

Man 3 Construction site impacts**2 of 4 credits achieved****Credit criteria**

1 Credit available where evidence provided demonstrates that 2 or more of items a-g, listed below are achieved.

2 Credits are available where evidence provided demonstrates that 4 or more of items a-g, listed below are achieved.

3 Credits are available where evidence provided demonstrates that 6 or more of items a-g, listed below are achieved.

- a. monitor, report and set targets for CO₂ or energy arising from site activities;
- b. monitor, report and set targets for CO₂ or energy arising from transport to and from site;
- c. monitor, report and set targets for water consumption arising from site activities;
- d. implement best practice policies in respect of air (dust) pollution arising from the site;
- e. implement best practice policies in respect of water (ground and surface) pollution occurring on the site;
- f. main contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site;
- g. main contractor operates an environmental Management System.

One additional credit where evidence provided demonstrates that at least 80% of site timber is responsibly sourced and 100% is legally sourced.

Credit validation

Evidence for items a, b, c and g listed above will be provided.

Credit references

Confirmation given by Ramsden and Partners.

Further information/action

The following evidence is required.

A copy of the relevant section from main contract specification confirming:

- Contractor's obligations in respect to each item on the checklist
- Site timber will be sourced from suppliers capable of providing certification to the level required for the particular tier claimed.
- All timber will come from a 'legal source' and is not on the CITIES list*.

OR

Where the main contract specification is not yet available, a formal letter from the client/developer including:

- Completed checklist A3 identifying which items will form part of the main contractor's obligations.
- The policy for sourcing site timber for the project.
- Confirmation that the above will be implemented in compliance with BREEAM's requirements.

*Or in the case of Appendix III of the CITIES list, it has not been sourced from the country seeking to protect this species as listed in Appendix III.

Man 4 Building user guide**1 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates the provision of a simple guide that covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building.

Credit validation

Builder user guide will be provided

Credit references

Confirmation given by Ramsden and Partners.

Further information/action

ALL of the following items are required to be part of the Building User Guide:

- Building Services Information for General User (GU) and Facilities Manager (FM)
- Emergency information for the GU and FM
- Energy and Environmental Strategy for the GU
- Water Use for the GU and FM
- Transport Facilities for GU and FM
- Re-fit/re-arrangement considerations for GU
- Reporting provision for GU
- Training for GU and FM
- Energy and Environmental Strategy: Information on air tightness required for the Facilities Manager
- Materials & Waste Policy for GU and FM: Information sufficient for the recycling of paper, but no information on other recyclable materials.
- Re-fit/re-arrangement considerations for FM: recommendation to overview re-arranged office layout, but no information on re-use of materials, Green Guide "A" rated materials, etc., and the potential impact of increasing occupancy.
- Reporting provision for FM: although contact details of suppliers/installers of equipment and services are provided, the area of responsibility of each contact must be provided as well.

Man 8 Security**1 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted at the design stage and their recommendations incorporated into the design of the building and its parking facilities (if relevant).

Credit validation

The local police force will be consulted during design stage and the recommendations implemented.

Credit references

Confirmation given by Ramsden and Partners.

Further information/action

The following demonstrate compliance:

- The design team has consulted with and sought the advice of the local police *Architectural Liaison Officer (ALO)* or *Crime Prevention Design Advisor (CPDA)* on designing out the opportunity for crime, in accordance with the principles and guidance of *Secured by Design**.
- Consultation with the ALO/CPDA occurred during or prior to the *Outline Proposals* stage (RIBA stage C) or equivalent.
- The final design embodies the recommendations of the ALO/CPDA and is built to conform to the principles and guidance of *Secured by Design**

* *Secured by Design*: A policy initiative that seeks to encourage the construction industry to adapt crime prevention measures in the design of developments, to assist in reducing the opportunity for and fear of crime (<http://www.securedbydesign.com/>).

Health and Wellbeing

The following table summarises the credits awarded for this section.

The Code Credit Reference	Number of Credits Achieved	Number of Credits Available
Hea 1 - Daylighting	1	1
Hea 2 - View Out	0	1
Hea 3 - Glare Control	1	1
Hea 4 - High frequency lighting	1	1
Hea 5 - Internal and external lighting levels	1	1
Hea 6 - Lighting zones & controls	0	1
Hea 7 - Potential for natural ventilation	1	1
Hea 8 - Indoor air quality	0	1
Hea 9 - Volatile Organic Compounds	0	1
Hea 10 - Thermal comfort	1	1
Hea 11 - Thermal zoning	1	1
Hea 12 - Microbial contamination	1	1
Hea 13 - Acoustic performance	1	1
TOTAL CREDITS	9	13

Hea 1 Daylighting**1 of 1 credits achieved****Credit criteria**

Credits are awarded where evidence provided demonstrates that at least 80% of floor area is adequately day-lit.

Credit validation

Daylight factor satisfactory

Credit references

Assumption based on drawings provided by Ramsden and Partners.

Further Information/action

To achieve a credit in this section, following requirements must be met in addition to the daylight factor of 2%:

EITHER a uniformity ratio of at least 0.4

OR a view of the sky from desk height (0.7m) AND the room depth criterion $d/w + d/H_w < 2/(1-R_B)$ is satisfied, where

d = room depth

w = room width

H_w = window head height from floor level

R_B = average reflectance of surfaces in the rear half of the room

This BREEAM issue also offer an extra *innovation credit* if the project demonstrates compliance according to the following:

1. At least 80% of the floor area has an average daylight factor of 3% in multi-storey buildings and 4% in single-storey buildings.
2. The requirements outlined above concerning uniformity ratio, view of sky or room depth criterion are met. Where demonstrating compliance via uniformity ratio or point daylight factor the following minimum requirements apply:
 - A uniformity ratio of at least 0.4 or a minimum point daylight factor of at least 1.2%.

Hea 2 View out**0 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that all desks are within a 7m radius of a window.

Credit validation

The project does not comply with the requirements for this credit.

Credit references

Assumption based on drawings provided by Ramsden and Partners.

Further Information/action

Evidence required to award credit:

Drawings showing the layout of workstations; these may be notional where no final layout is possible.

If view out is provided into an internal courtyard or atrium, the desk/workstation nearest the window must be at least 10m away from the back wall of the courtyard/atrium.

Hea 3 Glare control**1 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that an occupant controlled glare control system (e.g. internal or external blinds) is fitted.

Credit validation

Internal blinds will be available for glare control.

Credit references

Confirmation given by Ramsden and Partners.

Further Information/action

Evidence required:

Confirmation of the extent and details of any glare control provision including information as to how these are controlled by the occupants

Marked up drawings showing the location of blinds

To achieve credit all windows to occupied rooms must be glare controlled.

Hea 4 High frequency lighting**1 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.

Credit validation

High frequency lighting will be specified for this project.

Credit references

Assumption by Lugus Engineering.

Further information/action

Design team must confirm that high frequency ballasts have been specified by either:

- A lighting specification OR
- Plan

Hea 5 Internal and external lighting levels**1 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained illuminance levels (in lux) recommended by CIBSE.

Credit validation

A lighting designer will be commissioned and the recommended illuminance levels will be achieved.

Credit references

Confirmation given by Ramsden and Partners.

Further information/action

Information required to award the credit:

- Illuminance levels specified in accordance with Part Two of the CIBSE Code for Lighting 2002 and its 2004 Addendum for all principal functional areas and all ancillary areas
- For areas where computer screens are used such as offices, the lighting design must comply with CIBSE Lighting Guide 7 "Lighting for Offices"
- External Lighting: Lux levels must be specified in accordance with CIBSE Guide 6 "The Outdoor Environment"

Hea 6 Lighting zones & controls**0 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that lighting, in all relevant building areas, lighting is appropriately zoned to occupant controllable.

Credit validation

Lighting designer will not be commissioned for this project.

Credit references

Confirmation given by Ramsden and Partners.

Further information/action

To achieve the credit following requirements must be met:

- Lighting in all occupied areas is zoned to allow separate control, such as
- Office and circulation spaces
- Office zones of no more than four workplaces in office areas
- Workstations adjacent to windows and other areas
- Confirmation of the control systems specified, including details of the installation and its zoning

Hea 7 Potential for natural ventilation**1 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that fresh air is capable of being delivered to the occupied spaces of the building via a natural ventilation strategy, and there is sufficient user-control of the supply of fresh air.

Credit validation

All windows are specified to be openable.

Credit references

Assumption based on drawings provided by Ramsden and Partners.

Further information/action

To achieve the credit, natural ventilation through openable windows must be allowed. Following requirements should be met:

Openable window area should be equivalent to 5% of the gross internal floor area, or the design demonstrates that the natural ventilation strategy provides adequate cross flow of air to maintain required thermal comfort conditions and ventilation rates. The latter can be calculated using ventilation design tools types recommended by CIBSE AM10 "Natural Ventilation in Non Domestic Buildings".

Hea 8 Indoor air quality**0 of 1 credits achieved****Credit criteria**

One credit where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.

Credit validation

The building is natural ventilated, but sources of external pollution are within 10m of openable windows.

Credit references

Assumption based on drawings provided by Ramsden and Partners.

Further Information/action

Requirements for the credit are:

For mechanical ventilated areas:

- Location of air intakes/outtakes is 10 m apart
- Air intake must be 20 m from sources of external pollution

For natural ventilated areas:

- Location of openable windows must be over 10 m from sources of external pollution.

Hea 9 Volatile Organic Compounds**0 of 1 credits achieved****Credit criteria**

One credit where evidence provided demonstrates that the emissions of VOCs and other substances from key internal finishes and fittings comply with best practice levels.

Credit validation

It was considered that internal finishes and fittings will not comply with best practice levels.

Credit references

Assumption by Lugus Engineering.

Further Information/action

The products (where specified) have been tested against and meet the relevant British Standards for Volatile Organic Compound (VOC) emissions.

Hea 10 Thermal comfort**1 of 1 credits achieved****Credit criteria**

Where evidence provided demonstrates that thermal comfort levels in occupied spaces of the building are assessed at the design stage to evaluate appropriate servicing options, ensuring appropriate thermal comfort levels are achieved.

Credit validation

Thermal modelling of building will be performed to assess and optimise thermal comfort levels

Credit references

Assumption by Lugus Engineering.

Further information/action

Requirements to award credit:

- A feasibility study must be carried out aiming at optimising thermal comfort
- Confirmation that thermal comfort levels meet the requirements of CIBSE Guide A.
- Thermal modelling of the building must be carried out using a software that is compliant with CIBSE AM11 and must provide a full dynamic thermal analysis

Hea 11 Thermal zoning**1 of 1 credits achieved****Credit criteria**

Where evidence provided demonstrates that local occupant control is available for temperature adjustment in each *occupied space* to reflect differing user demands.

Credit validation

Local controls will be in place to allow thermal zoning

Credit references

Assumption by Lugus Engineering.

Further information/action

To achieve the credit, following requirements must be met:

- Heating/Cooling must be designed to allow independent occupant thermal control in all separate rooms/areas (including floors) within the building
- The zoning allows separate occupant control (within the *occupied space*) of each perimeter area (i.e. within 7m of each external wall) and the central zone (i.e. over 7m from the external walls).
- Where long-lag systems are specified these are designed to service the base load only and responsive secondary heating is provided which is zoned as above