

# Contractor's Requirements

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### Document Information

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#### Disclaimer

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#### Overview

City House, Sutton Park Road is being assessed under BREEAM New Construction Version 6 Methodology, using the Shell and Core approach.

To optimise the BREEAM 'EXCELLENT' rating for the client, the contractor will be obliged to adhere to the following requirements, which are designed for inclusion within the tender package/specifications.

Please include the statements listed in this document within the contractor's tender documents/specifications to ensure compliance with the relevant BREEAM credits and requirements.

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# Contractor's Requirements

## City House, Sutton Park Road

### Management

#### Man 03: Construction Site Impacts

##### **Timber Procurement:**

All timber and timber-based products used on site must be 'Legally harvested and traded timber', sourced from manufacturers / suppliers capable of providing chain of custody certification.

##### **BREEAM AP (site)**

The contractor and the client must formally agree performance targets. The contractor will appoint a BREEAM AP at an appropriate time and level to:

- Work with the project team and consider links between BREEAM issues and assist them in achieving the project's performance targets.
- Monitor construction progress against performance targets
- Identify risks and opportunities
- Provide feedback to the constructors
- Monitor and coordinate the appropriate evidence

##### **Responsible Construction Management:**

The contractor must complete all items in the responsible construction management checklist within Appendix A.

##### **Energy Consumption:**

The contractor must monitor and record data on energy consumption (kWh) against a target from the use of construction plant, equipment (mobile and fixed) and site accommodation necessary for completion of all construction processes. The generated CO<sub>2</sub> emissions from energy production must also be recorded. This data must be provided to the BREEAM Assessor.

##### **Water Consumption:**

The contractor must monitor and record data on water consumption (m<sup>3</sup>) against a target from the use of construction plant, equipment (mobile and fixed) and site accommodation necessary for completion of all construction processes. This data must be provided to the BREEAM Assessor.

##### **Transport of Construction Materials and Waste:**

The contractor must monitor and record data on transport movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum this will cover:

- Transport of materials from the factory gate to the building site, including any transport, intermediate storage, and distribution.
- Scope of this monitoring must cover the following as a minimum:
  - Materials used in major building elements (i.e., those defined in BREEAM issue Mat 01 Life cycle impacts), including insulation materials.
  - Ground works and landscaping materials.
- Transport of construction waste from the construction gate to waste disposal processing/recovery centre gate. Scope of this monitoring must cover the construction waste groups outlined in the project's waste management plan.

Using the collated data, the contractor will report separately for materials and waste, the total fuel consumption (litres) and total carbon dioxide emissions (kgCO<sub>2</sub> eq), plus total distance travelled (km).

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## City House, Sutton Park Road

### Man 04. Commissioning and Handover

#### Commissioning – testing schedule and responsibilities:

A schedule of commissioning and testing that identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and testing and inspecting building fabric will be provided.

The schedule will identify the appropriate standards that all commissioning activities will be conducted in accordance with, such as current Building Regulations, BSRIA and CIBSE guidelines and/or other appropriate standards, where applicable.

With regards to the BMS, the following commissioning procedures will be carried out:

- Commissioning of air and water systems is carried out when all control devices are installed, wired and functional
- In addition to air and water flow results, commissioning results include physical measurements of room temperatures, off-coil temperatures, and other key parameters as appropriate
- The BMS/controls installation should be running in auto with satisfactory internal conditions prior to handover
- All BMS schematics and graphics (if BMS is present) are fully installed and functional to user interface before handover
- The occupier or facilities team will be fully trained in the operation of the system.

An appropriate project team member will be appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client.

The principal contractor will account for the commissioning and testing programme, responsibilities, and criteria within their budget and main programme of works, allowing for the required time to complete all commissioning and testing activities prior to handover.

#### Commissioning – design and preparation:

A specialist commissioning manager will be appointed during the design stage with responsibility for:

- Undertaking design reviews and giving advice on suitability for ease of commissioning.
- Providing commissioning management input to construction programming and during installation stages; and,
- Management of commissioning, performance testing and handover/post-handover stages.

#### Handover:

Prior to handover, the main contractor must develop two building user guides for the following users:

- A non-technical user guide for distribution to the building occupiers; and,
- A technical user guide for the premises facilities managers.

A draft copy MUST BE developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. This must contain the information listed within Appendix B.

The contractor must prepare two training schedules timed appropriately around handover and proposed occupation plans for the following users:

- A non-technical training schedule for the building occupiers; and,
- A technical training schedule for the premises facilities managers.

# Contractor's Requirements

## City House, Sutton Park Road

### Health and wellbeing

#### Hea 01: Visual Comfort

##### Daylighting

The main contractor will ensure that the office areas are built to the architect's specification and all requirements to meet the results of the daylighting assessment will be constructed.

##### View Out:

The main contractor will ensure that the office areas are built to the architect's specification and that a minimum of 35% glazing compared to the surrounding wall area is applied where the floor plate is 14m deep. For other figures please refer to Table 1.0 in BS 8206.

##### External lighting:

The main contractor must ensure that all external lighting for the building is installed to provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night.

External lighting provided must be installed in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of workplaces - Part 2: Outdoor workplaces.

#### Hea 05: Acoustics

The contractor will follow the specifications to ensure the acoustic standards for Indoor ambient noise levels comply with the design ranges given in Section 7 of BS 8233: 2014. Testing must be undertaken by a compliant testing body in accordance with the acoustic testing and measurement procedures outlined on BREEAM Methodology.

#### Hea 07: Safe and Healthy Surrounds

##### Safe Access

The main contractor will ensure that the office areas are built to the architect's specification. Dedicated and safe cycle paths are provided from the site entrance to any cycle storage and connect to offsite cycle paths where applicable.

Dedicated and safe footpaths are provided on and around the site providing suitable links for the following:

- The site entrance to the building entrance
- Car parks (where present) to the building entrance
- The building to outdoor space
- Connecting to off-site paths where applicable.

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:

- Delivery areas are not accessed through general parking areas and do not cross or share; pedestrian and cyclist paths OR outside amenity areas accessible to building users and general public.
- There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking.
- 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.

##### Outside Space

There is an outside space providing building users with an external amenity area. The outside space must:

- Be appropriately sized for the number of building users
- 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.

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# Contractor's Requirements

## City House, Sutton Park Road

### Energy

#### Ene 01: Reduction of energy use & carbon emissions

##### **Energy performance:**

The main contractor must ensure that the final construction meets or exceeds the energy performance from the design stage BRUKL report.

#### Ene 02: Energy sub-metering

##### **Sub-metering of major energy consuming systems:**

The main contractor must ensure that energy metering systems will be installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. These include space heating, domestic hot water heating, humidification, cooling, ventilation, i.e., fans (major), pumps, lighting, small power, renewable or low carbon systems (separately), controls, and other major energy consuming systems (e.g., lifts) or plant.

The energy consuming systems must be metered using an appropriate energy monitoring and management system such as a BMS. The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.

##### **Sub-metering of high energy load and separate tenancy areas:**

An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system will be provided, covering a significant majority of the energy supply to high energy use areas and departments within the building.

#### Ene 03: External lighting

The main contractor must ensure that the average initial luminous efficacy of the external light fittings for the building are not less than 70 luminaire lumens per circuit Watt.

All external light fittings must be automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.

#### Ene 04: Low Carbon Design

The contractor must ensure the findings of the LDC technologies feasibility study (the most appropriate local low or zero carbon (LZC) energy source for the development) are implemented and installed within the building.

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### Transport

#### Tra 01: Transport assessment and travel plan

A travel plan has been developed as part of the feasibility and design stages, which considers all types of travel relevant to the building type and users and in line with all BREEAM requirements. The contractor must ensure that the recommendations outlined in the plan are installed and the travel plan will be handed over to building occupants upon completion.

#### Tra 02: Sustainable transport measures

All sustainable transport measures from the design stage must be installed within the final construction.

#### Compliant cycle storage spaces

Compliant cycle storage spaces are defined as those meeting the following:

- Cycles can be secured within spaces in racks with overhead covering. The cycle racks are set in or fixed to a permanent structure (building or hardstanding) or alternatively, may be located in a locked structure fixed to, or part of, a permanent structure with appropriate surveillance
- The distance between each cycle rack, and the cycle racks and other obstructions, e.g. a wall, allows appropriate access to the cycle storage space for easy storage and access to bikes
- The storage facility or entrance to the facility is in a prominent site location visible to potential users from either an occupied building or a main access to a building
- The cycle storage facility has adequate lighting; demonstrated by meeting the lighting criteria in BREEAM issue Hea 01 Visual comfort
- The lighting must be controlled to avoid out-of-hours use and operation during daylight hours, where there is sufficient daylight in or around the facility.

#### Compliant changing facilities

Compliant changing facilities are defined as those that meet the following:

- Appropriately sized for the likely or required number of users. The assessor should use their judgement to determine whether the changing area is appropriately sized given the number of cycle storage spaces or showers provided
- Account for privacy to allow cyclists of either gender to change in private
- Changing areas must include adequate space and facilities to hang or store clothing and equipment while changing or showering, e.g. bench seat or hooks
- Toilet or shower cubicles cannot be counted as compliant changing facilities.

#### Compliant drying spaces

A compliant drying space is defined as a space that is specifically designed and designated for this purpose. It should be provided with suitable finishes, adequate heating and ventilation and the facility to hang wet clothes with sufficient air movement around them to dry effectively.

Examples of non-compliant spaces:

- Plant rooms: these are not specifically designed for the purpose and their use as a drying space may create a health and safety hazard;
- Coat hooks in cloakrooms or staff changing areas: these are not specifically designed and are unlikely to provide adequate ventilation or allow sufficient air movement to dry clothing effectively.

#### Compliant lockers

Compliant lockers are defined as those meeting the following:

- The number of lockers is at least equal to the number of cycle spaces required
- Lockers are in or adjacent to compliant changing rooms, where provided
- The lockers are sized appropriately for the storage of a cyclists' equipment.

#### Compliant showers

Compliant showers are defined as those meeting the following:

- Provision of one shower for every 10 cycle storage spaces, subject to a minimum provision of one shower
- Any building providing eight showers or more complies regardless of the number of cycle storage spaces provided
- Both male and female users must be catered for, either separate showers within shared gender-specific facilities (required provision split 50-50) or single shower cubicles and changing space for mixed use
- The showers do not need to be dedicated to cyclists and can be those shared with other users or uses.

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### Water

#### **Wat 01: Water Consumption**

The contractor will meet the specification to ensure that there is a 40% improvement in water consumption against the BREEAM baseline through low water use sanitary ware.

If a rainwater harvesting system has been specified, then it must be installed in compliance with BS EN 16941-1:2018.

The following provides indicative flow rates / capacities for achieving this:

Fitting	Maximum Water Use
WCs	3.75 litres effective flush volume
Showers	6 litres/min
Urinals	1.5 litres/bowl/hour - 2 or more urinals per cistern
Taps in sanitary areas	5 litres/min
Taps in kitchenette areas	6 litres/min
Domestic scale dishwasher	12 litres/cycle
Waste disposal unit	Waterless
Domestic scale washing machine	40 litres/use

#### **Wat 02: Water Monitoring**

A pulsed water meter must be fitted on the mains supply to the building. Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area.

Each meter (main and sub) will have a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption.

The pulsed/digital water meter(s) for the new building will be connected to the existing BMS (where an existing BMS is present).

#### **Wat 03: Water Leak Detection and Prevention**

The contractor will ensure that a leak detection system is installed, which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter. The leak detection system must meet the following:

- A permanent automated system that alerts the building occupants to the leak OR an inbuilt automated diagnostic procedure for detecting leaks
- Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time.
- Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods.
- Programmable to suit the owner/occupiers' water consumption criteria.
- Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.

The contractor will ensure that flow control devices that regulate the supply of water to each WC area/facility according to demand will be installed (and therefore minimise water leaks and wastage from sanitary fittings).

#### **Wat 04: Water Efficient Equipment**

The contractor will ensure that the mitigation measures specified at the design stage regarding unregulated water use are installed.

# Contractor's Requirements

## City House, Sutton Park Road

### Materials

#### **Mat 01: Building Life Cycle Assessment (LCA)**

The contractor must ensure that the chosen measures from the design stage LCA have been implemented in the final construction.

#### **Mat 03: Responsible Sourcing of Materials and Insulation**

All timber for use on the project must be from approved, well-managed sources. For the avoidance of doubt, this is to mean that all solid timber and timber products supplied to the site or incorporated in joinery manufactured for the site are to be of known origin and accompanied by an FSC, PEFC, CSA or SFI certificate with Chain of Custody (CoC) evidence. Furthermore, all timber will come from a legal source not included on the CITES list.

The contractor must ensure that all materials procured during the construction stage will be provided from suppliers with responsible sourcing certification. The contractor must commit to ensuring that the following minimum certification levels are achieved for each different material stream specified:

- All timber and timber-based products must be FSC certified as a minimum.
- All concrete and cement products must be certified under the BES 6001 framework as a minimum.
- All metal products must have an EMS (ISO 14001) certification for the key process stage as a minimum.
- All stone or aggregate must have an EMS (ISO 14001) certification for the key process and supply chain stages as a minimum.
- All clay-based products (including pavers, blocks, bricks, roof tiles, etc.) must have an EMS (ISO 14001) certification for the key process and supply chain stages as a minimum.
- All gypsum products must be certified under the BES 6001 framework as a minimum.
- All glass products must have an EMS (ISO 14001) certification for the key process stage as a minimum.
- The specific manufacturers (and the corresponding responsible sourcing certificates) must be confirmed for each material type at the post construction stage.

Copies of certification for all materials must be provided to the BREEAM assessor. Examples of purchase orders (or similar proof of purchase) must be provided to the BREEAM assessor.

#### **Mat 05: Designing for durability and resilience**

##### **Protecting vulnerable parts of the building from damage:**

Vulnerable areas of the development have been identified internally and externally, and the contractor will ensure that they have suitable design features installed to protect them. In areas of higher risk, suitable durability, and protection measures to vulnerable parts of the building can include:

- Bollards, barriers or raised kerbs to delivery and vehicle drop-off areas
- Robust external wall construction, up to 2m high
- Corridor walls specified to Severe Duty (SD) as per BS 5234-2)
- Protection rails to walls of corridors.
- Kick plates or impact protection (e.g., trolleys) on doors
- Hard-wearing and easily washable floor finishes in heavily used circulation areas (i.e., main entrance, corridors, public areas etc.)
- Door stoppers to prevent door handles damaging walls

##### **Protecting exposed parts of the building from material degradation:**

The contractor will be required to protect exposed parts of the building from material degradation. The relevant building elements must incorporate appropriate design and specification measures to limit material degradation due to environmental factors such as solar radiation, temperature variation, water/moisture, wind, precipitation, extreme weather conditions, biological agents, and pollutants.

Material degradation examples include corrosion, swelling or shrinkage, fading/discolouration, rotting, leaching, blistering, melting, salt crystallisation, or abrasion. Please refer to BS 7543:2015 for more information.



# Contractor's Requirements

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### Waste

#### Wst 01: Construction Site Waste Management

The contractor will review the pre-demolition audit, maximise high grade reuse and recycling opportunities, make reference to the audit in the resource management plan and compare actual waste arisings with those forecasts and investigate significant deviations.

The contractor will be required to develop and update a Site Waste Management Plan (SWMP) on a regular basis. This should show that non-hazardous construction waste generated by the building's construction phase (excluding demolition and excavation waste) should not be greater than 7.5m<sup>3</sup> (or 6.5 tonnes) per 100m<sup>2</sup> of GIFA.

The Site Waste Management Plan (SWMP) must contain:

- The target benchmark for resource efficiency i.e., m<sup>3</sup> of waste per 100m<sup>2</sup> or tonnes of waste per 100m<sup>2</sup>
- Procedures and commitments for minimising non-hazardous waste in line with the target
- Procedures for minimising hazardous waste

The contractor will also be required to meet the following benchmarks in terms of diversion of waste from landfill:

Type of waste	Volume	Tonnage
Non-demolition	70%	80%
Demolition	80%	90%

Waste diverted from landfill must be either:

- Reused on site (in-situ or for new applications)
- Reused on other sites
- Salvaged/reclaimed for reused
- Returned to the supplier via a 'take-back' scheme
- Recovered from site by an approved waste management contractor for recycle.

Waste materials must be sorted into separate key waste groups either onsite or offsite through a licensed contractor for recovery.

#### Wst 02. Recycled Aggregates

The contractor will:

- Identify all aggregate uses and types on the project
- Determine the quantity in tonnes for each identified use and aggregate type
- Identify the region in which the aggregate source is located
- Calculate the distance in kilometres travelled by all aggregates by transport type.

Report the above figures to the project BREEAM assessor.

#### Wst 03: Operational Waste

The contractor will ensure that dedicated space will be provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s), and activities. This space will be:

- 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/weekly operational activities and occupancy rates.

Where it is not possible to determine what provision should be made, use the following guide for minimum storage space provision:

- At least 2m<sup>2</sup> per 1000m<sup>2</sup> of net floor area for buildings < 5000m<sup>2</sup>
- A minimum of 10m<sup>2</sup> for buildings ≥ 5000m<sup>2</sup>
- An additional 2m<sup>2</sup> per 1000m<sup>2</sup> of net floor area where catering is provided (with an additional minimum of
- 10m<sup>2</sup> for buildings ≥ 5000m<sup>2</sup>).

The net floor area should be rounded up to the nearest 1000m<sup>2</sup>.

# Contractor's Requirements

## City House, Sutton Park Road

### Ecology

#### Ecology credits (all)

The contractor will confirm compliance has been monitored against all relevant UK and EU or international legislation relating to the ecology of the site.

The contractor will liaise with the project team and collaborated with representative stakeholders to identify the optimal ecological outcome for the site.

The ecological outcome for the site will be determined by identifying, appraising, and selecting specific solutions and measures. The solutions and measures will be identified sufficiently early in the project to influence key project planning decisions and will be done in accordance with the following hierarchy of action:

1. Avoidance
2. Protection
3. Reduction or limitation of negative impacts
4. On site compensation and
5. Enhancement, considering the capacity and feasibility within the site, or where viable, off-site.

The optimal ecological outcome for the site will be selected after liaising with representative stakeholders and the project team.

The project team, liaising and collaborating with representative stakeholders and, taking into consideration data collated and shared, will propose solutions and selected measures to be implemented during site preparation and construction works. These will be implemented by the contractor. >

The contractor and relevant project team members will ensure that clear roles and responsibilities are in place and are appropriate to the scale of the project. This will allow for the implementation of the solutions and measures, in line with the delivery of the assessment requirement for this issue, incorporating:

- Responsibilities, relationships, and management required for implementation, including clear ownership of each task
- Allocation of roles and responsibilities and identification of when these apply
- Allocation of resources (including financial, time, technical and skills)
- Procedures to promote effective implementation, monitoring, and feedback for continual improvement
- Alignment with and, where relevant, integration into related activities and processes

- Effective handover and collaborative activities where responsibility is transferred and shared, including transition to long term management and maintenance arrangements.

Timescales for implementing solutions and measures will be taken into consideration, where relevant:

- Which roles and responsibilities apply
- Ecological seasonality
- Alignment with existing and planned activities and processes
- Project phasing, including existing planned activities and processes on or near the site, or in the wider local area.

Contract requirements will focus on:

- Reducing and managing potential knock-on impacts of works (e.g., pollution and disturbance) Contractual and other handover project milestones
- Long term management, maintenance, monitoring requirements and outline costs.

The project team will liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, on solutions and measures implemented to:

- Monitor and review the effectiveness with which the plans for LE 03 & LE 04 are implemented
- Develop and review management and maintenance solutions, actions, or measures.

In support of the above and to help ensure their continued relevance over the period of the project the following should be considered by the contractor:

- Monitoring and reporting of the ecological outcomes for site implemented at the design and construction stage
- Monitoring and reporting of outcomes and successes from the project
- Arrangements for the ongoing management of landscape and habitat connected to the project (on and, where relevant, off site)
- Maintaining the ecological value of the site and its relationship or connection to its zone of influence
- Maintaining the site in line with the any sustainability linked activities, e.g., ecosystems benefits (LE 02).
- Remedial or other management actions are carried out which relate to those identified in LE 02, LE 03 and LE 04.

Continues onto next page.

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As part of the tenant or building owner information supplied, the contractor will include a section on Ecology and Biodiversity to inform the owner or occupant of local ecological features, value, and biodiversity on or near the site. The information pack will include the following content, as appropriate:

- Details of the ecological value within the property boundary (e.g., public, and private gardens, green roofs), common areas (e.g., communal garden), and the surrounding area (e.g., public recreational space).
- The benefits of the ecological value to the occupants and the broader community.
- Guidance on how the occupants can make the most of the local ecology and contribute to its management, (e.g., planting ecologically appropriate species in their property), as well as things that should be avoided doing (e.g., disrupting wildlife corridors).
- Highlight relevant actions that can be taken to enhance value within the property that is owned or occupied to help ensure its ongoing management and maintenance.
- Contact details for those responsible for the management and maintenance of the local ecology and sources of local information on biodiversity and ecological management including management companies and local wildlife trusts.

Working with the ecologist, a landscape and ecology management plan will be developed in accordance with BS 42020:2013 Section 11.1 covering as a minimum the first five years after project completion and include:

- Actions and responsibilities, prior to handover, to give to relevant individuals
- The ecological value and condition of the site over the development life
- Identification of opportunities for ongoing alignment with activities external to the development project and which supports the aims of BREEAM's Strategic Ecology Framework
- Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts
- Clearly defined and allocated roles and responsibilities.

The landscape and management plan will be updated as appropriate to support maintenance of the ecological value of the site.

# Contractor's Requirements

## City House, Sutton Park Road

### Pollution

#### Pol 01: Impact of Refrigerants

##### Impact of refrigerants

The contractor will ensure that all systems with electric compressors comply with the requirements of BS EN 378:2016 (parts 2 and 3). Refrigeration systems containing ammonia must comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice.

Systems using refrigerants need to have a DELC of  $\leq 100\text{kgCO}_2\text{-eq/kW}$  cooling and heating capacity. The BREEAM assessor can provide the Pol 01 calculator tool to help with the calculation.

#### Pol 02: Local Air Quality

The main contractor must ensure that all heating and hot water is supplied by non-combustion systems. For example, only powered by electricity.

#### Pol 04 Reduction of Light Pollution

The contractor must ensure that all the external lighting comply with the following:

- The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011.
- All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00.
- The safety or security lighting used between 23:00 and 07:00 will comply with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes.
- Illuminated advertisements, where specified, will be designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements.

#### Pol 05 Noise Attenuation

A noise impact assessment will be carried out in compliance with BS 4142:2014 to determine the following noise levels:

- Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development.
- The rating noise level resulting from the proposed noise-source.

The noise level from the assessed building must be at least 5dB lower than the background noise throughout the day and night. The noise impact assessment will be carried out by a suitably qualified acoustic consultant, holding a recognised acoustic qualification and membership of UKAS. Where noise levels are above benchmarks, the contractor will install attenuation measures to meet BREEAM requirements.

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### Appendix A

Ref	Criteria	Required for two credits plus the exemplary credit
<b>Risk evaluation and implementation</b>		
The principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks, covering the following, where appropriate:		
<b>Vehicle movement</b>		
a	Manage the construction site entrance to minimise the impacts (e.g., safety, disruption) arising from vehicles approaching and leaving the development footprint.	✓
b	Ensure the development footprint is accessible for delivery vehicles fitted with safety features (e.g., side under run protection) to remove or limit the need for on street loading or unloading. Where on-street loading is unavoidable, this should be appropriately managed.	✓
c	Identify access routes to the development footprint, including for heavy vehicles to minimise traffic disruption and safety risks to others.	✓
<b>Pollution Management</b>		
d	Minimise the risks of air, land, and water pollution.	✓
e	Minimise the risks of nuisance from vibration, light and noise pollution.	✓

Ref	Criteria	Required for two credits plus the exemplary credit
<b>Tidiness and Health &amp; Wellbeing</b>		
f	Practices ensure the development footprint is safe, clean, and organised at all times. This includes, but is not limited to, facilities, materials, and waste storage.	✓
g	Ensure clear and safe access in and around the buildings at the point of handover.	✓
h	Provide processes and equipment required to respond to medical emergencies.	✓
i	The principal contractor identifies and implements initiatives to promote and maintain the health and wellbeing of all site operatives within the development footprint. This can be via site facilities, site management arrangements, staff policies etc.	✓
j	Establish management practices and facilities encouraging equality, fair treatment, and respect of all site operatives.	✓
k	Provide secure, clean, and organised facilities (e.g., changing and storage facilities) for site operatives within the development footprint.	✓
<b>Security processes</b>		
l	Minimise risks of the site becoming a focus for antisocial behaviour in the local community (e.g., robust perimeter fencing, CCTV, avoid creating dark corners etc.).	✓

# Contractor's Requirements

## City House, Sutton Park Road

Ref	Criteria	Required for two credits plus the exemplary credit
<b>Training, awareness, and feedback</b>		
m	Aspects of the construction process that might impact the community are communicated regularly, ensuring that nuisance and intrusion are minimised.	✓
n	Ensure ongoing training is provided, and up to date, for personnel and visitors (covering items a to l above, as appropriate.)	✓
o	The principal contractor ensures that site operatives are trained for the tasks they are undertaking (including any site-specific considerations).	✓
p	The fleet operators undertake driver training and awareness to promote safety within the development footprint and off site.	✓
<b>Monitoring and reporting</b>		
<b>The principal contractor ensures:</b>		
q	The fleet operator captures and investigates any road accidents, incidents and near misses and reports them back to the principal contractor. The principal contractor analyses these items.	✓
r	All visitor, workforce and community accidents, incidents and near misses are recorded, and action is taken to reduce the likelihood of them reoccurring.	✓
s	Processes are in place to facilitate collecting and recording feedback from the community and to address any concerns related to the development footprint.	✓

# Contractor's Requirements

## City House, Sutton Park Road

### Appendix B

Building User's Guide	Required Contents List
Overview of Building and its Environmental Strategy	Energy / water / waste efficiency policy / strategy and how users should engage with / deliver the policy/strategy.
Shared Facilities	Provision of and access to shared facilities
Safety and Emergency Information	Safety and emergency information / instructions
Operational Procedures	Building related operational procedures specific to building type / operation e.g., labs.
Reporting arrangements	Building related incident reporting/feedback arrangements
Provision of and access to transport facilities	Provision of and access to transport facilities e.g., public transport, cyclist facilities, pedestrian routes etc.
Provision of and access to local amenities	Provision of and access to local amenities.
Links, references, and relevant contact details	Links, references, and relevant contact details
<b>Additionally, for the building occupiers' guide:</b>	
Building Services	Building Services
Access and Security	Access and Security
<b>Additionally, for the facilities managers' guide:</b>	
Building Services	The building services overview and access to controls (where to find them, what they control, how to operate effectively and efficiently etc.)
Re-fit, refurbishment, and maintenance arrangements	Re-fit, refurbishment, and maintenance arrangements / considerations
Training information / links	Building related training information / links
Ecology	Information on ecological feature maintenance