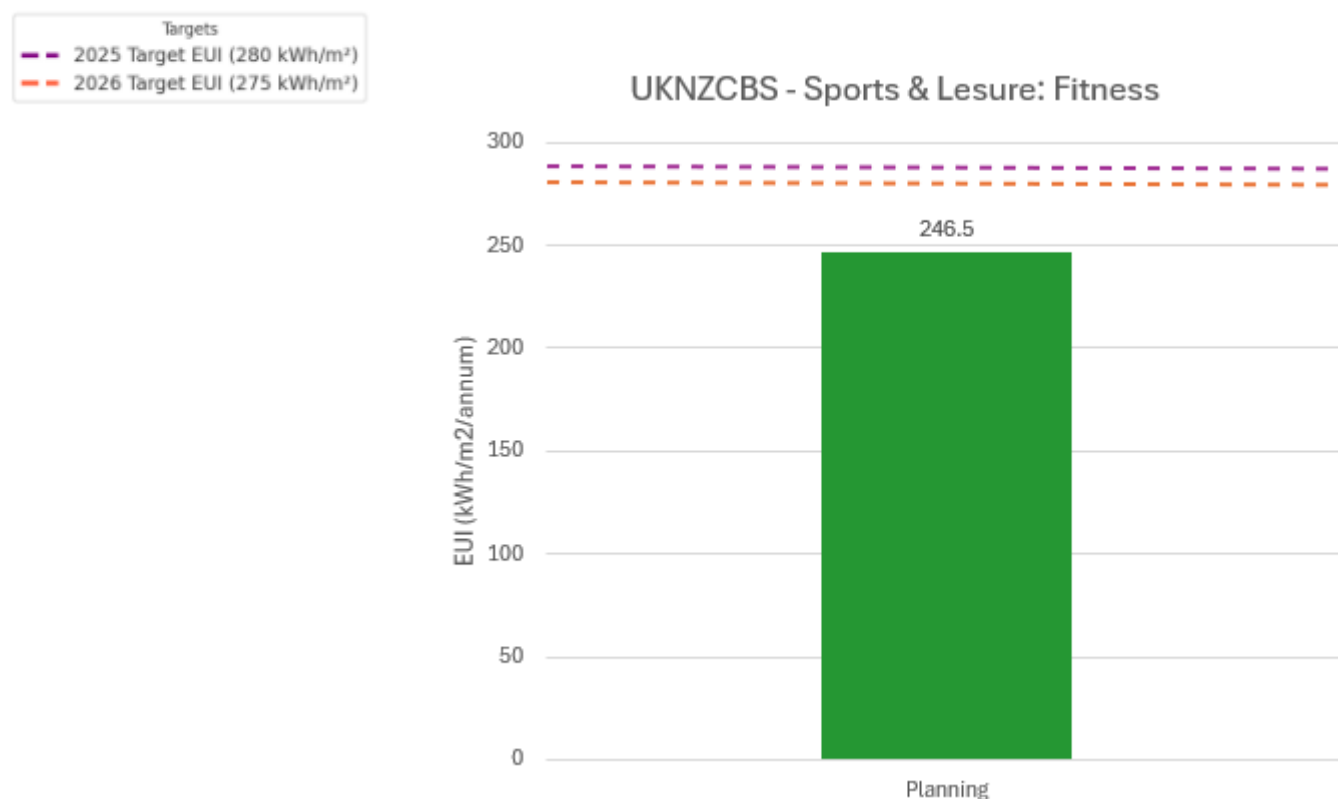


Figure 5. UKNZCBS – Sports & Leisure: Fitness Energy Use Intensity

5.1 NABERS UK

NABERS UK is an adaption of the successful rating programme NABERS that operates in Australia. Launched in 1999, NABERS is widely considered to be a world leading environmental performance rating tool for commercial buildings that gives a rating of up to six stars (the higher the more efficient). The CIS Tower development is aiming for an appropriate NABERS rating.

Figure 6 displays the Energy Use Intensity for the Offices compared to a 4.5* rating. All scenarios, except Scenario 2 (increased power load), achieve a 4.5-star rating. Scenario 08 achieves the highest margin 23.7%. Typically, a 25% margin is used at this stage, but this varies case by case and may be reduced with consent. However, the typical margin may be achieved with the current proposals once the design is developed in further detail.

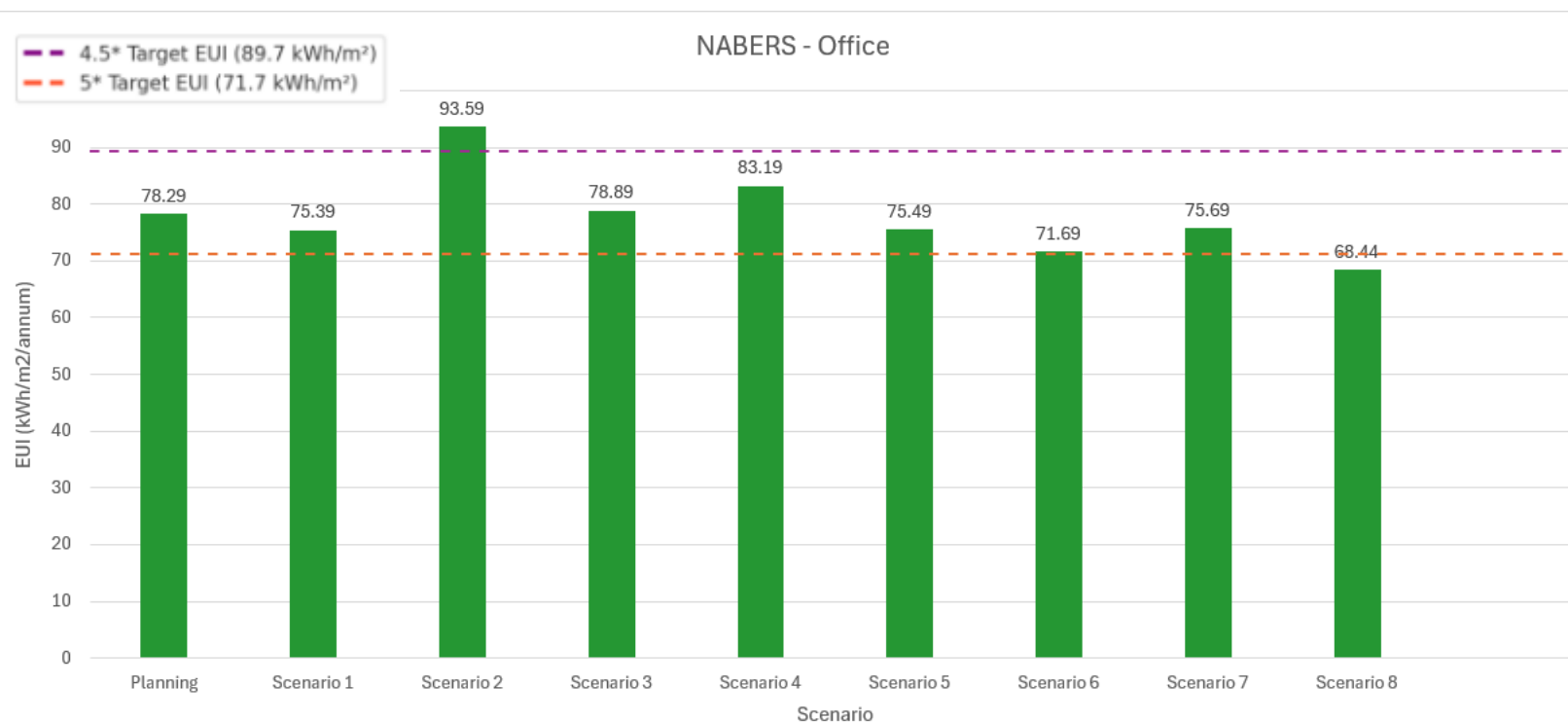


Figure 6. NABERS – Office Energy Use Intensity

6.0 Appendix 1 – UKNZCBS Existing Building Retrofit Energy Use Intensity Targets



UK Net Zero Carbon Buildings Standard

Pilot Version rev1

Table OE-2: Energy use intensity limits, Existing Building with One-Go Retrofit

← Date of commencement on site	Commercial Residential		Culture & Entertainment	Data Centres		Healthcare				Higher Ed.	Homes	Hotels	Offices (either GIA or NIA metrics may be used)				Retail				Schools				Science & Tech.	Sport & Leisure				Storage & Distribution																																					
	kWh/m²GIA/yr	Student resi.		kWh/m²GIA/yr	Care homes	kWh/m²GIA/yr	Performance	kWh/m²GIA/yr	Collection				kWh/m²GIA/yr	Archives	PUE	Low utilisation	PUE	High utilisation	kWh/m²GIA/yr	Acute Trust	kWh/m²GIA/yr	Care Trust	kWh/m²GIA/yr	Community Trust		kWh/m²GIA/yr	Mental health & Learning Trust	kWh/m²GIA/yr	Ambulance Trust	kWh/m²GIA/yr	-	kWh/m²GIA/yr	Single family homes	kWh/m²GIA/yr	Flats	kWh/m²GIA/yr	General	kWh/m²GIA/yr	Call Centres	kWh/m²GIA/yr	Trading Floors	kWh/m²GIA/yr	Supermarket	kWh/m²GIA/yr	High street retail, Department store	kWh/m²GIA/yr	F&B without catering ^a	kWh/m²GIA/yr	F&B with catering ^b	kWh/m²CPA/yr	Landlord areas ^c	kWh/m²GIA/yr	Retail warehouse	kWh/m²GIA/yr	Early years	kWh/m²GIA/yr	Primary	kWh/m²GIA/yr	Secondary incl. SEN	kWh/m²GIA/yr	-	kWh/m²GIA/yr	Dry	kWh/m²GIA/yr	Wet	kWh/m²GIA/yr	Fitness
2025	110	220	130	100	10	1.4	1.2	258	140	162	166	182	130	75	65	180	100	125	191	239	220	275	230	90	250	450	80	100	90	85	95	360	210	500	280	35	100	230																													
2026	108	216	128	98	10	1.4	1.2	259	140	163	167	182	127	74	65	176	97	122	187	234	216	270	224	87	243	438	79	97	89	84	94	351	206	490	275	34	97	221																													
2027	106	211	125	96	10	1.39	1.19	259	140	163	167	182	123	73	64	172	94	118	183	229	211	264	217	84	236	425	77	94	88	83	92	341	202	480	270	33	94	211																													
2028	103	206	122	93	10	1.38	1.18	259	140	163	167	182	119	72	64	168	91	114	179	224	206	258	210	81	228	412	75	90	86	81	90	331	198	470	264	32	90	201																													
2029	101	202	120	91	10	1.38	1.18	259	140	163	167	182	116	71	63	164	88	110	174	218	201	252	204	78	221	400	74	87	85	80	89	322	194	460	259	31	87	192																													
2030	99	197	117	89	9	1.37	1.17	259	140	163	167	182	112	70	63	160	85	107	170	213	196	245	197	75	214	387	72	84	84	79	87	312	190	450	254	30	84	182																													
2031	96	192	114	86	9	1.36	1.16	259	140	163	167	182	108	69	62	156	82	103	166	208	191	239	190	72	206	374	70	80	82	77	85	302	186	440	248	29	80	172																													
2032	94	188	112	84	9	1.36	1.16	259	140	163	167	182	105	68	62	152	79	99	162	203	186	233	184	69	199	362	69	77	81	76	84	293	182	430	243	28	77	163																													

7.0 Appendix 2 – Draft EPC: Be Lean + Be Clean + Be Green

Energy Performance Certificate
Non-Domestic Building

 HM Government

CIS Tower EPC_ Be Lean + Be Clean + Be Green
Miller Street
Manchester
M60 xxx

Certificate Reference Number:
3492-0707-2687-0009-8688

This certificate shows the energy rating of this building. It indicates the energy efficiency of the building fabric and the heating, ventilation, cooling and lighting systems. The rating is compared to two benchmarks for this type of building: one appropriate for new buildings and one appropriate for existing buildings. There is more advice on how to interpret this information in the guidance document *Energy Performance Certificates for the construction, sale and let of non-dwellings* available on the Government's website at www.gov.uk/government/collections/energy-performance-certificates.

Energy Performance Asset Rating

More energy efficient

A+

A 0-25

B 26-50

C 51-75

D 76-100

E 101-125

F 126-150

G Over 150

Net zero CO₂ emissions

20

This is how energy efficient the building is.

Less energy efficient

Technical information

Main heating fuel:

Grid Supplied Electricity

Building environment:

Air Conditioning

Total useful floor area (m²):

55255.867

Building complexity:

Level 5

Building emission rate (kgCO₂/m² per year):

8.22

Primary energy use (kWh_{eq}/m² per year):

87.87

Benchmarks

Buildings similar to this one could have ratings as follows:

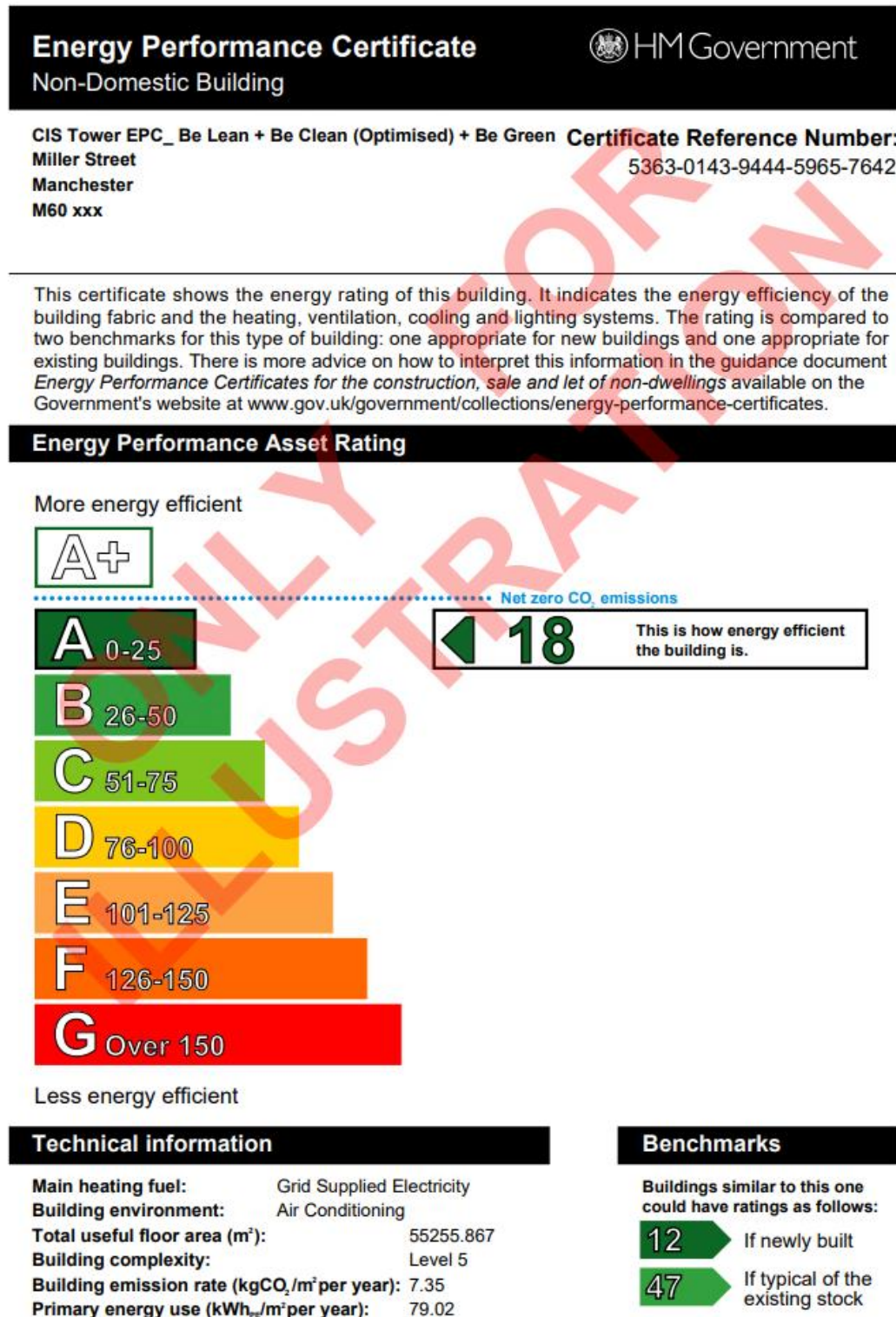
12

If newly built

47

If typical of the existing stock

8.0 Appendix 3 – Draft EPC with 40MWh PV



9.0 Appendix 4 – PV Area Drawing

