Detailed Assessment Information

Management

M1	**Commissioning**	**1 of 2 credits achievable** **Possible: 2 of 2 credits achievable**

Compliance Requirements

First Credit

Where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be passed onto sub-contractors and carried out in line with current building regulations and, where applicable, best practice such as that published by CIBSE and BSRIA.

For buildings with complex systems evidence must also be provided to confirm that a specialist commissioning agent is appointed.

Second Credit

Where evidence provided demonstrates that seasonal commissioning will be carried out during the first year of occupation, post construction. This includes the following commissioning responsibilities over a 12 month period:

- The active chilled beam and ventilation systems are considered to be complex system and the seasonal commissioning shall be undertaken by a specialist commissioning agent
- Testing of all building services under full load conditions, i.e. heating operation in mid winter, cooling operation in mid summer
- Testing of all building services under part load conditions (spring / autumn)
- Where applicable, testing should also be carried out during periods of extreme (high or low) occupancy
- Interviews with building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the system
- Recommissioning of systems (following any corrective work undertaken) and to incorporate any revisions in the operating procedures into the O&M manuals

Action Required

First Credit

Kier Building Services Engineers are to provide documentation extracts confirming the following:

- Their appointment as the Consulting Building Services Engineer (CBSE) and demonstrate their responsibilities associated with monitoring commissioning on behalf of the client, listing the relevant systems for which commissioning is required
- A specialist commissioning agent is to be appointed to carry out commissioning in line with current Building Regulations and BSRIA/CIBSE best practice guidelines

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Second Credit

Goodman International Limited is to provide contract extracts confirming that seasonal commissioning is to be undertaken by the tenant(s) during their first year of occupation, in line with the credit requirements listed above.

M4	Considerate Constructors	2 of 2 credits achievable

Compliance Requirements

First Credit

Where evidence provided demonstrates that there is a commitment to comply with best practice site management principles, e.g. signing up to the CCS (Considerate Constructors Scheme www.ccscheme.com).

Second Credit

Where evidence provided demonstrates that there is a commitment to go significantly beyond best practice site management principles, e.g. achieving a score of 32 or more out of 40 under the CCS.

Action Required

First Credit

Goodman International Limited is to provide contract extracts confirming that the Contractor is to be registered and certified under the CCS.

Second Credit

Goodman International Limited is to provide contract extracts confirming that the Contractor is to go significantly beyond best practice site management principles and achieve a total score of 32 or more under the CCS.

M5	Construction site impacts	4 of 4 credits achievable

Compliance Requirements

Part A (3 Credits)

1 credit is awarded for every two of the following construction site management principles that are undertaken:

- Commitment to monitor, report and set targets for **CO_2 production or energy use arising from site activities**
- Commitment to monitor and report **CO_2 or energy arising from commercial transport to and from the site**
- Commitment to monitor, report and set targets for **water consumption** arising from site activities
- Commitment to **monitor site construction waste**
- Commitment to **sort and recycle site construction waste**
- Commitment to adopt best practice policies in respect to **air (dust) pollution**

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- Commitment to adopt best practice policies in respect to **water (ground and surface) pollution**

Part B (1 Credit)

One credit can be awarded where all timber used during construction, including formwork, site hoardings and other temporary site timber used for the purpose of facilitating construction, is to be procured from sustainably managed sources, independently certified to a Tier 1 or 2 level as set out in the Responsible Sourcing of Materials credit, MW8, in the Materials environmental category (refer to BREEAM Checklist A7 Responsible sourcing of materials in Appendix A: Additional Guidance with respect to the definition of the Tier levels).

Action Required

Part A

Goodman International Limited is to provide contract extracts confirming that the Contractor is to implement six construction site management principles.

Part B

Goodman International Limited is to provide contract extracts confirming that the Contractor is to responsibly source all temporary site timber used during construction to a Tier 1 (defined in BREEAM Checklist A7 Responsible sourcing of materials).

M12	Building user guide	1 of 1 credits achievable

Compliance Requirements

One credit is awarded 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. The guide should cover the following areas:

- Building services information
- Emergency information
- Energy & environmental strategy
- Water use
- Transport facilities
- Materials & waste policy
- Re-fit / re-arrangement considerations
- Reporting
- Training

Action Required

The Project Team is to provide a copy of the *Building User Guide*.

OR

The Project Team is to provide correspondence confirming that a *Building User Guide* is to be developed to the required BREEAM standard.

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Health and Wellbeing

HW1	Daylighting	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that at least 80% of net lettable office floor area is adequately daylit in accordance with the guidance in the CIBSE Window Design Guide, BS8206 Part 2 and the BRE Site Layout Guide:

- An average daylight factor of at least 2% and

EITHER

- A uniformity ratio of at least 0.4 (spaces with glazed roofs, such as atria, must achieve a uniformity ratio of at least 0.7)

OR

- A view of sky from desk height (0.7m) is achieved
- The room depth criterion d/w + d/Hw<2/(1-RB) is satisfied

  d = room depth

  w = room width

  Hw = window head height from floor level

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

HW2	View out	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that all desks are within a 7m radius of a window or permanent opening (such as an atrium) providing a view.

HW3	Glare control	1 of 1 credits achievable

Compliance Requirements

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

In speculative buildings a commitment by the developer to provide an occupant controlled system of glare control, as part of their fit out works, will be acceptable.

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Action Required

Goodman International Limited is to provide contract extracts confirming that the tenant(s) are to provide internal occupant controlled blinds on all windows to occupied rooms as part of the fit out.

Scott Brownrigg is to provide details of the range/type of internal occupant controlled blinds acceptable for fit out by the tenant(s).

HW4	High frequency lighting	1 of 1 credits achievable

Compliance Requirements

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

Action Required

Kier Building Services Engineers is to provide documentation extracts confirming high frequency ballasts are to be installed on all fluorescent and compact fluorescent lamps.

HW5	Internal and external lighting levels	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with CIBSE recommendations:

Internal Lighting

- Illuminance (lux) levels are specified in accordance with Part Two of the CIBSE Code for Lighting 2002 and its 2004 Addendum
- For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7, 'Lighting for Offices'

External Lighting

- Lux levels must be specified in accordance with CIBSE Lighting Guide 6, 'The outdoor environment'

Action Required

Kier Building Services Engineers are to provide a schedule of activity areas and their associated design illuminance (Lux) levels.

Internal Lighting

Kier Building Services Engineers are to provide documentation extracts confirming that the lighting design for the principal functional ancillary areas is in accordance with Part Two of the CIBSE Code for Lighting 2002 and its 2004 Addendum.

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Kier Building Services Engineers are to provide documentation extracts confirming that the lighting design for the offices areas meets the intent of CIBSE LG7.

Goodman International Limited is to provide contract extracts confirming that the tenant(s) are to provide supplementary lighting to achieve CIBSE LG7 certification. Kier Building Services Engineers are to provide documentation extracts confirming that the necessary electrical services are to be provided to allow for the installation of the future tenant supplementary lighting.

External Lighting

Kier Building Services Engineers are to provide documentation extracts confirming that the lighting design for the external areas is in accordance with CIBSE LG6.

HW6	Lighting zones	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that lighting, in all occupied areas, is zoned to allow separate control. For offices, separate zones should be provided for (as a minimum):

- Office and circulation spaces
- Office zones of no more than four workplaces in office areas
- Workstations adjacent to windows / atria and other areas

In the case of speculative office buildings, the control system must have the capacity to be zoned as detailed above, but need not be set up for this.

Action Required

Kier Building Services Engineers are to provide electrical services lighting layout drawings/documentation extracts confirming that lighting, in all occupied areas, is zoned to allow separate control, including details of the lighting installation and its zoning controls.

HW8	Potential for natural ventilation	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that the area of openable external façade windows to all occupied areas is equivalent to 5% of the gross internal floor area and that for accommodation over 7m deep the openable windows are on opposite sides. This should have an even distribution across the office area so as to promote adequate cross ventilation.

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HW9	Internal air pollution	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.

Air-conditioned and mixed-mode buildings:

Where location of air intakes / outlets are over 10m apart to minimise recirculation AND intakes are over 20m from sources of external pollution (any roads, including site roads, car parks, other extracts or pollution sources).

HW11	Ventilation rates	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that each space within the development achieves recommended minimum fresh air rates:

- Fresh air is provided at a rate of 12 litres per second per person

Action Required

Kier Building Services Engineers are to provide documentation extracts confirming a fresh air ventilation rate of 12 litres/second per person.

HW14	Thermal comfort	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that thermal comfort levels (meeting the requirements set out in CIBSE Guide A) are assessed at design stage, this is used to evaluate appropriate servicing options and that appropriate thermal comfort levels are achieved.

Action Required

Kier Building Services Engineers are to provide documentation extracts/thermal comfort assessment results confirming that a thermal comfort assessment, utilising software that is CINBSE AM11 compliant, is to be/has been undertaken. A schedule of activity areas and their associated internal design set point temperatures is to be provided confirming that the thermal comfort levels meet the requirements set out in CIBSE Guide A.

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HW15	Thermal zoning	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that local control is available for temperature adjustment in each area to reflect differing load requirements. Zoning must allow separate occupant control of each perimeter area (i.e. within 7m of each external wall) and the central zone (i.e. over 7m from the external walls.)

Current Status

Kier Building Services Engineers, *Outline Specification of the Mechanical and Electrical* Services, clause 3.2.9, demonstrates that the fan coil units to be located in the open plan office areas are zoned for no greater than 6m x 4.5m at the building perimeter and 80m^2 for the internal areas, in accordance with BCO guidelines.

This credit is achieved.

Action Required

Kier Building Services Engineers are to provide mechanical services layout drawings/documentation extracts confirming the method of control of the fan coil units, i.e. the provision of integral return air temperature sensors to allow for independent temperature control in each fan coil unit zone.

HW16	Microbial contamination	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where:

- Evidence provided demonstrates all water and HVAC systems are designed to meet the requirements of HSE Approved Code of Practice (ACoP) L8 or CIBSE TM13

AND

- Evidence provided demonstrates that no humidification is present

Action Required

Kier Building Services Engineers are to provide documentation extracts confirming that all water systems are to be designed to meet the requirements of HSE Approved Code of Practice (ACoP) Guidance L8 or CIBSE TM13.

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HW17	Acoustic performance	0 of 1 credits achieved

Compliance Requirements

Where evidence provided demonstrates that the building design can be shown to achieve indoor ambient noise levels that fall within the following ranges in unoccupied offices:

- 35-40dB LAeqT in small offices
- 40-45dB LAeqT in medium offices
- 45-50dB LAeqT in large/open plan offices

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Energy

E1	Reduction of CO_2 emissions	6 of 15 credits achievable Possible: 8 of 15 credits achievable

Compliance Requirements

Up to 15 credits are available where evidence provided demonstrates that the building achieves a percentage improvement above the requirement for CO_2 emissions as set out in the *Approved Document Part L2A (ADL2A)* of the Building Regulations, 2006.

Credits	Percentage improvement over the requirements of the *ADL2A* of the Building Regulations, 2006
1	+1%
2	+2%
3	+4%
4	+6%
5	+8%
6	+10%
7	+12%
8	+14%
9	+18%
10	+22%
11	+30%
12	+40%
13	+50%
14	+60%
15	≥70%

Action Required

Kier Building Services Engineers are to provide calculations confirming a percentage improvement of at least 10 - 14% above the requirements of the *ADL2A* of the Building Regulations, 2006. Further, Kier Building Services Engineers are to confirm the expertise and experience of the individual carrying out the thermal modelling in compliance with the *ADL2A* of the Building Regulations, 2006.

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E2	Sub-metering of substantial energy uses	1 of 1 credit achievable

Compliance Requirements

One credit is awarded where evidence is provided to demonstrate the provision of direct sub-metering of substantive energy uses within the building. Separate energy sub-meters must be provided for the following systems (where present):

- Space Heating
- Humidification Plant
- Cooling Plant
- Fans (major)
- Lighting
- Small power (lighting and small power can be on the same sub-meter where supplies are taken at each floor/department)
- Other major energy consuming items where appropriate

Action Required

Kier Building Services Engineers are to provide an electrical services schematic/documentation extracts confirming the location and function of the sub-meters.

Kier Building Services Engineers are to provide documentation extracts confirming that the building management system (BMS) provides a breakdown of the energy use (monitoring) associated with each sub-meter.

E3	Sub-metering of areas / tenancy	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates sub-metering of energy use by tenancy/area is installed within the building (this must be at least floor-by-floor sub-metering).

Action Required

Kier Building Services Engineers are to provide an electrical services schematic/documentation extracts confirming the location and function of the sub-meters.

Kier Building Services Engineers are to provide documentation extracts confirming that the building management system (BMS) provides a breakdown of the energy use (monitoring) associated with each sub-meter.

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E4	External lighting	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates energy efficient external lighting is specified:

- 80% of external luminaires providing car park lighting, road lighting, flood lighting and sign lighting have an efficacy of at least 70 lamp-lumens/circuit-Watt
- 80% of external luminaires providing building access ways and pathways lighting have an efficacy of at least 50 lamp-lumens/circuit-Watt
- Light fittings are controlled through a time switch or daylight sensor to allow for daylight control (daylight sensor override on a manually switched lighting circuit is acceptable)

Decorative lighting and floodlighting is not exempt from the credit requirements.

Action Required

Kier Building Services Engineers are to provide documentation extracts confirming that time switches and daylight sensor controls are provided for the external lighting installation.

Kier Building Services Engineers are to provide documentation extracts/external luminaire schedule demonstrating that 80% of the external luminaires have an efficacy of at least 70 lamp-lumens/circuit-Watt for the car park lighting, road lighting, flood lighting and sign lighting, and that external luminaires for the building access ways and pathways lighting have an efficacy of at least 50 lamp-lumens/circuit-Watt.

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Transport

T1	Provision of public transport	0 of 2 credits achieved

Compliance Requirements

First Credit – Commuting During Peak Hours

One credit is awarded where evidence provided demonstrates good access is available to and from public transport networks for commuting (less than 500m from a public transport node with a service at least once every 15 minutes at peak times – 8.00am to 10am and 5.00pm to 7.00pm – to a local urban centre).

Second Credit – Business Travel Through the Day

One credit is awarded where evidence provided demonstrates there is good access to and from public transport networks for business travel (less than 500m from a public transport node with a service at least once every 30 minutes through the working day – 8.00am to 7.00pm – to a major transport node serving local and regional infrastructure systems).

T2	Transport CO_2	7 of 10 credits achieved

Compliance Requirements

Up to 10 credits are available on the basis of net CO_2 emissions resulting from commuting. The building location, NLA and number of car parking spaces are used to calculate estimated CO_2 emissions in kg/person/year.

Action Required

No further action is required.

T5	Cyclist facilities	Possible: 2 of 2 credits achievable

Compliance Requirements

First Credit

Where evidence provided demonstrates that there is adequate provision of covered, secure and well lit cycle racks and showers. The number of spaces and showers required is based on the NLA of the development.

Second Credit

Where in addition to the above, evidence provided demonstrates adequate provision of changing facilities and lockers for clothes or a dedicated drying space for wet clothes.

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Action Required

First Credit

Scott Brownrigg is to provide plan layout drawings confirming:

- 37 number cycle racks are to be provided that are covered and protected from the rain, and are designed to allow both a wheel and the frame to be locked securely to the structure ('Sheffield' type cycle racks)
- Cycle racks are to be a minimum distance of 0.8m apart for ease of movement
- Cycle racks are to be provided within 50m of the main building entrance
- Cycle racks are to be provided in a prominent location
- Lighting to the cycle store is to be provided in accordance with BS5489-1 *Lighting of roads and amenity areas*
- Three number showers are to be provided

Second Credit

Scott Brownrigg is to provide plan layout drawings confirming specially designed and designated drying spaces are to be provided with appropriate heating/ventilation.

T8	Travel plan	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that a travel plan has been developed and tailored to the specific needs of the users of the assessed development.

1. The travel plan is structured to meet the needs of the particular site and takes into consideration the findings of a site specific transport assessment that covers the following (as a minimum):
    - Current local environment for walkers and cyclists
    - Public transport links serving the site
    - Current facilities for cyclists
2. The plan demonstrates how and what measures have been, or will be taken to minimise the impact of traffic, as a result of the new development
3. The findings of the travel plan have been used to steer the design of the development in order to meet the travel plan objectives. This must be demonstrated by the design team using specific examples such as:
    - Providing parking priority spaces for car sharers
    - Providing dedicated cycle storage facilities and cycle lanes on site (adjoining lanes off site where applicable)
    - Negotiating improved bus services, i.e. altering bus routes or offering discounts
    - Restricting and / or charging for car parking

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- Making the site pedestrian friendly. i.e. safe crossing points, direct routes, well lit and sign posted to other amenities and public transport nodes

4. The travel plan addresses the following types of travel:

   - Commuter journeys
   - Business travel
   - Visitors / customers
   - Deliveries

5. The travel plan includes a package of measures that address constraints and opportunities for the following:

   - Walking
   - Cycling
   - Public transport
   - Use of the private car for travel to work
   - Mopeds / motorcycles
   - Reducing the need to travel
   - Visitors / customers
   - Deliveries

6. The findings of the travel plan have been used to steer the design of the development in order to meet the travel plan objectives

Action Required

The appointed travel consultant is to provide a *Travel Plan Heads of Terms* developed to the required BREEAM standard that advises the tenant(s) on how to develop a *Travel Plan* to their specific requirements.

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Water

W1	Water consumption	2 of 3 credits achievable

Compliance Requirements

Up to three credits can be awarded on the basis of the predicted potable water consumption for sanitary use within the building:

- 1 credit where consumption is 4.5 – 5.5m^3 per person per year
- 2 credits where consumption is 1.5 – 4.4m^3 per person per year
- 3 credits where consumption is <1.5m^3 per person per year

The calculation is determined by what is specified for the following:

- WC flush volumes
- Washbasin tap flow controls
- Urinal controls
- Shower flow rates
- Rainwater and grey water harvesting (if applicable)

Action Required

Scott Brownrigg is to provide the sanitary appliance schedule.

W2	Water meter	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that a water meter with a pulsed output will be installed on the mains supply to the building.

Action Required

Kier Building Services Engineers are to provide documentation extracts confirming that a water meter with a pulsed output is specified for the mains incoming water supply to the building.

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W3	Water leak detection	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that a leak detection system is specified or installed and is capable of identifying major leaks both within the building and between the building and the site boundary, and should cover all mains water supplies to the building. The system must be:

- Audible when activated
- Activated when a continuous flow of water passes through the water meter at a flow rate above a pre-set minimum for a pre-set period of time
- Able to identify different leakage rates, e.g. continuous, high and / or low level leaks, over set time periods
- Programmable to suit the owner / occupiers' requirements
- Where applicable, designed to avoid false alarms caused by normal operation of large water consuming plant such as chillers

Action Required

Kier Building Services Engineers are to provide documentation extracts confirming the provision of a water leak detection system on all the water supplies to the building. Technical literature is to be provided to demonstrate compliance with the requirements listed above.

The alarm is to be pre-set to monitor a continuous, high and/or low water level leak over a set period to suit the predicated average water consumption of the building. This can be altered by the facilities manager to suit the tenant.

W4	Sanitary supply shut off	0 of 1 credits achieved

Compliance Requirements

One credit where evidence provided demonstrates that proximity detection shut off is provided to the cold water supply to all urinals and WC's.

Solenoid valves must be specified for each toilet area in the building (controlling the water supply to all urinals and WC's) and these must be linked to either infra-red movement detectors or sensors placed at or on entry doors.

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Materials

MW1	Materials specification – major building elements	Possible: 3 of 4 credits achievable

Compliance Requirements

Up to four credits are available where evidence provided demonstrates that the major building elements specified have an 'A rating', as defined in the Green Guide to Specification.

Action Required

Scott Brownrigg is to provide documentation extracts confirming the specification of the major building elements, including the provision of hollow precast reinforced concrete slab for the upper floor slabs of the development.

MW3	Floor finishes	1 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that carpets and other floor finishes are specified by the future occupant or, in tenant areas of speculative buildings, where carpets or floor finishes are installed in a limited show area only.

Action Required

No further action required.

MW5	Re-use of building façade	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that at least 50% of the total facade (by area) is reused and at least 80% of the reused facade (by mass) comprises in-situ reused material.

MW6	Re-use of building structure	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's volume.

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MW7	Recycled aggregates	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates significant use of crushed aggregate, crushed masonry or alternative aggregates (manufactured from recycled materials) are specified for 'high grade' aggregate uses (such as the building structure, ground slabs, roads, etc).

MW8	Responsible sourcing of materials	1 of 3 credits achievable

Compliance Requirements

Up to three credits are awarded where evidence provided demonstrates materials used in structural and non-structural elements are responsibly sourced. The majority of materials in the following elements within the building must be responsibly sourced:

- Roof
- Frame
- Walls (external)
- Floors (ground, upper)
- Foundations / substructure
- Doors
- Windows

Action Required

Goodman International Limited is to provide contract extracts demonstrating that the Contractor is to use suppliers who can provide the necessary certification for their products (non-timber products – EMS or ISO 14001 certified at the process stage of the product; timber products – FSC/CSA/SFI certification scheme with CoC certificates).

MW12	Storage of recyclable waste	1 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that a central, dedicated storage space is provided for materials that can be recycled. This can be either within the building itself, or on site using skips (provided there is good access for collections and it is within easy reach of the building).

Action Required

No further action required.

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Land Use and Ecology

LE1	Reuse of land	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that the footprint of the proposed development largely falls within the boundary of land previously developed.

LE2	Contaminated land	0 of 1 credits achieved

Compliance Requirements

One credit is awarded where evidence provided demonstrates that the land used for the new development has, prior to development, been defined as contaminated, and where adequate remedial steps have been taken to decontaminate the site prior to construction.

LE3	Ecological value of land and protection of ecological features	Possible: 1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that the construction zone is defined as land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works.

Action Required

The appointed suitably qualified ecological consultant is to provide an *Ecology Report* confirming the land is of low ecological value and the provision of compliant protection measures for any existing features of ecological value.

The appointed suitably qualified Ecological Consultant is to demonstrate their professional status, i.e. meet the BREEAM requirements necessary to be classified as a suitably qualified ecologist.

LE4	Mitigating ecological impact	Possible: 1 of 2 credits achievable

Compliance Requirements

One Credit

One credit is awarded where evidence provided demonstrates the change in ecological value of the site, as a result of development, is less than zero and equal to, or greater than, minus nine species, i.e. a small negative change.

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Two Credits

Two credits are awarded where evidence provided demonstrates there is no negative change in the ecological value of the site as a result of development, i.e. equal to, or greater than, zero species.

Action required

The appointed suitably qualified ecological consultant is to provide calculations confirming the change in ecological value of the site as a result of the development.

LE5	Enhancing site ecology	Possible: 1 of 3 credits achievable

Compliance Requirements

First Credit

Where evidence is provided to demonstrate that the design team (or client) has:

i) Appointed a professional to advise and report on enhancing and protecting the ecological value of the site

ii) Implemented the professional's recommendations for general enhancement and protection of the site ecology

Second Credit

Where evidence is provided to demonstrate a positive increase in the ecological value of the site of up to (but not including) 6 species.

Third Credit

Where evidence is provided to demonstrate a positive increase in the ecological value of the site of 6 species or greater.

Action required

The appointed suitably qualified ecological consultant is to provide the *Ecology Report*, including the survey analysis, advice and recommendations on protection and enhancement of ecological features.

The suitably qualified ecological consultant is to demonstrate their professional status, i.e. meet the BREEAM requirements necessary to be classified as a suitably qualified ecologist.

Goodman International Limited is to provide correspondence confirming that the *Ecology Report* recommendations for general enhancement and protection of site ecology will be implemented.

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LE6	Long term impact on biodiversity	1 of 2 credits achievable Possible: 2 of 2 credits achievable

Compliance Requirements

Where evidence is provided to demonstrate that the client has committed to achieving the mandatory requirements listed below:

First Credit

- At least two of the additional requirements

OR

Second Credit

- At least four of the additional requirements

Mandatory Requirements

A suitably qualified ecologist must confirm in writing that:

- All relevant UK and EU legislation relating to protection and enhancement of ecology has been, or will be, complied with during the design and construction process
- An appropriate management plan is produced covering at least the first five years after project completion. This should include details of the scope of the management plan
- Key responsibilities, and with whom these responsibilities lie, e.g. owner, landlord, occupier, FM, other

Additional Requirements

- A 'Biodiversity Champion' has been nominated
- The relevant site workforce has been trained on how to protect the site ecology during the project
- Record and monitor actions taken to protect biodiversity throughout key stages of construction
- The client requires that a new ecologically valuable habitat, appropriate to the local area, be created
- The client requires the contractor to programme site works to minimise disturbance to wildlife
- The client requires actions to be taken to protect / enhance biodiversity
- A Biodiversity Champion must have sufficient authority and time on site to influence activities and ensure that they have minimal detrimental impact on biodiversity
- Local biodiversity expertises are sought at or before the design stage

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Action required

Mandatory Requirements

The appointed suitably qualified ecological consultant is to provide correspondence confirming that all the mandatory requirements are to be implemented.

The suitably qualified ecological consultant is to provide the site wide biodiversity management plan.

Additional Requirements

Goodman International Limited is to provide contract extracts confirming that the Contractor is to:

- Nominate a 'Biodiversity Champion' with the authority to influence site activities
- Train all relevant work-force on how to protect the site ecology during the project
- Record actions taken to protect biodiversity and monitor their effectiveness throughout key stages of the development

The appointed suitably qualified ecological consultant is to provide a site layout drawing confirming the provision of a new ecologically valuable habitat appropriate to the local area.

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Pollution

P1	Refrigerant GWP – building services	0 of 1 credits achieved

Compliance Requirements

Where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less than 5 or where there are no refrigerants specified for use in building services.

Refrigerant	GWP
R134a (HFC-134a)	1300
R407c (HCFC-407c)	1600
R290 (HC290 propane)	3
R600 (HC600 butane)	3
Ammonia	0

HFC's do not comply. HC's, ammonia and the specification of no refrigeration do comply.

P2	Preventing refrigerant leaks	0 of 2 credits achieved

Compliance Requirements

First Credit

One credit is awarded where evidence provided demonstrates that refrigerant leaks can be detected or where there are no refrigerants specified for use in the building or development.

Second Credit

One credit is awarded where evidence provided demonstrates that the provision of automatic (following the detection of a leak) refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves or where there are no refrigerants specified for the development.

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P4	Insulant GWP	Possible: 1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that the specification of building services, building fabric and sound insulating materials avoids the use of substances with a global warming potential (GWP) of 5 or more in either manufacture or composition.

Insulants blown with HFC's do not comply. Mineral wools and insulants blown with CO_2 or Pentane do comply.

Action Required

Scott Brownrigg/Kier Building Services Engineers are to provide documentation extracts confirming that all the building fabric, including internal sound proofing, and building services insulants are to have a zero ODP and a GWP < 5. This is to include the type, manufacturer and technical specification of the specified insulants.

P6	NO_x emissions of heating source	Possible: 3 of 3 credits achievable

Compliance Requirements

Up to three credits available, depending on the dry NO_x emissions from delivered space heating energy:

1 credit where dry NO_x emissions are ≤ 100 mg/kWh (at 0% excess O2).

2 credits where dry NO_x emissions are ≤ 70 mg/kWh (at 0% excess O2).

3 credits where dry NO_x emissions are ≤ 40 mg/kWh (at 0% excess O2).

Action Required

Kier Building Services Engineers are to provide documentation extracts confirming the NO_x emissions rate associated with the gas driven VRF heat recovery system is ≤ 40mg/kWh.

P7	Flood risk	2 of 3 credits achieved

Compliance Requirements

Part A (2 Credits)

Two credits are awarded where evidence provided demonstrates that the assessed development is situated in a flood zone that is defined as having a low annual probability of flooding.

OR

One credit is awarded where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium annual probability of flooding and the ground level of the building, car parking and access is at least 600mm above the design flood level for the site's location.

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Part B (1 Credit)

Where evidence provided demonstrates that Sustainable Urban Drainage (SUDS) Techniques are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site through development..

Action Required

No further action required.

P8	Minimising water course pollution	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that on site treatment such as oil separators / interceptors or filtration have been specified for areas at risk from pollution, i.e. vehicle manoeuvring areas, car parks, waste disposal facilities, delivery facilities or plant areas.

Action Required

Baynham Meikle Partnership is to provide documentation extracts/surface water drainage layout drawing demonstrating that areas at risk from pollution (vehicle manoeuvring areas, car parking areas, etc.) are provided with appropriate facilities for drainage and pollution control such as petrol interceptors, in accordance with current best practice guidelines.

P11	Renewable and low emission energy	0 of 3 credits achieved

Compliance Requirements

Part A (1 Credit)

One credit is awarded where evidence provided demonstrates that a feasibility study considering renewable and low emission energy has been carried out and the results implemented.

Part B (2 Credits)

Up to two credits are awarded where the first credit is achieved and where evidence provided demonstrates that a percentage of total energy demand for the building / development is supplied from local renewable, or low emission energy, sources.

P12	Reduction of night time light pollution	1 of 1 credits achievable

Compliance Requirements

One credit is awarded where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institution of Lighting Engineers (ILE) *Guidance notes for the reduction of obtrusive light*, 2005.

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Action required

Kier Building Services Engineers are to provide documentation extracts confirming that time switches and daylight sensor controls are provided for the external lighting installation.

Kier Building Services Engineers are to provide calculations/documentation extracts confirming that the external lighting design is in accordance with the *ILE Guidance notes for the reduction of obtrusive light*, 2005, and that the lighting in each of the external areas complies with the requirements.

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APPENDIX A – ADDITIONAL GUIDANCE

BREEAM Checklist A1 Considerate Constructors

NOTE: For each of the eight sections (below) the Considerate Constructors Scheme awards a score on a scale of 0 to 5 (with half points). The score achieved or required must be entered into boxes 1-8 below i.e. EITHER 0; 0.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; OR 5.0.

- When a firm commitment is made to achieve certification under the Considerate Constructors Scheme without reference to particular scores, a score of 3 should be entered in each of the boxes 1-8 below. This gives a total score of 24 in box 9 below and subsequently one credit can be awarded.
- When a firm commitment is made to require the constructor to achieve certification AND a score greater than 3 is required in one or more sections, the scores required should be added in boxes 1 to 8 below and totalled accordingly.

Considerate Section	Score achieved		1
Environmentally Aware Section	Score achieved		2
Site Cleanliness Section	Score achieved		3
Good Neighbour Section	Score achieved		4
Respectful Section	Score achieved		5
Safe Section	Score achieved		6
Responsible Section	Score achieved		7
Accountable Section	Score achieved		8
TOTAL Considerate Constructors Score	(Sum of 1-8)		9

Total CC score achieved is less than 24	0 credits
Total CC score is between 24 to 31.5 incl.	1 credit
Total CC score is between 32 and 40 incl.	2 credits

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BREEAM Checklist A3 Construction Site Impacts

a.	**Commitment to monitor, report and set targets for CO_2 or energy use arising from site activities**
1.	Confirmation is required that monthly measurements of energy use will be recorded and displayed on site
2.	Appropriate target levels of energy consumption must be set and displayed (targets could be annual, monthly or project targets)
3.	As a minimum monitoring must include checking the meters and displaying some form of graphical analysis in the site office to show consumption over the project duration and how actual consumption compares to the targets set
4.	The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data
Note:	
1.	Targets for energy consumption during the construction process can be set using DTI's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets (see references section of main credit for further details)
2.	BREEAM does not require targets to be met but is encouraging the process of setting monitoring and reporting against targets

b.	**Commitment to monitor and report CO_2 or energy use arising from commercial transport to and from the site**
1.	Confirmation is required that a site monitoring systems will be in place to monitor and record deliveries. This system will need to record:
a.	The number of deliveries
b.	The mode of transport
c.	The kilometres/miles travelled for all deliveries:
i.	Where the delivery is specifically for the site, a figure of total distance travelled should be used, i.e. a round trip (from the point of origin, to the site and back to the point of origin)
ii.	Where the delivery to the site is part of a multiple delivery route, the recorded figure for distance travelled should be the distance travelled to the site (from the previous delivery), plus the distance to the next delivery or return
2.	This information can then be used to estimate a total figure for kg of CO_2 for the project. BREEAM does not require this information to be converted to CO_2 but the information must be made available to the senior project and site management staff / suppliers to establish benchmarks and aid future decision making towards improving site and transport efficiency. If the project team wishes to convert this information into CO_2 emissions, there are tables provided at the end of this checklist, which can be used
3.	If the design team or contractor confirms that the project is aiming to achieve the "Construction Site Transport" 'measures for traffic movements and distances' (published April 2003, see references) then this aspect has been achieved automatically. The information obtained for this item can also be used to satisfy the DTI's Environmental KPI on transport
Note:	
1.	Please see further information below on monitoring site transport CO_2

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c.	**Commitment to monitor, report and set targets for water consumption arising from site activities**
1.	Compliance is demonstrated by the design / site management team confirming, in writing, that monthly measurements of water consumption will be recorded and displayed on site
2.	Appropriate target levels of water consumption must be set and displayed (targets could be annual, monthly or project targets)
3.	As a minimum monitoring must include checking the meters and displaying some form of graphical analysis in the site office to show consumption over the project duration and how actual consumption compares to targets set
4.	The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data
Note:	
1.	Targets for water consumption during the construction process can be set using DTI's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets (see reference section of main credit for further details
2.	BREEAM does not require targets to be met but is encouraging the process of setting, monitoring and reporting against targets

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d. Commitment to monitor site construction waste

The objective of monitoring site construction waste is to identify methods of waste reduction, reuse and/or recycling.

1. Confirmation is required that the site's construction waste is being monitored. Confirmation can either be in the form of:

a. A site specific waste policy or procedure

b. Specification

c. Letter of appointment

d. Other formally written document

2. This point can be awarded where the client or contractor confirms the BRE's SMARTStart™ system) scheme is to be used

Notes:

1. Targets for waste minimisation during the construction process can be set using DTI's Environmental KPI benchmarks or BRE's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets by providing benchmark figures (see references section for further details)

2. BREEAM does not require targets to be met but is encouraging the process of setting, monitoring and reporting against targets

3. The implementation of a Site Waste Management Plan will also help to manage the site construction waste produced. Data obtained from monitoring site construction waste can then be used to check performance against benchmarks set for site construction waste and the effectiveness of any solutions implemented

4. For details on creating a Site Waste Management Plan see DTI's Voluntary Code of Practice: Site Waste Management Plans, Guidance for Construction Contractors and Clients or alternatively continuous improvement measures such as BRE's SMARTAudit waste reduction tool can be used. In England, DEFRA are looking to regulate for the use of Site Waste Management Plans by April 2007

5. There are two Environmental KPI's used for waste generation on site. Firstly, waste from the construction process measured by waste generated in m^3 per $100m^2$ of floor area. Secondly, waste measured from the construction process by waste generated in m^3 per£100,000 of project value. Constructing Excellence produces annual benchmarks for the second KPI. Significant reductions in waste and better management can be achieved through good design, improved logistics, better on-site construction practices and reuse/recycling wherever possible. The national average figures for construction waste are still evolving. Data from all types of construction sites is continuously collected, with the aim of developing benchmarks for different types of construction and waste. BRE's SMARTWaste System automatically calculates the Environmental KPI's for a project from the waste data collected and input into the system. Environmental KPIs have been used to benchmark waste minimisation for a number of schemes, including Greenwich Millennium Village and Chiswick Park

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e.	**Commitment to sort and recycle site construction waste**
1.	Waste must either be:
a.	Recycled on site, or
b.	Sorted on site and collected for recycling
2.	Confirmation is required that the site's construction waste will be sorted into at least five of the following categories and reused/recycled as appropriate. This confirmation can be in the form of a site specific waste policy or procedure, specification, letter of appointment for a waste / recycling contractor, or other formally written document

Key Waste Group	Examples of Products in the Key Waste
Ceramics*	Bricks, ceramic tiles, day roof tiles, ceramic toilets and sinks
Inert*	Soils, clays, sand, gravel, natural stone
Metals*	Radiators, metal formwork, metal sinks, cables and wires, metal bars
Packaging	Pallets, cardboard, bubble wrap, cable drums, wrapping bands, polythene sheets
Plastic	Gutters and downpipes, DPC, uPVC windows and doors, socket boxes
Concrete*	Concrete pipes, kerb stones, paving slabs, concrete rubble, solid blocks
Insulation	Glass fibre, mineral wool, purlboard, breather paper
Miscellaneous	Office waste, canteen waste, vegetation, ad hoc materials
Plaster / Cement	Plasterboard, render, plaster, cement, fibre cement sheets, mortar
Timber*	Plywood, chipboard, noggins, battens, doors, windows, mdf, timber off cuts and surplus materials
Liquids and Oils	Hydraulic oil, engine oil, lubricating oil, transmission oil, liquid fuel, cleaning agents, mould oil
Architectural Features	Chimneys, facades, fireplaces, roof tiles and reclaimed bricks

3.	In some cases such as minor refurbishments/fit outs it will not be feasible to recycle 5 of the key waste groups. This may be because the materials are not present or because there is insufficient quantity (i.e. less than 4.5m^3 of material). In such cases the point may be awarded if all applicable groups on the list above are being reused/recycled.
4.	It should be possible to recycle the five basic materials (marked*) locally, other recyclable material groups will be dependent on local facilities / sites. Note: www.bremap.co.uk can be used to locate the nearest recycling facilities.
5.	Where space on site is too limited to allow waste materials to be segregated, a waste contractor may be used to separate and process recyclable materials off site. Where this is the case, sufficient documentary evidence must be produced which demonstrates that segregation of materials is carried out to the correct standards and that materials are reused/recycled as appropriate

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f.	**Commitments to adopt best practice policies in respect to air (dust) pollution**
1	Confirmation is required of the site's procedures to minimise air / dust pollution. This can include:
a.	'Dust sheets'
b.	Regular proposals to damp down the site in dry weather
c.	Covers to skips, etc.
2.	The site team must indicate how this information is disseminated to site operatives
Note:	
1.	DTI/BRE publications 'Control of Dust from Construction and Demolition Activities' and Pollution Control Guide Parts 1-5 provide good practice guidelines on construction related pollution (refer to References)

g.	**Commitment to adopt best practice policies in respect to water (ground and surface) pollution**
1.	Confirmation is required of the site's procedures to minimise water pollution following best practice guidelines outlined in the following documents:
a.	PPG 1 - General guide to the prevention of pollution. Environment Agency
b.	PPG 5 - Works in, near or liable to affect watercourses. Environment Agency
c.	PPG 6 - Working at demolition and construction sites. Environment Agency
2.	The site team must also indicate how this information is disseminated to site operatives

h.	**Commitment to source timber used during construction from sustainably managed sources**
1.	80% of timber used during construction, including formwork, site hoardings and other temporary site timber used for the purpose of facilitating construction, is to be procured from sustainably managed sources, independently certified by one of the top two levels as set out in the Responsible Sourcing of Materials credit, MW8, in the Materials section
2.	Re-used timber from off site can be counted as equivalent but reusable formwork only complies if it meets the above criteria
3.	This credit can be awarded where all the timber used is reclaimed timber

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Information for Monitoring Site Transport CO_2

Good Practice Guide (GPG) 273 describes types of software systems available to monitor transport routes. These systems could be adapted to provide the information requested for the transport section of this credit in addition to providing the other benefits outlined in GPG 273 (such as savings in cost and time).

The following tables are taken from the DEFRA 'Guidelines for Company Reporting on Greenhouse Gas Emissions' and COPERT II emission factors, and can be used to convert the information gathered from monitoring deliveries into total kg CO_2.

Table 1: Standard road transport fuel conversion factors					
Fuel used	**Total units used**	**Units**	**x**	**kg CO_2 per unit**	**Total kg CO_2**
Petrol		litres		2.31	
Diesel (inc. low sulphur		litres		2.68	
Compressed Natural Gas		kg		2.67	
Liquid Petroleum Gas		litres		1.51	

Source:
Guidelines for Company Reporting on Greenhouse Gas Emissions, DEFRA
National Air Emission Inventory, UK Greenhouse Gas Inventory, Digest of UK Energy Statistics DTI 1998
Greenhouse Gas Inventory Reference Manual IPPC 1996

Table 2: Standard road transport fuel conversion factors					
Size of car and distance units	**Total units travelled**	**Units**	**x**	**kg CO_2 per unit**	**Total kg CO_2**
Small Petrol Car Max 1.4 litre engine		litres		0.28	
		km		0.17	
Medium Petrol Car Max 1.4-2.1 litre engine		litres		0.36	
		km		0.22	
Large petrol car above 2.1 litres		litres		0.44	
		km		0.27	
Average Petrol Car		litres		0.33	
		km		0.20	

Source:
Guidelines for Company Reporting o Greenhouse Gas Emissions, DEFRA
COPERT II emission factors and Transport Research Laboratory data, combined with real road testing data

Table 3: Standard road transport fuel conversion factors					
Size of car and distance units	**Total units travelled**	**Units**	**x**	**kg CO_2 per unit**	**Total kg CO_2**
Small diesel car 2.0 litres and under		litres		0.19	
		km		0.12	
Large diesel car over 2.0 litres Petrol car max 1.4-2.1 litres engine		litres		0.23	
		km		0.14	
Average Diesel Car		litres		0.20	
		km		0.12	

Source:
Guidelines for Company Reporting on Greenhouse Gas Emissions, DEFRA
COPERT II emission factors and Transport Research Laboratory data, combined with real road testing data

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Table 4: Freight road mileage conversion factors							
Type of Lorry	**Total km travelled**	**X**	**Litres fuel per km**	**X**	**Fuel conversion factors**		**Total kg CO_2**
Articulated		X	0.35	X	Petrol	2.31	
				X	Diesel	2.68	
				X	LPG	1.51	
Rigid		X	0.40	X	Petrol	2.31	
				X	Diesel	2.68	
				X	LPG	1.51	

Source: Guidelines for Company Reporting on Greenhouse Gas Emissions, DEFRA
Continuing Survey of road Goods Transport 2001.

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BREEAM Checklist A4 Land of low ecological value

Section 1: Ecological features of the site			
Instruction: criteria 1.1-1.5 can be used to determine the presence of existing ecological features across the total site. However, if YES is recorded against **any** question in Section 1 for the construction zone, then it cannot be defined as land of low ecological value and the credit cannot be awarded. If the construction zone records a NO against **all** the questions in Section 1 then proceed to Section 2.			
1.1	Does the site contain any trees or hedges above 1m high or with a trunk diameter greater than 100mm?	YES ☑	NO ☐
1.2	Are there any ponds, streams or rivers on, or running through the site?	YES ☐	NO ☑
1.3	Is there any marsh or other wetland present on the site?	YES ☐	NO ☑
1.4	Are there any meadows or species-rich grassland present on the site?	YES ☑	NO ☐
1.5	Is there any heath land such as heather present on site?	YES ☐	NO ☑
Section 2: Type of land to be used for the new building			
Instruction: in addition to answering NO to all the questions in Section 1, if YES is recorded against one or more of the questions in Section 2 then the construction zone can be defined as land of low ecological value. This credit can then be awarded, as long as all features of ecological value (as defined in Section 1) in the surrounding site and boundary area are adequately protected from damage.			
2.1	Does the construction zone consist of land which is entirely within the floor plan(s) of existing building(s) or building(s) demolished within the past 2 years?	YES ☐	NO ☑
2.2	Does the construction zone consist of land which is entirely covered by other constructions such as sporting hard surfaces, car parking or such constructions which have been demolished within the past two years?	YES ☐	NO ☑
2.3	Does the construction zone consist of land which is contaminated by industrial or other waste to the extent that it would need decontamination before building?	YES ☐	NO ☑
2.4	Does the construction zone consist of land which is a mixture of either existing building, hard surfaces and/or contaminated land?	YES ☐	NO ☑
2.5	Does 80% of the land within the construction zone comply with statements 2.1, 2.2 or 2.3 and the remaining 20% of the ground area of the building extend into land which has been either: a. Used for single-crop arable farming for at least 5 years or b. Consists of regularly cut lawns and sports fields	YES ☐	NO ☑

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BREEAM Checklist A7 Responsible Sourcing of Materials – Checklist of Requirements for Tiers 1-4

Tier	Requirements	Examples of Compliant Schemes	Checklist of Documentation Required	Points
1	Third party certification scheme with CoC and rigorous stakeholder consultation (at both standard setting and during implementation). Scheme must have developed standards.	FSC CSA SFI CoC	**Design** One of the following indicating that the material will comply with the relevant certification scheme: • Letter of intent from supplier OR • Purchase order from the supplier including CoC number (if the material has been ordered) OR • Chain of Custody (CoC) certificate (if timber has already been supplied)	3
2	Third party certification scheme with CoC and stakeholder consultation. Scheme must have developed standards.	PEFC	As above	2
3	Environmental Management System at **extraction & process stages**	ISO 14001 EMAS Evidence of BS8555 (for SME's)	**Design** One of the following indicating that the material will comply with the relevant EMS standards (see credit for further information): • EMS (or equivalent) certificate from the manufacturers at the process and extraction stages OR • Signed letter from the manufacturers at the process and extraction stages confirming EMS (or equivalent) certification details OR • Letter of intent from the developer to use a manufacturer at the process and extraction stages, who has an EMS (or equivalent), if supplier is not yet appointed	1.5

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4	Certification scheme for timber. Environmental Management System at **process stages** for other materials	MTCC Verified SGS Timber TFT – Tropical forest trust EMAS ISO 14001	**Design** *Timber* One of the following indicating that the material will comply with the relevant certification scheme: • Letter of intent from supplier OR • Purchase order from the supplier including CoC number (if the material has been ordered) OR • Chain of Custody (CoC) certificate (if timber has already been supplied *Non Timber Materials* One of the following indicating that the material will comply with the relevant EMS standards (see credit for further information): • EMS (or equivalent) certificate from the manufacturers at the process stage OR • Signed letter from the manufacturers at the process stage confirming EMS (or equivalent) certification details OR • Letter of intent from the developer to use a manufacturer at the process stage, who has an EMS (or equivalent), if supplier is not yet appointed	1

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