



Sustainability Statement

Batch No: 001

Date: 02/18

MADE BY ETUDE

Introduction	3
Scheme Overview	4
Policy Context	5
Environmental Assessments	9
Water Efficiency	12
Flood Risk & Drainage	14
Operational Waste	15
Ecology	16
Transport & Connectivity	17
Materials	19
Energy & CO ₂ Reduction	20
Health & Wellbeing	21
Reducing Pollution	22
Summary of Sustainability Commitments	23

Introduction

Purpose

This Sustainability Statement has been prepared by Etude on behalf of Workspace to support the redevelopment of the Chocolate Factory,.

- Full planning permission is sought for the partial demolition, extension and change of use (in part) of the Chocolate Factory buildings.
- Demolition of the remaining buildings and redevelopment to create three new build blocks ranging in height from three up to 17 storeys.

Overall, the proposed Chocolate Factory development will be a mixed use development comprising 10,657sqm (GIA) of commercial floor space (flexible use classes A1, A3, B1, D1 and D2) and 230 Class C3 residential units with associated residential and commercial car parking, public realm works and access.



Rendering of the proposed redevelopment of The Chocolate Factory

Aims

The aim of this document is to demonstrate that sustainable design standards are integral to the development proposals for the Chocolate Factory and that they have been considered at the very beginning of the design process.

In particular, this document sets out how the proposed development will:

- Be energy efficient and minimise carbon emissions;
- Use water efficiently;
- Encourage waste recycling;
- Improve biodiversity;
- Minimise pollution;
- Improve Health & Wellbeing;
- Minimise the environmental impact of construction works.

Sustainability Statement | The Chocolate Factory

This report is split up into three sections:

1.

An overview of the policy context in terms of sustainable design and construction

2.

A summary of the sustainable design measures proposed for The Chocolate Factory.

3.

The main commitments proposed for the Chocolate Factory

This Sustainability Statement also includes the following detailed assessment as appendices:

Appendix A	Operational waste management strategy
Appendix B	BREEAM refurbishment pre-assessment of Block A
Appendix C	BREEAM new construction pre-assessment of Block F
Appendix D	Indicative Code for Sustainable Homes pre-assessment for Blocks B, D and E
Appendix E	Indicative Code for Sustainable Homes / Homes Quality Mark comparison

The following detailed reports have also been submitted in support of the full planning application and should be referred to for further details:

- Design and Access Statement,
- Energy Statement (including a detailed energy analysis),
- Transport Assessment and Travel Plan;
- Acoustics report;
- Drainage and Flood Risk Assessment;
- Environmental Statement.

A meeting was held at Haringey Council in March 2016 to review the progress and targets proposed for the scheme.

Existing Site

The site is located south east of Wood Green station and is well served by a number of transport links, including Wood Green Tube Station and Alexandra Palace Train station with a calculated Public Transport Accessibility Level (PTAL) of 4.

Proposed Site

Workspace is seeking to redevelop the Chocolate Factory and adjacent buildings in order to provide a mixed use development comprising 10,657sqm (GIA) of commercial floor space (flexible use classes A1, A3, B1, D1 and D2) and 230 Class C3 residential units.



The Chocolate Factory - Existing site map



The Chocolate Factory - Proposed site drawing



The Chocolate Factory - Current street view



Rendering of the proposed redevelopment of The Chocolate Factory

Background

The importance of sustainable design and construction is increasingly the focus of regulations and national, regional and local policies and planning guidance. This section summarises some of the key themes from each document. Key points have been highlighted.

The London Plan (2016)

The London Plan sets a strategic plan for the development of London by integrating economic, environmental, transport and social framework. It states that the purpose of the planning system is to contribute to the achievement of sustainable development.

This document touches on many aspects of sustainability: it sets a target of **zero carbon for all new residential developments, a 35% CO₂ reduction over Part L 2013 for all non-residential developments**, incentivises connections to decentralised energy networks, and gives guidance to avoid the risk of overheating. Other sustainability aims include the use of recycled aggregates, sustainable urban drainage systems (SUDS) and green roofs.

The GLA Sustainable Design and Construction SPG states the importance of urban greening, carbon offsetting mechanisms, air quality, pollution control, and resilience flooding.

Haringey's Local Plan: Strategic Policies 2013-2026 (2013 with proposed alterations 2017)

The Local Plan sets out a vision and key policies for the future development by taking into consideration the Haringey's Sustainable Community Strategy and other plans and strategies.

Chapter 4 (an *Environmentally Sustainable Future*) covers the key policies

SP4 Working towards a Low Carbon Haringey

SP5 Water Management and Flooding

SP6 Waste and Recycling

SP7 Transport.

SP4 Working towards a Low Carbon Haringey

Over the life time of the Local Plan, reducing energy use in buildings and working towards a low carbon borough will be one of the key challenges facing Haringey. The Council will promote the measures outlined below to reduce carbon emissions from new and existing buildings.

1. In line with London Plan policy, the Council will promote and require all new developments to take measures to reduce energy use and carbon emissions during design, construction and occupation, by incorporating the following measures:

a. From 2011 onwards, all new residential development will achieve a minimum 25% reduction in total (regulated) CO₂ emissions in line with Code for Sustainable Homes Level 4 energy standards, and should aim to achieve Level 6. **All new residential development shall be zero carbon from 2016 onwards;** and

b. From 2011 onwards all new non-residential development shall be built to **at least BREEAM "very good" standard and should aim to achieve BREEAM "excellent"** or the current nationally agreed standard. All new non-residential development shall be zero carbon from 2019.

2. The Council will promote low- and zero-carbon energy generation through the following measures:

a. Requiring all developments to assess, identify and implement, where viable, site-wide and area-wide decentralised energy facilities including the potential to link into a wider network;

b. Establishing local networks of decentralised heat and energy facilities by requiring developers to prioritise connection to existing or planned networks where feasible;

c. Working with neighbouring boroughs and other partners to explore ways of implementing sub-regional decentralised energy networks including the potential in the Upper Lee Valley Opportunity Area; and

d. All new developments are required, where viable, to achieve a reduction in predicted carbon dioxide emissions of 20% from on site renewable energy regeneration, which can include connections to local sources of decentralised renewable energy.

Planning policy and guidance



The London Plan (2016)



Haringey's Local Plan: Strategic Policies 2013 - 2026 (2017)



Haringey's Local Plan: Development Management Policies (2017)



Haringey's Site Allocations DPD (2017)



Emerging Wood Green Area Action Plan (2017)

SP5: Water Management and Flooding

The Council will require all development in Haringey to be water efficient during construction and operation and to reduce all forms of flood risk. All development shall:

- Improve the water environment, water quality and drainage systems;
- **Minimise water use** and illustrate how development would contribute to general and flash flooding;
- Take account of flood risk vulnerability classification as set out in paragraph 100 of the NPPF and will apply the NPPF Sequential Test and Exception Test;
- **Implement measures to prevent (or mitigate as last resort) local surface water and downstream flooding;**
- Implement Sustainable Drainage Systems from strategic to individual site level to improve water attenuation, quality and amenity;
- Restore and enhance the Blue Ribbon Network including Pymmes Brook, Moselle Brook, the River Lee and its tributaries, deculverting wherever feasible, to improve water quality and amenity of these waterways and to help reduce flood risk (in line with London River Action Plan); and
- Require higher resilience and levels of flood protection for critical infrastructure to ensure the protection of essential services such as water and power.

SP6 Waste and Recycling

The Council supports the objectives of sustainable waste management set out by the Government in PPS10 Planning for Sustainable Waste Management and the Mayor's London Plan. To achieve these, the Council shall:

- Safeguard existing waste sites unless compensatory provision is made;
- Maximise self-sufficiency in waste management capacity;
- **Seek to minimise waste creation, increase recycling rates in relation to commercial, industrial and municipal waste in order to achieve the Mayor's recycling targets;**
- Address waste as a resource and look to disposal as the last option, in line with the Mayor's waste hierarchy;
- Require integrated, well-designed recycling facilities to be incorporated into all new developments;
- Monitor changes in the stock of waste management facilities, waste arisings, and the amount of waste recycled, recovered and going for disposal; and
- Continue working with its partners in the North London Waste Authority to adopt the North London Waste Plan (NLWP) which has identified locations suitable for waste management facilities to meet the London Plan apportionment of 1.9m tonnes and the Haringey apportionment of 237,000 tonnes.

Haringey will require Site Waste Management Plans for all major applications to identify volume and types of demolition and construction waste and to demonstrate how waste will be minimised and managed during construction and occupation

Local Plan: Development Management DPD (2017)

The London Plan and the Strategic Policies Local Plan respond to the issue of climate change, both through promoting mitigation and adaptation measures. The Plans seek to ensure that new development incorporates the latest sustainable design and construction methods, particularly to improve the energy performance of buildings and reduce carbon emissions, as well as to reduce and mitigate flood risk.

The Development Management Local Plan (DMLP) sets out detailed, generally criteria-based, proposed planning policies which the Council will be using to assess planning applications.

Section 4 Environmental Sustainability sets out further detailed requirements to guide proposals for new development, helping to ensure that they are built to the highest environmental standards, fully optimise opportunities for more sustainable energy provision, and proactively respond to flood and water management (including drainage) needs in Haringey's highly urbanised setting. It also includes environmental protection policies including for the management of air quality, noise and light pollution, contaminated land and hazardous substances.

The key following requirements should be noted:

POLICY DM21:

SUSTAINABLE DESIGN, LAYOUT AND CONSTRUCTION

A All new development, including building and landscape works, will be expected to consider and implement sustainable design, layout and construction techniques. Proposals should:

- Apply the energy hierarchy to minimise energy use in order to meet, and if possible exceed, minimum carbon dioxide reduction requirements;
- Apply the cooling hierarchy to reduce the potential for overheating and limit reliance on mechanical air conditioning systems;
- Maximise opportunities to enhance biodiversity on-site, including through appropriate landscaping, Sustainable Drainage Systems, living roofs and green walls
- Wherever possible, use building materials with high environmental performance ratings; and
- Seek opportunities for locally sourced labour.

B The Council will support appropriate measures to sustainably retrofit existing homes and non-residential buildings.

C Proposals that fail to demonstrate adequate consideration for sustainable design, layout and construction techniques will be resisted.

D Consideration will be given to the use of carbon offset payments, to be secured by planning obligations, where it can be demonstrated that proposals are unable to meet carbon dioxide emission reduction targets on-site.

The additional requirement should also be noted:

Applicants will be expected to undertake dynamic thermal modelling to ensure that the development does not overheat. This is particularly important for south facing dwellings, top floor living accommodation and development proposed for users that are more susceptible from overheating risk (elderly, long term sick, young children). The GLA has developed with the Chartered Institute of Building Services Engineers (CIBSE) guidance for developers to address the risk of overheating in buildings. This document is titled 'TM49: Probabilistic design summer years for London'. This dynamic modelling should address future temperatures likely to be experienced over the lifetime of the development. Alongside this model applicants should submit evidence showing how the principles of the cooling hierarchy have influenced the design.

POLICY DM22: DECENTRALISED ENERGY

A Subject to other policy requirements, proposals that contribute to the provision and use of Decentralised Energy network infrastructure will be supported.

B Communal energy systems

- a) All major development should incorporate site-wide communal energy systems that serve all energy demands within the development from a common system, irrespective of whether it is connected to a DE network.

- b) All development that incorporates site-wide communal energy systems should optimise opportunities for extending such systems beyond the site boundary to supply energy to neighbouring existing and planned future developments.

C Existing and planned future DE networks

- a) All development proposals should prioritise connection to existing or planned future DE networks.
- b) All major development located within 500 metres of an existing DE network, and minor new-build development located within 25 metres, will be expected to secure connection to that network.
- c) All major development located within 500 metres of a planned future DE network, which is considered by the Council likely to be operational within 3 years of a grant of planning permission, will be expected to secure connection to that network.
- d) Where connection to an existing or planned future DE network is expected, applicants must submit a feasibility assessment so the Council can determine whether a connection is technically feasible and financially viable.

D DE network 'connection zones'

- a) All major development located within 500 metres of a DE network 'connection zone' should be designed for connection to a DE network.
- b) All minor new-build development located within 25 metres of a DE network 'connection zone' should be designed for connection to a DE network.

E Customer charters

Where site-wide communal and district heating systems are operational, the Council will strongly encourage heat and energy service providers to enter into customer charters with domestic and micro-business customers.

POLICY DM23: ENVIRONMENTAL PROTECTION

Air Quality

A All development proposals should consider air quality and be designed to:

- a) Improve or mitigate the impact on air quality in the Borough; and
- b) Improve or mitigate the impact on air quality for the occupiers of the building or users of the development.

B Air quality assessments will be required for all major development and other development proposals, where appropriate.

C Where adequate mitigation is not provided planning permission will be refused.

Noise and Vibration

D The Council will seek to ensure that new noise sensitive development is located away from existing or planned sources of noise pollution. Potentially noisy developments may be refused if it cannot be suitably demonstrated that measures will be implemented to mitigate its impact.

E A noise assessment will be required to be submitted if the proposed development is a noise sensitive development, or an activity with the potential to generate noise.

Light Pollution

F Development proposals that include external lighting must mitigate potential adverse impacts from such lighting. Where appropriate, proposals will be required to submit details demonstrating that external lighting is:

- a) Appropriate for its purpose in its setting;
- b) Designed to minimise and provide protection from glare and light spillage, particularly to sensitive receptors such as residential properties and natural habitats, including watercourses; and
- c) Energy efficient.

Contaminated Land

G Proposals for new development will only be permitted where it is demonstrated that any risks associated with land contamination, including to human health and the environment, can be adequately addressed in order to make the development safe.

H All proposals for new development on land which is known to be contaminated, or potentially contaminated, will be required to submit a preliminary assessment to identify the level and risk of contamination and, where appropriate, a risk management and remediation strategy.

Hazardous Substances

I Proposals for development of new hazardous installations, or development of sites located within the vicinity of existing installations, will only be permitted where it is demonstrated that necessary safeguards are incorporated to ensure the development is safe.

POLICY DM24: MANAGING AND REDUCING FLOOD RISK

A The Council will ensure that all proposals for new development avoid and reduce the risk of flooding to future occupants and do not increase the risk of flooding.

B All proposals for new development within Flood Zone 2 and 3a will be required to provide sufficient evidence for the Council to assess whether the requirements of the Sequential Test and Exception Test, where required, have been satisfied. Proposals must be informed by a site specific Flood Risk Assessment (FRA) taking account of all potential sources of flooding and should:

- Demonstrate the application of a sequential approach for the development of individual sites to ensure that the most vulnerable land uses are located in areas of the site that are at lowest risk of flooding;
- Preserve overland flood and flow routes and ensure there is no net loss of flood storage. Adequate flood storage and compensation should be provided on site, or if this is not possible, provided off site where circumstances allow;

- Where appropriate, set out the mitigation measures that will be incorporated on site to manage residual flood risk including:
 - Finished floor levels set no lower than 300mm above the 1 in 100 chance in any given year, including an allowance for climate change, flood level; and
 - Ensure safe access and egress for future users of the development or an appropriate emergency evacuation plan.
- Contribute to naturalising watercourses where opportunities arise, in line with Policy DM28 (Watercourses and Flood Defences).

C All proposals for new development will be required to:

- Manage and reduce surface water run-off, in line with Policy DM25 (Sustainable Drainage Systems) and Policy DM26 (Critical Drainage Areas);
- Manage water and waste water discharges, in line with Policy DM29 (On-site Management of Waste Water and Water Supply).

D With the exception of water compatible uses and essential infrastructure, development in areas designated in Haringey's Strategic Flood Risk Assessment as being within Flood Zone 3b will not be permitted.

POLICY DM25: SUSTAINABLE DRAINAGE SYSTEMS

A All proposals for new development must seek to manage surface water as close to its source as possible in line with the London Plan drainage hierarchy.

B The Council will require Sustainable Drainage Systems (SuDS) to be sensitively incorporated into new development by way of site layout and design, having regard to the following requirements:

- All major development proposals will be required to reduce surface water flows to a greenfield run-off rate for a 1 in 100 year critical storm event;
- All minor development proposals should aim to achieve a greenfield run-off rate and, at a minimum, achieve a 50 per cent reduction on existing site run-off rates;

- All other development should seek to achieve a greenfield run-off rate and include at least one 'at source' SuDS measure resulting in a net improvement in water quantity or quality discharging to a sewer; and
- For all development where a greenfield run-off rate cannot be achieved justification must be provided to demonstrate that the run-off rate has been reduced as much as possible.

C Where Sustainable Drainage Systems are implemented they will be expected to:

- Meet the requirements set out in the Council's relevant local standards and guidance, or national standards where agreed;
- Incorporate measures identified in the Surface Water Management Plan;
- Be designed to maximise biodiversity
- and local amenity benefits, and where appropriate, ensure that SuDS techniques provide for clean and safe water at the surface;
- Improve water quality; and
- Function effectively over the lifespan of the development.

D Where SuDS cannot be implemented due to site constraints (such as land contamination or space limitations) robust justification must be provided along with proposed alternative sustainable approaches to surface water management.

Headline requirements

The residential element of these scheme must achieve zero carbon (i.e. minimum 35% on site reduction on Part L 2013 with residual regulated carbon emissions being offset by a s106 contribution)

The non-residential element of the scheme must achieve a 35% carbon reduction over the baseline.

The non-residential element of the scheme must achieve BREEAM Very Good and aim at BREEAM Excellent.

The residential overheating risk should be assessed.

BREEAM Non-Domestic Refurbishment 2014

BREEAM (2014) is an Environmental Assessment Methodology developed and administered by the BRE and is aimed at new non-residential constructions.

A BREEAM New Construction 2014 pre-assessment is included in the Appendix for each block. Its purpose is to reduce a building's impact on the environment by:

- Incorporating beneficial management processes (e.g. considerate construction);
- Improving health and wellbeing (e.g. comfort, amenity, accessibility)
- Reducing energy use and CO₂ emissions;
- Promoting sustainable modes of transport;
- Reducing potable water use;
- Promoting responsibly sourced materials with the lowest environmental impact;
- Managing construction and operational waste;
- Enhancing the site's ecology;
- Minimising pollution.



BLOCK A - BREEAM Refurbishment 2014 'Very Good'

The existing Blocks B and C built during the early 20th Century will be refurbished and joined in order to create the new 'Block A', focal point at the centre of the Masterplan for the area. The refurbishment is targeting a **Very Good rating** under the **BREEAM UK Refurbishment 2014 methodology**. This is compliant with planning policy and considered appropriate as it is a refurbishment.

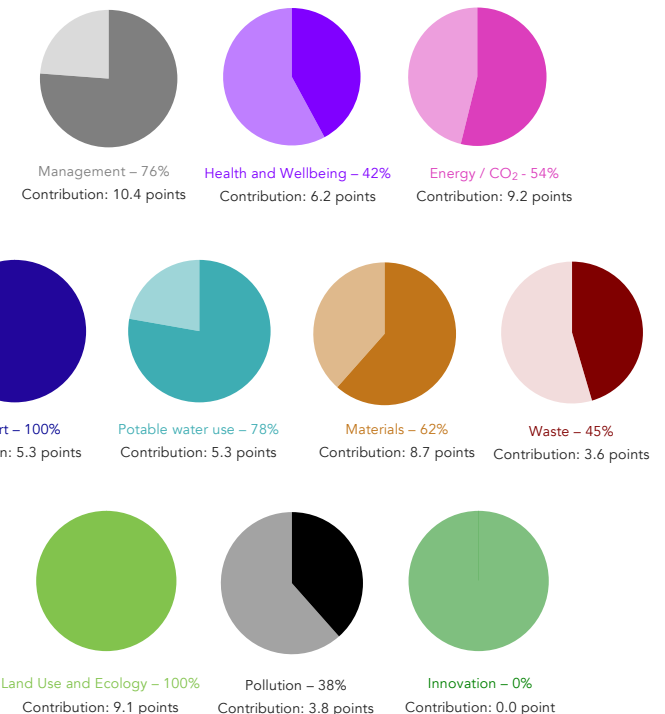
A BREEAM UK Refurbishment 2014 pre-assessment is included in the appendix. It has been prepared by Etude on behalf of Workspace to allow an initial evaluation of the likely rating to be achieved under a formal assessment. It indicates that a rating of Very Good can be achieved. The following targeted credits should particularly be noted:

- The improved building fabric and services, combined with the integration to the potential community heating system should lead to a significant improvement in terms of energy performance;
- Opportunities to re-use as much as possible for the building fabric and structure will be investigated.
- Water-efficient fittings, a leak detection system and flow control devices coupled with isolation valves should reduce water consumption;
- Cyclist facilities (including showers and changing facilities) should be provided;
- A pre-demolition audit should be carried out early during design development and best practice procedures should be put in place to manage the environmental impact of construction (e.g. Considerate Constructors Scheme, Monitoring) and of materials (Green Guide, Responsible sourcing);
- Cyclist safety and consultation on Secured by Design should inform the design.

Based on the assumptions summarised in this pre-assessment report, a score of 62.1% is achieved, i.e. 7.1% above the minimum score required to achieve a rating of Very Good under BREEAM 2014 Refurbishment (i.e. 55%).



BREEAM 'Very Good'



BREEAM New Construction 2014

BREEAM (2014) is an Environmental Assessment Methodology developed and administered by the BRE and is aimed at new non-residential constructions.

A BREEAM New Construction 2014 pre-assessment is included in the Appendix for each block. Its purpose is to reduce a building's impact on the environment by:

- Incorporating beneficial management processes (e.g. considerate construction);
- Improving health and wellbeing (e.g. comfort, amenity, accessibility)
- Reducing energy use and CO₂ emissions;
- Promoting sustainable modes of transport;
- Reducing potable water use;
- Promoting responsibly sourced materials with the lowest environmental impact;
- Managing construction and operational waste;
- Enhancing the site's ecology;
- Minimising pollution.



BLOCK F - BREEAM New Construction 2014 'Excellent'

Block F and Block I at the Chocolate Factory are targeting an **'Excellent'** rating under the **BREEAM UK New Construction 2014 Fully Fitted methodology**. This is compliant with planning policy: as it is a new building, the applicant is proposing to exceed the minimum requirement of 'Very Good' and aim for 'Excellent'.

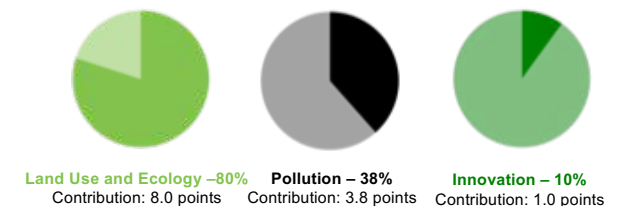
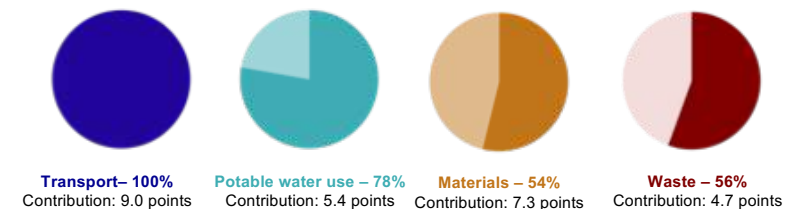
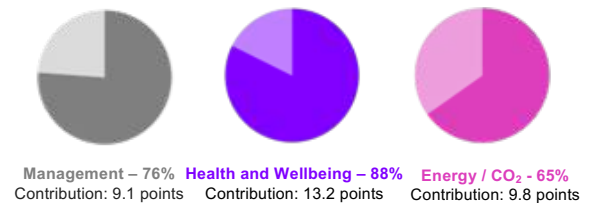
An initial BREEAM New Construction 2014 pre-assessment has been prepared by Etude on behalf of Workspace and allows an initial evaluation of the likely rating to be achieved under a formal BREEAM assessment for Block F at the Chocolate Factory. It is included in the appendix. The following targeted credits should particularly be noted:

- The building's energy performance should be at least 25% better than Part L 2013 through an energy efficient envelope, efficient services (most importantly ventilation and lighting) and connection to an energy centre;
- Water-efficient fittings, a leak detection system and flow control devices coupled with isolation valves should reduce water consumption;
- Cyclist facilities (including showers and changing facilities) should be provided;
- Best practice procedures should be put in place to manage the environmental impact of construction (e.g. Considerate Constructors Scheme, Monitoring) and of materials (Green Guide, Responsible sourcing);
- Cyclist safety and consultation on Secured by Design should inform the design.

Based on the assumptions summarised in this pre-assessment report, a score of 71.4% is achieved, i.e. 1.4% above the minimum score required to achieve a rating of Excellent under BREEAM 2014 (i.e. 70%).



BREEAM 'Excellent'



The Code for Sustainable Homes

The Code for Sustainable Homes (CfSH) is an Environmental Assessment Methodology developed and administered by the BRE for the Department of Communities and Local Government (CLG).

The Code for Sustainable Homes scheme has now been withdrawn, however it remains in Haringey Council's policy and is a recognised framework for assessing the sustainability of housing. It was decided to use this methodology on the Chocolate Factory as a means to demonstrate the sustainability measures of the residential element, although it is noted that an express planning condition requiring a formal CfSH assessment is now unenforceable. The aims of the proposals are to reduce the residential development's impact on the environment by:

- Reducing energy use and CO₂ emissions while allowing residents to monitor their own usage;
- Reducing potable water use;
- Minimising pollution;
- Managing water run-off and flood risk;
- Promoting materials with the lowest environmental impact;
- Managing construction and household waste;
- Improving health and wellbeing (e.g. comfort, amenity, Lifetime Homes);
- Incorporating beneficial management processes (e.g. considerate construction, home user guide);
- Enhancing the site's ecological value.



Code for Sustainable Homes** 'Level 4' at The Chocolate Factory

The Proposed Development is targeting a Level 4 rating under the Code for Sustainable Homes (CfSH), November 2010 version (with 2014 Addendum).

An initial Code for Sustainable Homes pre-assessment has been prepared by Etude on behalf of Workspace to evaluate the likely rating to be achieved under a formal CfSH assessment for the residential units.

The key credits summarised below are targeted:

- On an area-weighted average basis, the dwellings are targeting to be **at least 35% better than Part L1A 2013**. This is likely to rely on an airtight and efficient envelope, efficient building services (including MVHR), connection into a central heating system, and roof-mounted photovoltaic panels;
- The average water consumption must not exceed **105 litres/person/day**;
- The site is assumed to be of **low ecological value** and measures are proposed to **improve biodiversity on site**;
- The **green guide rating of materials** will influence the selection of materials;
- Best practice procedures will be implemented to manage the **impact of construction on the environment**.

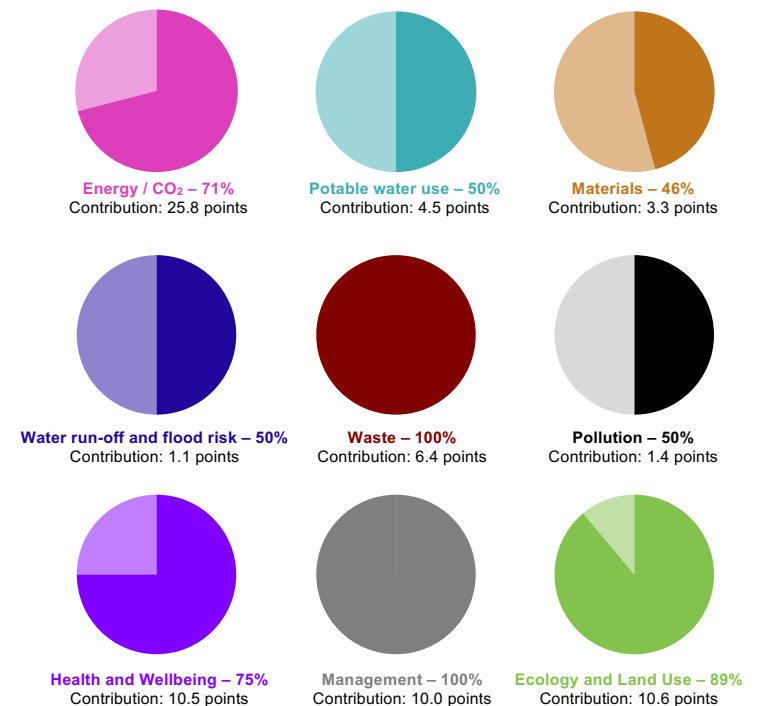
Based on the assumptions summarised in the initial pre-assessment, a score of 73.7% is achieved, which is above the minimum score required to achieve CfSH Level 4, i.e. 68%.

Code for Sustainable Homes and the Home Quality Mark

Upon review of the residential sustainability strategy with Haringey Council, Etude have undertaken a comparison between a new environmental assessment scheme called the Home Quality Mark, and Code for Sustainable Homes. A summary has been provided as part of this sustainability strategy.



CfSH 'Level 4'



Water Efficiency | Residential



Water Use

As a result of the increasing population in London, significant pressure is exerted on the natural water resources available to the region.

It is expected that by 2020, demand in London will outstrip supply by 133 million litres of water per day, growing to 414 million litres per day by 2040. This is roughly equivalent to the water needed by 2 million people.

Thames Water's *Water Resources Management Plan 2015- 2040* forecasts have forecast that a reduction in baseline water supplies over time with an increase in demand, requiring a focus on demand reduction in the short to medium term through leakage reduction, progressive metering and water efficiency measures.

For the residential component of the Chocolate Factory, internal water consumption will be minimised by introducing a number of measures such as water-efficient taps and showerheads, water-saving appliances and flow control devices in the communal areas.

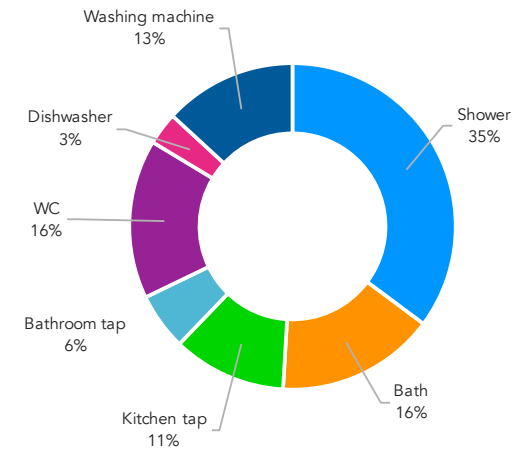
Targeted flow rates have been calculated using the BRE water calculator. According to the Water Calculator this would represent a CfSH water consumption of 101.7 l/p/day and would therefore comply with the mandatory criterion for Code level 4.

The methodology assumed is based on the BRE Calculation methodology. Whilst it is understood that a Code for Sustainable Homes assessment is not required, the benchmark figures have been used as a guide to demonstrate good practice for the scheme.

101.7 litres/person/day target



Breakdown of internal water consumption at The Chocolate Factory





Water Use

For the non-domestic elements of the Chocolate Factory, internal water consumption will be minimised by introducing a number of measures such as water-efficient taps and showerheads, water-saving appliances and flow control devices in the communal areas. This has been calculated using the BREEAM water calculator.

A leak detection system will be installed, capable of detecting a major water leak on the mains water supply within the buildings and between the buildings and the utilities water meter.

Overall a reduction over a recognized water consumption benchmark of 40% is targeted.

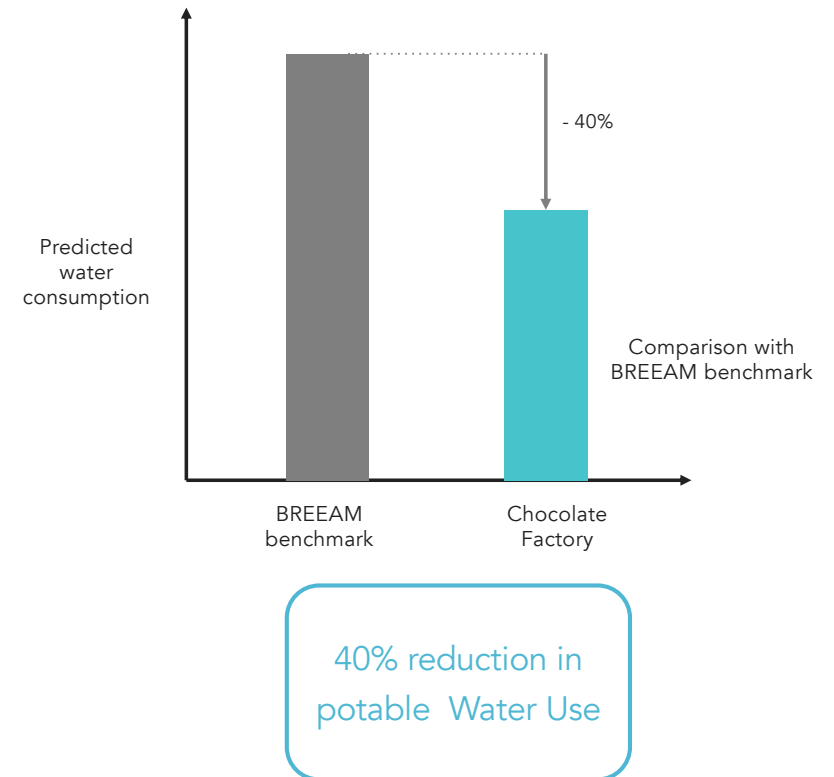
As the proposed development will have extensive planting throughout the building, there will be a large consumption of potable water consumption to cater for these plants. Planted areas will be irrigated manually to reduce the demand, and there will be no vehicle wash system.

Site storage and using rainwater for irrigation are currently being explored.

If the non-domestic buildings or public realm expect a large unregulated water demand, the design team will ensure water consumption and performance will be measured against the performance of a baseline specification for the same component type or use.

40% Water use reduction

- Showers: 6 litres/min
- Taps: 5 litres/min
- WC: dual flush 6 / 3 litres
- Urinal: 1.5 litres /bowl/hour
- Dishwasher: 5 litres /cycle (commercial size)
- Kitchen Taps: 5 litres /min





Flood Risk

The development is in flood zone 1, however flood risk across the site is high due mainly to surface water run off. The maximum flood depth would be around 0.5m.

Furness Partnership have completed a Flood Risk Assessment and drainage strategy and this is included as part of the planning application supporting documents. This demonstrates how the scheme will mitigate the risk of flood events, key points are:

- Majority of residential dwellings are well above the flood risk zone.
- External doors of ground floor units will be fitted with passive flood barriers. These rise automatically when approaching flood water pushes on them.

Drainage Strategy

The SUDS hierarchy has been considered, however due to the impermeability of the London Clay and the potential contamination over the site it is not possible to maximise the permeability of the site, an attenuation strategy with Green roofs has been used that discharge to surface water drainage.

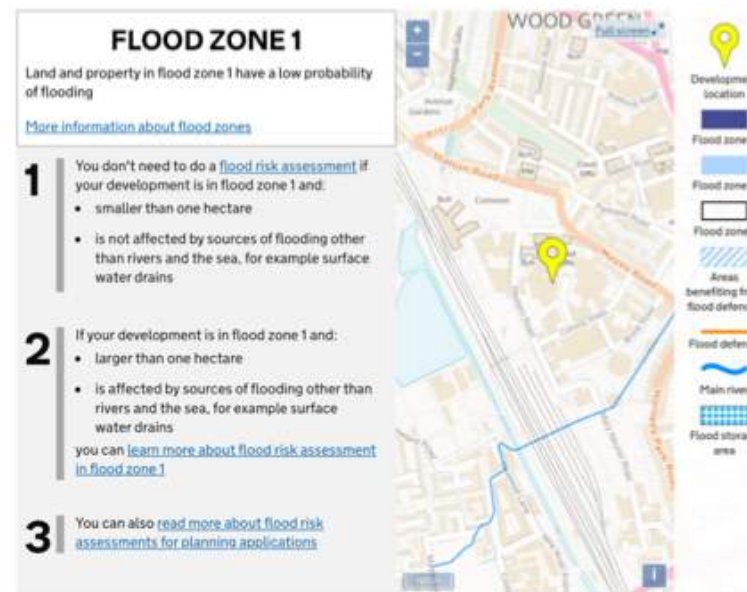
The proposed scheme will:

- Increase the permeable area across the scheme in comparison to the existing site to improve rainwater penetration and attenuation.
- Reduce the rainwater peak rate and run-off from the site to 11.9 l/s with rainwater attenuation tanks of a total capacity of 373 m³.

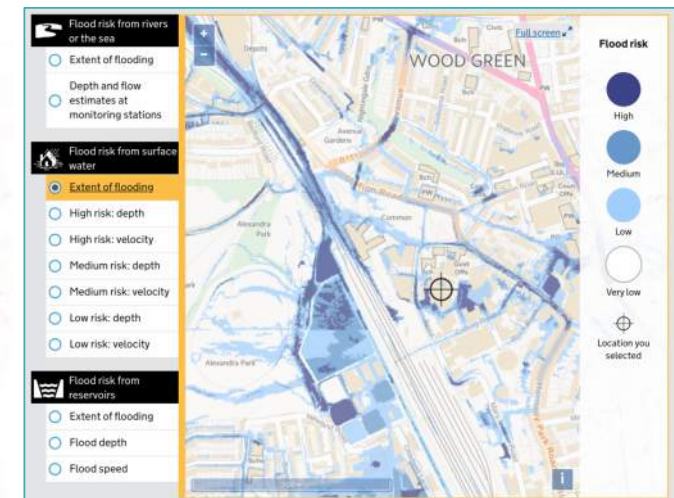


Environment Agency Flood Risk Map

Environment Agency Flood Risk Map



Environment Agency Flood Risk Map



Flood Risk from Surface Water - Environment Agency
© Crown copyright and database rights 2017 OS 100024198

Operational Waste

Sustainability Statement | The Chocolate Factory



Summary

The design seeks to incorporate good practice principles for waste management, comply with legislation and guidance, encourage recycling, provide adequate access to waste storage and facilitate its removal from site and be easy to manage.

In each dwelling, the following storage systems will be provided to maximise recycling rates:

- A bin for non recyclable waste (at least 30 litres);
- A bin for recyclable waste (at least 30 litres for 1B and 2B apartments and at least 40 litres for 3B apartments);
- A composting bin or caddy for food waste (at least 10 litres).

Solid waste will be transferred by the occupant from the dwelling to the nearest residential waste storage area located on the Ground Floor (for Buildings B, D and E) within each core.

In non-residential blocks a central waste storage area is provided with sufficient space for the floor area (at least 2m² per 1000m²). An operational waste strategy will be prepared to assess specific waste requirements from the these units.

Access

Access roads and approaches to buildings to be level or have a gradient from the refuse storage area of not greater than 1:12. The route between the storage area and the collection vehicle (i.e. in the direction that filled bins will be pulled) will not have any uphill gradients.

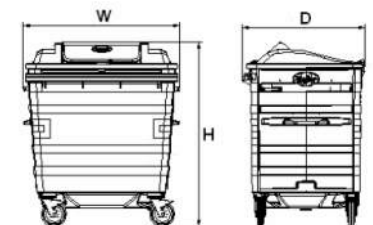
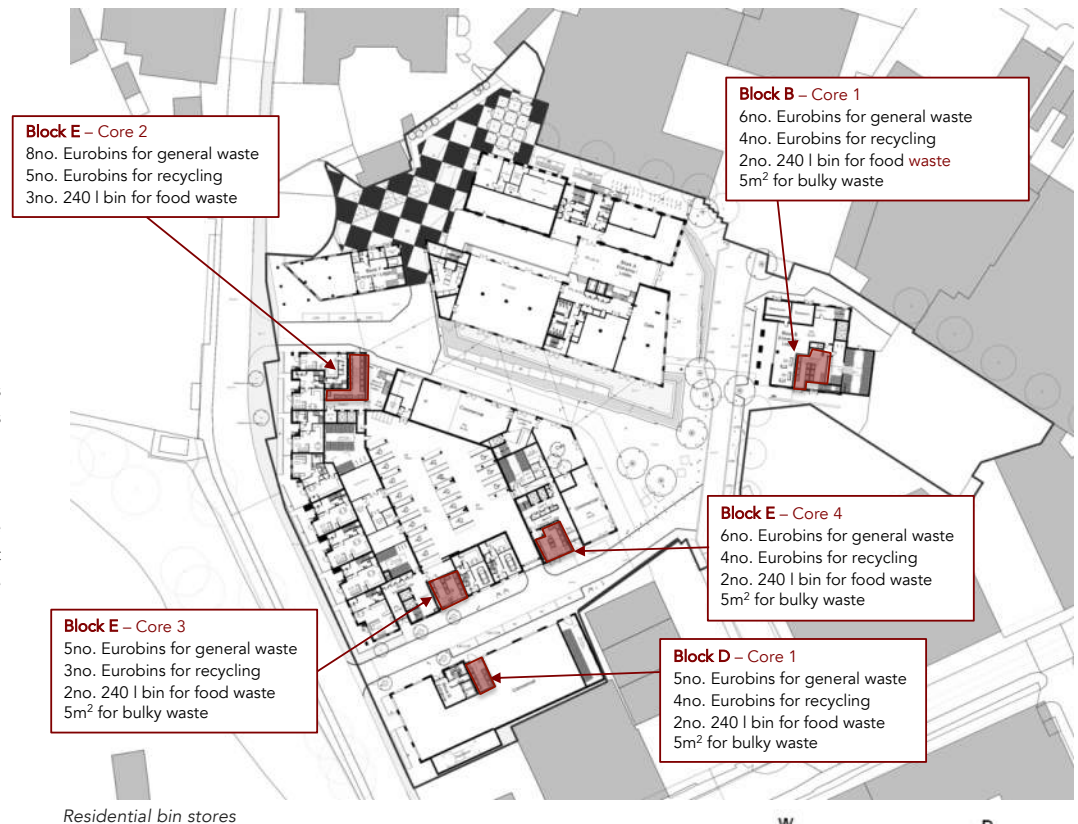
Collection

The London Borough of Haringey provides refuse collection services for residents living in purpose-built flats. Based on the current collection arrangements, recycling, food waste and general waste are collected **weekly**.

Waste must be separated into three streams: a recyclable waste stream, a food waste stream and a general waste stream. Food and garden waste is collected separately from the other waste streams every week. General refuse is collected weekly.

Veolia who act as the Council's waste contractor can be contacted to collect bulky items. However, this service can only be provided if adequate measures have been included in the design of the development.

It is important to note that residential and commercial waste must always be managed separately, and the London Borough of Haringey do not collect Commercial waste. Commercial waste is likely to be collected 3 times a week.



Euro bins for the recycling in the Chocolate Factory.



Summary

Aspect Ecology have been appointed to undertake an ecological and arboricultural survey of the existing site. The site was surveyed in December 2015, based on standard Phase 1 Habitat Survey methodology, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat.

A number of statutory and non-statutory ecological designations are present in close proximity to the Site, including Alexandra Palace and Park LNR / Borough I SINC, New River Metropolitan SINC, Wood Green Reservoirs Borough I SINC, Palace Gates Borough II SINC and Nightingale Gardens and Avenue Gardens Local SINC. The closest such designation to the site is New River, located approximately 150m west of the site.

The site itself is dominated by buildings and hardstanding, with amenity planting and a hedgerow, all of which were recorded to be of importance at the site or local level only. In regards to faunal interest, no protected, notable or rare species were recorded within or adjacent to the site during the survey work undertaken, and the it is not considered to offer suitable opportunities for such species, with the exception of some limited opportunities for nesting birds.

Potential non-significant adverse effects have been identified as a result of construction works that could affect Wood Green Reservoirs SINC, bats, birds and invertebrates, as a result of lighting, noise disturbance and dust deposition. Mitigation measures are proposed.

Various measures will be incorporated in the site design to improve the ecological value and biodiversity, including prioritising retaining existing trees and biodiverse roofs.

The recommendations of the ecologist will be incorporated in the final design and build.

See accompanying Aspect Ecology report.





Cycle storage facilities will be provided on site, with the aim of encouraging sustainable modes of transport and facilitating access for all. The quantity of cycle spaces has been calculated to BRE guidance and is inline with the London Plan 2016 with additional spaces added as thought appropriate:

Residential

- ✓ 47 cycle spaces for Block B;
- ✓ 32 cycle spaces for Block D;
- ✓ 80 cycle spaces for Block E.

Commercial

- ✓ 27 cycle spaces for Block A;
- ✓ 5 cycle spaces for Block E;
- ✓ 5 cycle spaces for Block F.

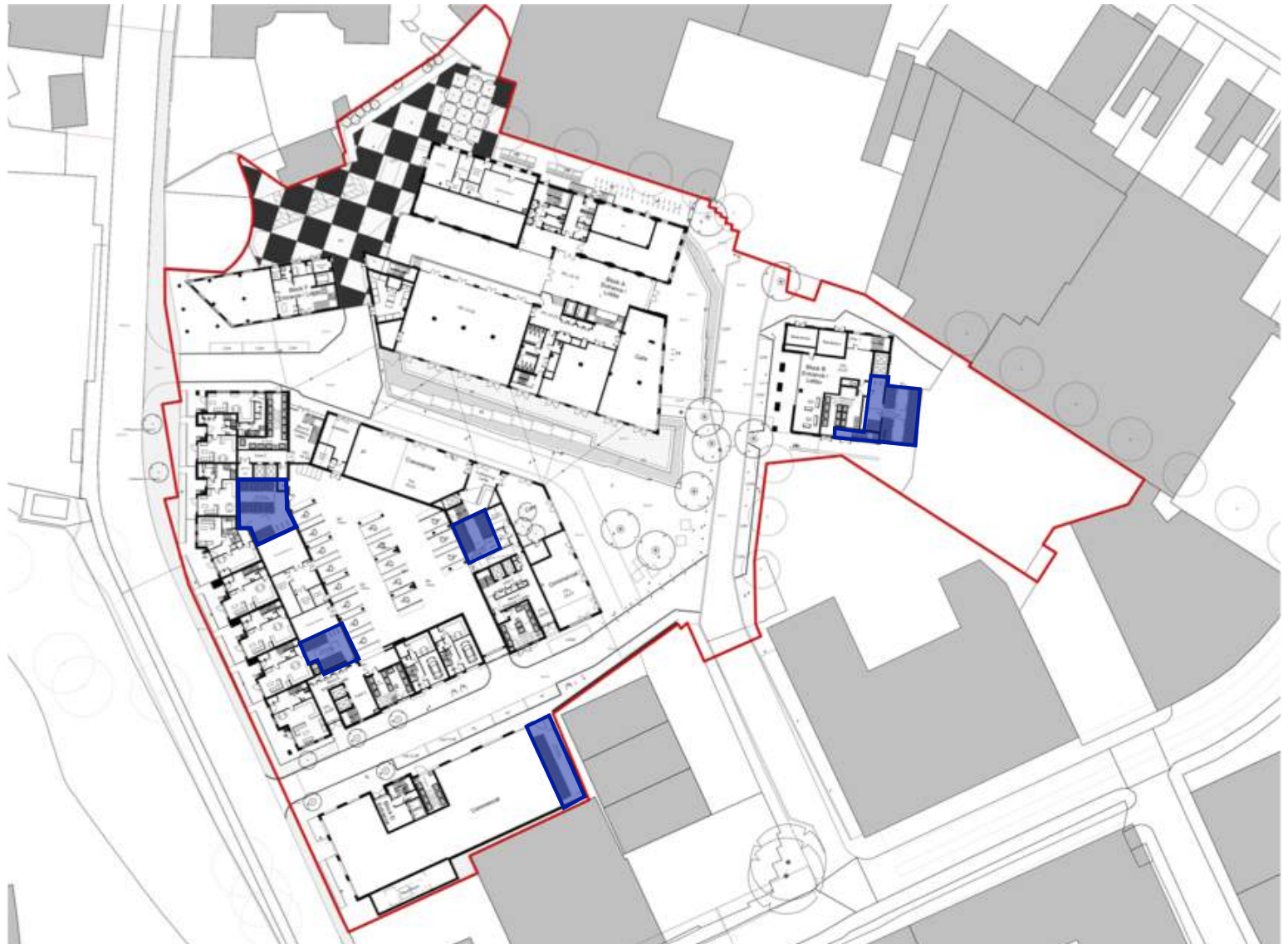
In addition to those cycle spaces the non-residential buildings will have at least two of the following cyclist facilities:

- Showers;
- Associated changing facilities and drying spaces;
- Lockers.

As far as car parking spaces are concerned, there will be:

- 2 car club parking spaces;
- 9 commercial car parking spaces;
- 32 residential car parking spaces (of which 16 disabled car parking spaces in Block E).

SDG have prepared a Transport Assessment including a Travel Plan that is included in the submission.



Cycle stores in each residential block

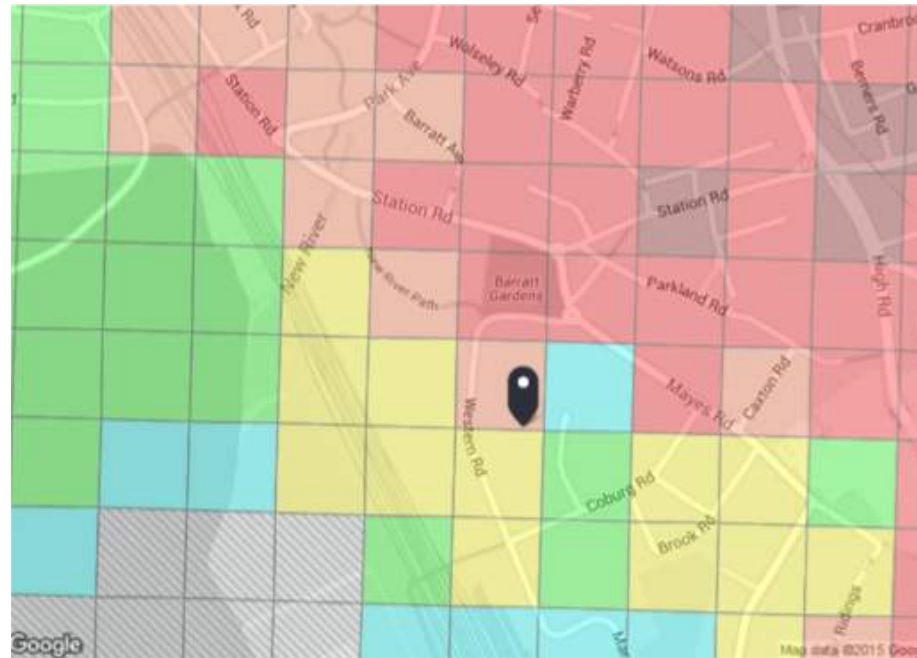


Public Transport Links

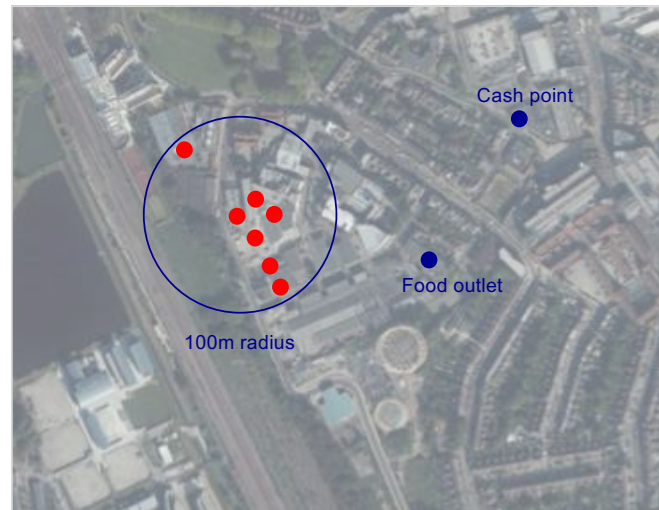
An assessment of the public transport index of the site indicates that the site is well located in terms of public transport infrastructure. The site has a PTAL score of 4 and an Accessibility index of 18.

This information is based on the Webcat – PTAL website which is administered by Transport for London.

The site is located within a 500m walking distance of an outdoor space. A food outlet and a cash machine are available within 500m.



Images: PTAL Rating from TFL WEBCAT platform



Materials



Environmental impact of materials

The proposal is to reuse and refurbish the existing Block A to ensure that materials are only used to improve the structural integrity, increase the fabric performance and enliven the façade with a new materials palette.

For both the new and refurbished parts of the site The Green Guide to Specification has been consulted and will continue to be used in order to inform the selection of materials. The objective is to minimise their environmental impact across their whole life cycle. The construction build-ups assumed at this stage and their corresponding Green Guide Ratings will be evaluated based on their performance during the detailed design.

Responsible sourcing of materials

The procurement of materials will seek to favour responsibly sourced materials. Suppliers will be asked to supply, where feasible, evidence of compliance with the following schemes:

- BES6001:2008 (Responsible Sourcing Standard)
- Re-used materials
- Forest Stewardship Council (FSC)
- Programme for the Endorsement of Forest Certification (PEFC)
- CSA
- Recycled materials
- Certified EMS for the Key Process and Supply Chain

At least 80% of timber will come from a certified source (FSC, PEFC or equivalent).

Additionally, all timber used will be sourced in accordance with the UK public procurement policy on timber.

Interior finishes

As part of the interior fit-out of the proposed scheme, the finishes and materials which will be selected to mitigate internal air quality issues.

Paints, varnishes, and surface finishes will be selected to have a low VOC and formaldehyde levels in line with best practice guidance.

Structure and exterior finishes

All constructions will be assessed using the BRE Green Guide, it is aimed to achieve high ratings with the materials selected.

Other considerations will be taken into account throughout detailed design such as:

- Minimising material usage
- Using reclaimed aggregate and cement replacement
- Minimising the distance travelled by materials
- Prioritising local suppliers and sources

Sustainability Statement | The Chocolate Factory

Element	Reference	Description	Rating
Roof	1212540050	In situ reinforced concrete slab with 50% GGBS and 20% recycled coarse aggregate, vapour control layer, insulation, TPO single ply roofing membrane	B
External walls	1206470004	Brickwork, cement mortar, insulation, cement-bonded particle board, light steel frame, vapour control layer, plasterboard, paint	A+
Floor finishes	821570017	Plain or decorative linoleum (EN 548). FCSS 23/32	A+
Floors	807280010	Power-floated in situ concrete slab on "shallow" profiled metal decking	A+
Windows	1231500011	Powder coated aluminium window, (profile <0.9kg/m), double glazed	A+

Example constructions and materials used in the new buildings at The Chocolate Factory.



Energy Efficiency

The proposed carbon reduction strategy can be summarised as follows:

Be Lean – Through energy efficiency and passive design measures only, the residential part of the development (blocks B, D1 and E) are expected to achieve an 12% improvement over Part L1A 2013. The commercial elements of the scheme are expected to achieve the following performance: Block F (new build) a 35% improvement over Part L2A 2013 and Block A (refurbishment and extension) a 42% improvement over a baseline composed by Part L2B 2013 for the refurbished areas and Part L1A 2013 for the extension.

Overall, the Chocolate Factory is expected to achieve a 28% improvement over this composite Part L baseline.

Be Clean – At this stage, and in line with the Council's recommendations, a local heat network with its own energy centre and CHP is not proposed. Individual block boilers will provide heat to each building until the future Wood Green heat network becomes available.

Be Green – A 140 kWp (circa 900m²) roof-mounted PV system is proposed for the site, which is expected to provide a further **12% reduction** in on-site CO₂ emissions.

Overall, the proposed design is anticipated to achieve a minimum 35% improvement over the baseline composed of:

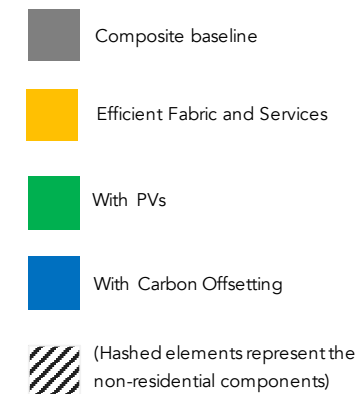
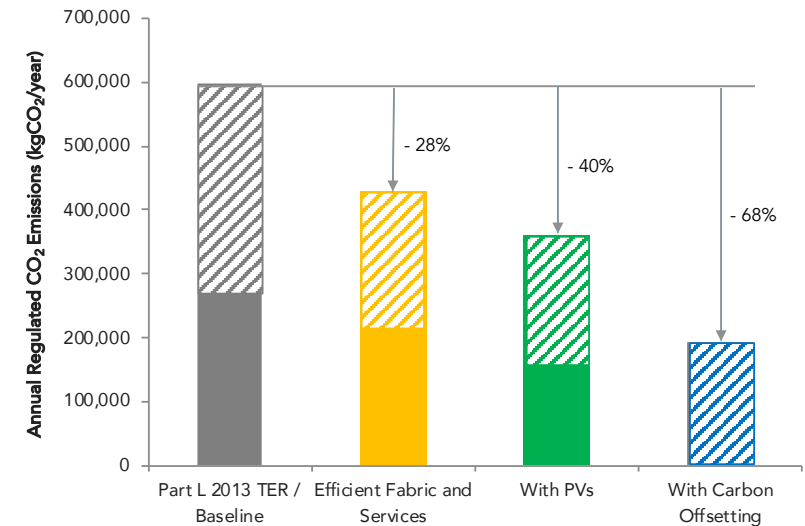
- Part L1A 2013 for the new residential elements of the scheme (Block B + Block D1 + Block E);
- Part L2A 2013 for the new commercial elements of the scheme (Block F and Block A extension);
- Part L2B representing the minimum requirements from Part L2B 2013 for the refurbishment of Block A.

Carbon Offsetting – In addition to these 'on-site measures', as all residential units have to be 'zero carbon' homes, the remaining regulated CO₂ emissions from these units will be offset through a financial contribution into the Haringey Council carbon offsetting fund, which will be used to reduce carbon emissions off-site.

Overall, the Chocolate Factory is targeting a 68% improvement over the baseline through on-site measures and carbon offsetting (100% for the residential units and 42% for the non-residential units).



Example solar photo voltaic array



Health & Wellbeing



Acoustics

Waterman Group have been appointed as acousticians on the scheme. A comprehensive baseline environmental noise survey was undertaken in order to establish and quantify the existing noise climate at, and within the vicinity of, the site.

Sound insulation will be included throughout the residential parts of the scheme to achieve indoor ambient noise levels below the BREEAM requirements.

This includes mitigating sound transmission between dwellings, between rooms, and from outside.

Daylight and Views Out

The façade design of the residential blocks has been carefully considered to provide reasonable daylight and views, whilst not over glazing and increasing the associated risk of summer overheating and thermal discomfort. All occupied rooms have more than 20% of the available wall area glazed, and room depths to achieve occupied areas within 7m of the window.

Accessibility and private space

As part of the overall masterplan proposed, it is the intention for all dwellings to be meet the lifetime homes standard, and Part M requirements. Where this is not feasible, a derogation should be sought.

All residents will have access to a mix of private, communal and public space as part of the masterplan.

Safety and Security

Crime prevention measures are set out in the Design & Access statement.

Sustainability Statement | The Chocolate Factory



Example elevations of Block E (West) showing the proportion of glazing on the façade.



Site plan showing private space and public realm areas

Pollution



Site Impacts

The proposed development of the Chocolate Factory will be registered under the Considerate Constructor Scheme and a score of more than 35 will be targeted.

A number of procedures will be implemented in order to manage the construction site in a manner that mitigates environmental impact. Example activities that contribute to the Considerate Constructors score are included below:

- Monitoring of CO₂ production or energy use arising from site activities;
- Monitoring of water consumption from site activities;
- Monitoring of transport of construction materials and waste;
- Best practice policies in respect of air (dust) pollution arising from site activities;
- Best practice policies in respect of water (ground and surface) pollution;
- Sourcing from all site timber in accordance with the UK Government's Timber procurement policy (i.e. legal and responsible sources).
- In addition, the Main Contractor will operate a compliant Environmental Management System (EMS).

Site Waste Management

As part of the planning application the design team have undertaken a construction management plan which will include a site waste management plan for the proposed development.

This document will provide a guide as to which best practice strategies will be employed to limit the environmental impact of construction process and reduce localised air and noise pollution.



Site waste managed into separate streams

Summary of Sustainability Commitments

Sustainability Statement | The Chocolate Factory

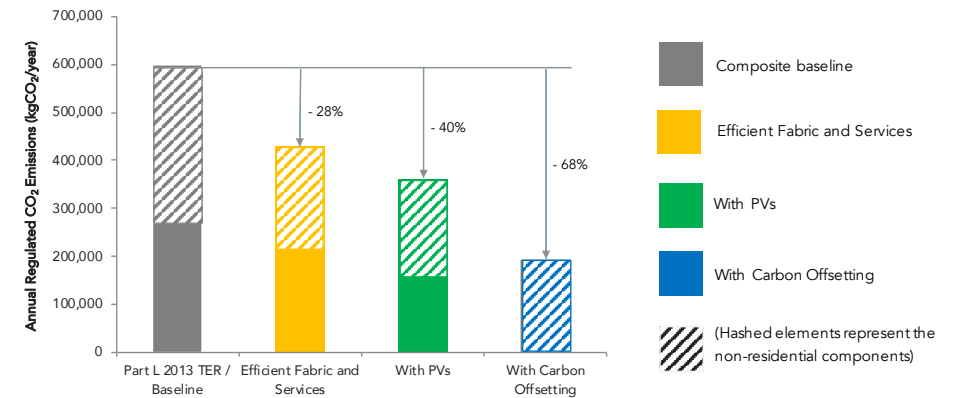


Energy and CO₂

- Through energy efficiency and passive design measures only, the residential part of the development (blocks B, D1 and E) are expected to achieve a 12% improvement over Part L1A 2013. The commercial elements of the scheme are expected to achieve the following performance: Block F (new build) a 35% improvement over Part L2A 2013 and Block A (refurbishment and extension) a 42% improvement over a baseline composed by Part L2B 2013 for the refurbished areas and Part L1A 2013 for the extension.
- Large roof-mounted PV system

Key residential energy efficiency parameters

- ✓ External Wall U-value: 0.20 W/m².K
- ✓ Heated corridors and stairwells
- ✓ Wall to unheated spaces (e.g. bike store) U-value: 0.20 W/m².K
- ✓ Floor above external space U-value: 0.15 W/m².K
- ✓ Floor above unheated space U-value: 0.15 W/m².K
- ✓ Floor above commercial space U-value: 0.15 W/m².K
- ✓ Main roof U-value: 0.13 W/m².K
- ✓ Other roofs U-value: 0.13 W/m².K
- ✓ Window U-value: 1.40 W/m².K (double-glazed) – U-value is for the whole system including glass, frame and edge effects
- ✓ Window g-value: 0.50
- ✓ Frame proportion: 25%
- ✓ Air permeability rate: 3 m³/h/m² at 50 Pa
- ✓ Thermal bridges: good practice



Environmental assessments

- BREEAM Refurbishment 'Very Good' for Block A
- BREEAM New Construction 'Excellent' for Block F
- Code for Sustainable Homes Level 4 for all residential units
- Environmental Impact Assessment



Transport and connectivity

- PTAL of 4
- Cycle parking in line with London Plan 2016 requirements
- Connection to existing/future cycle routes
- 20% of car parking spaces with electric charging facilities



Water Management and Conservation

- < 105 litres/person/day (residential)
- 25% reduction in average water consumption (non-residential)
- Rainwater harvesting



Materials Selection

- Re-use of Blocks B and C structure (now Block A)
- Retention of internal façade elements in Block A
- High proportion of aggregates from recycled or secondary sources for all roads
- Responsible sourcing
- Sustainable timber



Waste Management

- > 90% reduction in construction, demolition and excavation waste sent to landfill
- Adequate internal and external storage space for recyclable household waste



Ecology

- Ecological assessment
- Sustainable Urban Drainage Systems (SUDS) in streets and the public realm where possible, enabling species-rich planting and local irrigation potential

OPERATIONAL WASTE MANAGEMENT STRATEGY



Waste Management Strategy



The Chocolate Factory | Waste management | Context

Workspace is seeking to redevelop the Chocolate Factory and adjacent buildings in order to provide a mixed use development comprising approximately 10,657sqm of commercial floor space (flexible use classes A1, A3, B1, D1 and D2) and 230 new dwellings (mix of 1, 2, 3 & 4 bed units). The site is located south east of Wood Green station and is well served by a number of transport links with a calculated Public Transport Accessibility Level (PTAL) of 4.



2.0 APPROACH TO RESIDENTIAL WASTE MANAGEMENT

The waste strategy seeks to incorporate good practice principles and aims to:

- Comply with legislation and guidance;
- Encourage recycling;
- Provide adequate access to waste storage to facilitate removal from site.

The following documents have been used when formulating the strategy.

- Approved Document H6 of the Building Regulations 2010;
- British Standard BS 5906:2005 "Code of Practice for Storage and Onsite Treatment of Solid Waste from Buildings";
- London Borough of Haringey Local Plan - Development Management DPD (2017).



BS 5906:2005



LB Haringey
Development Management DPD
(2017)

3.0 RESIDENTIAL WASTE DEFINITIONS

The London Borough of Haringey provides refuse collection services for residents living in purpose-built flats. Based on the current collection arrangements, recycling, food waste and general waste are collected **weekly**.

Waste must be separated into three streams: a recyclable waste stream, a food waste stream and a general waste stream.

The following dry recyclable materials are collected together **weekly**:

- **Mixed paper and cardboard drink cartons** - newspapers, magazines, envelopes, food and drink cartons, catalogues, junk mail;
- **Plastic** – bottles, food trays, plastic tubs, trays, plastic bags.
- **Food tins and cans** - food and drink cans, foil and aerosols;
- **Mixed glass** – bottles, jars.

Food and garden waste is collected separately from the other waste streams every week.

Although general refuse is collected fortnightly from houses in the vicinity, Veolia who collect waste on behalf of the Council have indicated over the phone that a weekly collection was likely for blocks of flats.

Veolia can also be contacted to collect bulky items. However, this service can only be provided if adequate measures have been included in the design of the development.

4.0 STORAGE/EQUIPMENT IN EACH DWELLING

In each dwelling, the following storage systems will be provided to maximise recycling rates:

- A bin for non recyclable waste (at least 30 litres);
- A bin for recyclable waste (at least 30 litres for 1B and 2B apartments and at least 40 litres for 3B apartments);
- A composting bin or caddy for food waste (at least 10 litres).

Example of
recyclable and non-
recyclable bins



Example of caddy
for food waste

Solid waste will be transferred by the occupant from the dwelling to the nearest residential waste storage area located on the Ground Floor of each building (B, D1 and E).

The information above will be summarised in the Home User Guide distributed to each resident so that they are fully aware of how the waste will be managed.

5.0 WEEKLY RESIDENTIAL WASTE ARISING

According to Table 1 in BS5906:2005 (*Typical weekly waste arisings and subsequent storage requirements*) the amount of waste and associated storage requirement should be calculated as follows:

$$\text{Weekly residential waste arising} = 30 \text{ litres per unit} + 70 \text{ litres per bedroom}$$

According to BS5906:2005: 'the recommended storage area to be allocated for **recyclable waste** should ideally be 30% of the total waste output by weight, or 50% by volume'.

Finally, assuming that the recycling rate at the development will be at least 25% by volume (average recycling rate in Haringey in 2013/2014 of 36%), the recommended storage area to be allocated for **general waste** can be reduced by 25%.

Bulky waste

The London Borough of Haringey (LBH) do not have a specific space requirement for bulky waste items. To ensure that there is sufficient space for bulky items to be stored before collection by the Council, it is proposed to provide an allowance of 5m² in at least one of the bin stores in each block.

6.0 COMMUNAL RESIDENTIAL WASTE STORAGE REQUIREMENTS

According to the calculation principles summarised in section 5.0 and the current schedule of accommodation, the following storage requirements are required and have been integrated.

BLOCK B	Waste arising	Storage requirements	Storage capacity
General waste	6,375 litres/week	6 x 1,100-litre bins	6,600 litres
Recyclable waste	4,250 litres/week	4 x 1,100-litre bins	4,400 litres
Food waste	425 litres/week	2 x 240-litre bins	480 litres

BLOCK D	Waste arising	Storage requirements	Storage capacity
General waste	5,378 litres/week	5 x 1,100-litre bins	5,500 litres
Recyclable waste	3,585 litres/week	4 x 1,100-litre bins	4,400 litres
Food waste	359 litres/week	2 x 240-litre bins	480 litres

BLOCK E	Waste arising	Storage requirements	Storage capacity
General waste	18,308 litres/week	19 x 1,100-litre bins	20,900 litres
Recyclable waste	12,205 litres/week	12 x 1,100-litre bins	13,200 litres
Food waste	1,221 litres/week	7 x 240-litre bins	1,680 litres

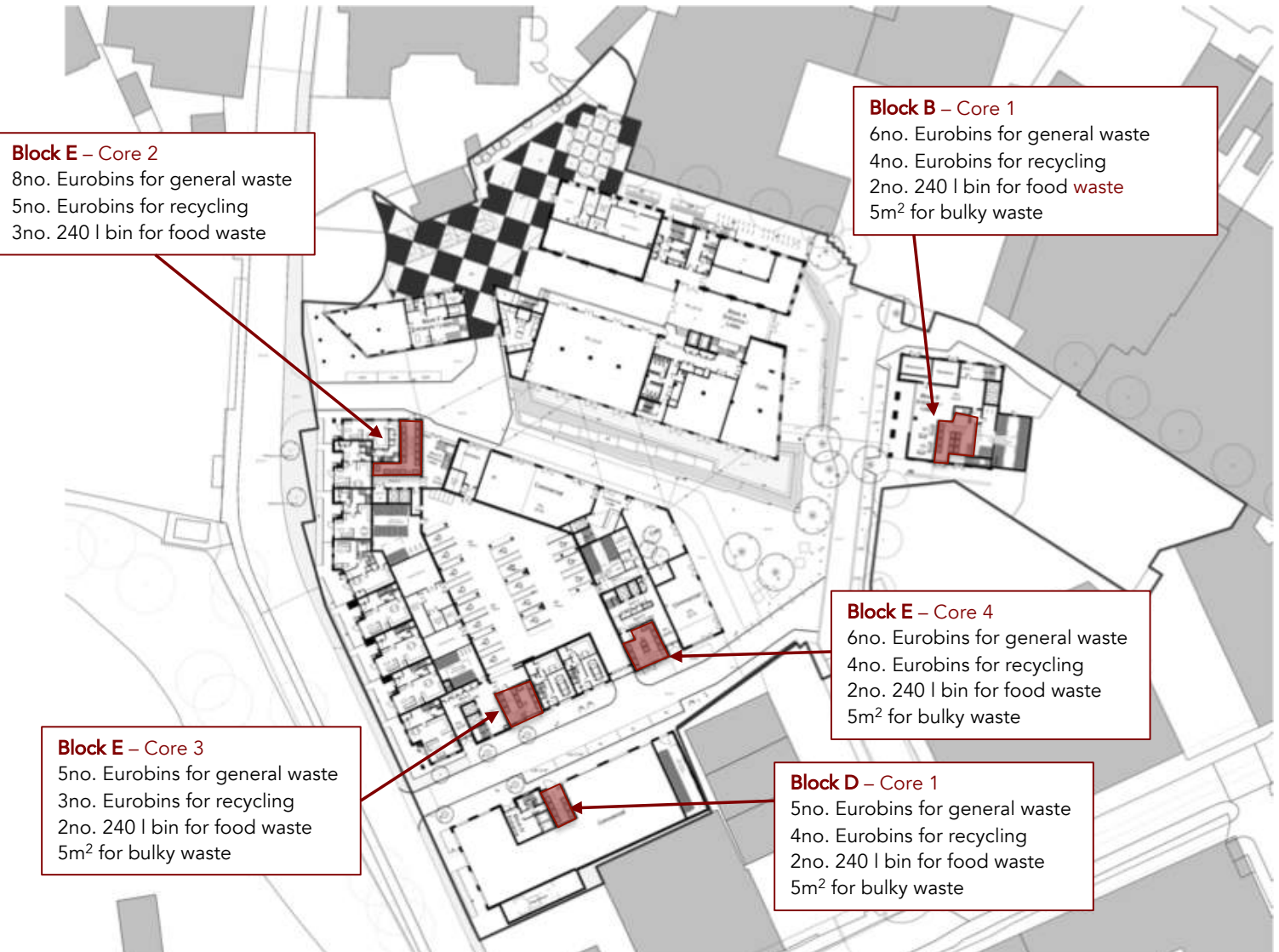
Note: Block E has several cores; therefore it has more than one managed area where waste will be deposited, whilst Block B and D will only have one waste storage area.

This is illustrated in more detail on the following page.

7.0 RESIDENTIAL BIN STORE LOCATIONS AND DISTANCE TO COLLECTION POINTS

Three key requirements have influenced the adjacent initial bin store diagram:

1. According to Building Regulations Part H, "storage areas...should be sited so that the distance householders are required to carry refuse does not usually exceed 30m (excluding any vertical distance)".
2. Wheeled refuse containers should be located not more than 10m away from the vehicle access point, preferably on a level surface.
3. The size of the bin stores must correspond to the number of dwellings accessed through each entrance.



Proposed Ground Floor Plan
Residential bin store areas are highlighted

8.0 ADDITIONAL REQUIREMENTS / GUIDANCE

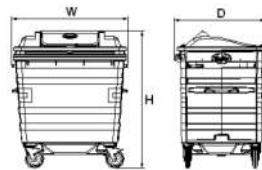
Eurobins

The London Borough of Haringey appointed waste contractor Veolia collects the various waste streams from the following containers:

- General waste in 1,100 litre Eurobins;
- Recyclable waste in 1,100 litre Eurobins;

The size of these Eurobins has been assumed to be:

1250 (L) x 980 (D) x 1370 (H).



Bin store layout and wheelchair access

- A 150 mm spacing should be provided between bins and other bins or walls as recommended by BS 8906:2005.
- There must be 2m clearance in front of each bin to enable it to be accessed and safely moved without needing to move any of the other containers.
- All doors and walkways must be at least 2m wide to allow for wheelchair access and safe maneuvering of bins. The walkway must be sized to allow for a wheelchair user to turn and return in the other direction.
- The minimum internal height for a bin storage area and any access doorways is 2m. There should be no other internal fixtures or fittings that reduce the clearance above the bins, so that their lids can be opened fully.
- External doors must not open outward over a public footway or road, and should not cause an obstruction to other access when in an open position.

Robustness

Doors and door frames should be designed with sufficient robust detail to withstand heavy wear and tear associated with the movement of bins. Consideration needs to be given to the operating requirements of doors and locks such that less able bodied residents can use them.

All floors (such as those in lifts, corridors and bin stores) are recommended to have washable floor finishes where the movement of waste is anticipated. This will allow easy cleaning following any spillages of waste as it is moved around the building.

Where necessary, the installation of a suitable buffer can prevent contact between the bins and the inside faces of the walls. It is also recommended that any switches, plugs or other similar installations are placed above or well below the height of the rim of the bins.

Bin storage areas must have a suitable impermeable hard standing ground covering. The slope of the floor must enable it to drain properly and completely. The drainage system must be suitable for receiving a polluted effluent. Any gullies must not be in the track of the container wheels.

The lighting of bin stores should involve sealed bulkhead fittings for the purpose of cleaning down with hoses. Switching should be either through a proximity detection system or on a time delay button to prevent lights being left on.

Maintenance of bin store

The installation of a bin washdown facility and suitable foul drainage is also recommended to allow for cleaning of bins and the bin store area. There must be a water supply with standard tap fittings available to the bin storage area to enable washing down of the bins, walls and floor.

Fire risk

Considerable fire risks are involved when large quantities of waste or recycled materials are stored. BS 5906:2005 states that bin stores should be constructed within a fire compartment structure, which is designed to contain a fire. The walls should be constructed of materials that are non-combustible (e.g. insulation).

Signage

Storage areas for refuse and recycling bins should be clearly identifiable as such, through the use of appropriate signage on doors or walls.

Note: The London Borough of Haringey (LBH) is part of a group of 7 North London Planning Authorities which contribute to the North London Waste Plan (NLWP). This plan has recently been consulted on and will set the framework for waste management in the North London Boroughs. This is currently due for adoption in 2017. Once finalised, the NLWP will set a framework for the management of Local Authority Collected Waste (LACW) and Commercial and Industrial (C&I) waste.

9.0 COMMERCIAL WASTE STORAGE PROVISIONS

It is important to note that residential and commercial waste must always be managed separately, and the London Borough of Haringey does not collect Commercial waste.

Commercial waste is likely to be collected 3 times a week. On this basis space for the following number of bins should be provided:

Block A: 12no. 1,100 L Eurobins in total for commercial waste (i.e. 5no. 1,100 L Eurobins for general waste and 7no. 1,100 L Eurobins for recyclable waste).

Block F: 2no. 1,100 L Eurobins in total for commercial waste (i.e. 1no. 1,100 L Eurobins for general waste and 1no. 1,100 L Eurobins for recyclable waste).

In addition, dedicated refuse storage rooms will be provided to the ground floor commercial units of Blocks E and D as part of their tenant fit-out.



Proposed Ground Floor Plan of Blocks A and F – Bin store areas are highlighted

10.0 VEHICLE ACCESS

Roadway strength

Roads should have foundations and a hard-wearing surface capable of withstanding a fully laden waste collection vehicle of 26 tonnes gross vehicle weight, with a maximum axle weight of 11.5 tonnes.

Vehicles undertaking collections should be able to stop for loading in a safe and legal position where they will not obstruct other traffic, pedestrians or access. Appropriate measures must be incorporated into road layouts to control unauthorised parking of vehicles that would prevent access by the waste collection vehicles and staff.

Maneuvering

Where possible, road layouts should be designed so that waste collection vehicles are not required to reverse in from or out to the public highway. Waste collection vehicles should not be required to reverse more than 12m, and then only in exceptional circumstances. If a turning space is necessary, the road layout should permit a turning circle of 17m kerb to-kerb, or 20.3m wall-to-wall.

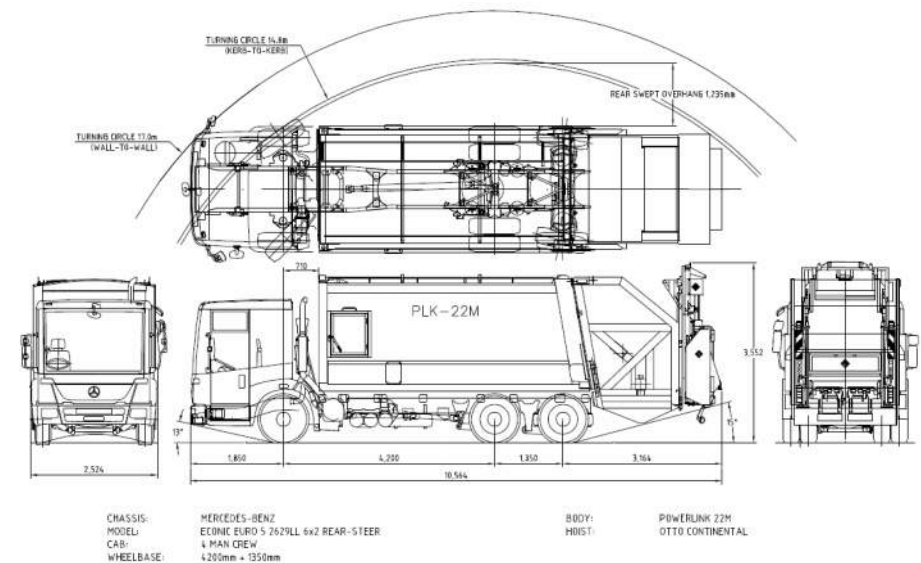
If pedestrians also use access routes where waste collection vehicles will be required to reverse, an additional raised footpath must be provided.

Access to bin stores

Access roads and approaches to buildings to be level or have a gradient from the refuse storage area of not greater than 1:12. It is not acceptable for the route between the storage area and the collection vehicle (i.e. in the direction that filled bins will be pulled) to have any uphill gradients.

Waste vehicle

Information on the standard vehicles to collect both refuse and recycling can be found below.



BREEAM 2014 REFURBISHMENT PRE-ASSESSMENT OF BLOCK A



Block A | BREEAM UK 2014 Non Domestic Refurbishment Pre-assessment

The Chocolate Factory | BREEAM 2014 Refurbishment | Summary



The existing Blocks B and C of the existing Chocolate Factory have been built during the early 20th Century. They will be refurbished and joined in order to create the new 'Block A', focal point at the centre of the application.

The refurbishment for this new 'Block A' is targeting a **Very Good rating** under the **BREEAM UK Refurbishment 2014 methodology**.

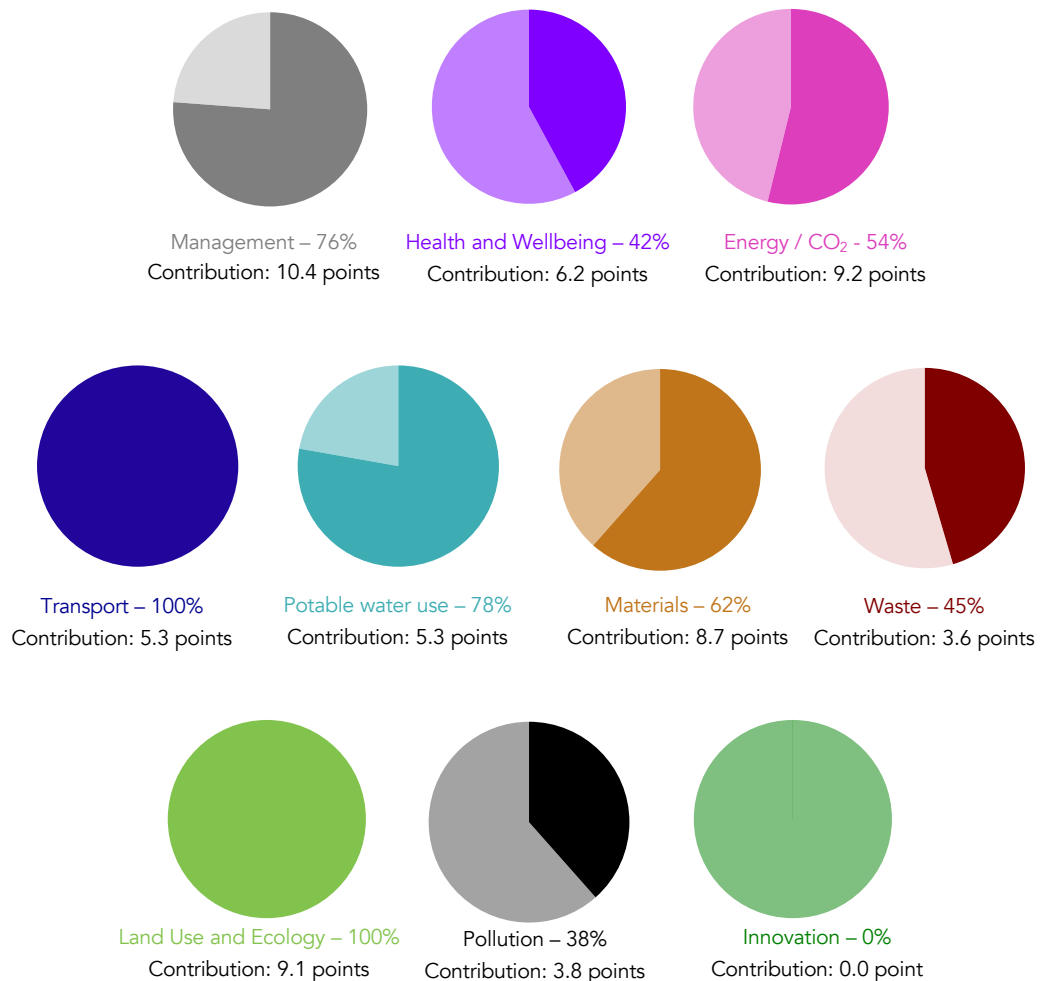
This pre-assessment, which has been prepared by Etude on behalf of Workspace allows an initial evaluation of the likely rating to be achieved under a formal assessment. It indicates that a rating of Very Good can be achieved. The following targeted credits should particularly be noted:

- The improved building fabric and services, combined with the integration to the potential community heating system should lead to a significant improvement in terms of energy performance;
- Water-efficient fittings, a leak detection system and flow control devices coupled with isolation valves should reduce water consumption;
- Cyclist facilities (including showers and changing facilities) should be provided;
- A refurbishment and pre-demolition audit should be carried out early during design development and best practice procedures should be put in place to manage the environmental impact of construction (e.g. Considerate Constructors Scheme, Monitoring) and of materials (Green Guide, Responsible sourcing);
- Opportunities to re-use as much as possible for the building fabric and structure will be investigated.
- Consultation on Secured by Design should inform the design.

Based on the assumptions summarised in this pre-assessment report, a score of 62.1% is achieved, i.e. 7.1% above the minimum score required to achieve a rating of Very Good under BREEAM 2014 Refurbishment (i.e. 55%).

The figure below is a graphical summary of the proportion of credits targeted compared with the credits available in the category and its contribution to the score.

Block A - BREEAM Refurbishment 'Very Good'



The Chocolate Factory | BREEAM 2014 Refurbishment | Context

Workspace is seeking to redevelop the Chocolate Factory and adjacent buildings in order to provide a mixed use development comprising approximately 10,657 sqm of commercial floorspace (flexible use classes A1, A3, B1, D1 and D2) and 230 new dwellings (mix of 1, 2, 3 & 4 bed units). Block A (the refurbished and extended Chocolate Factory building) represents a gross internal floor area of 8,344 sqm. It is targeting a BREEAM Very Good rating.



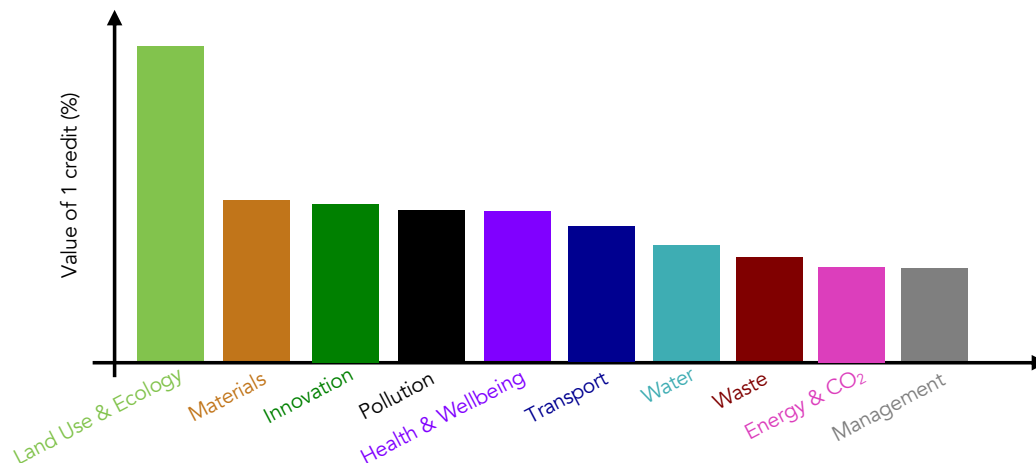
This BREEAM pre-assessment focuses on the refurbished buildings, which are targeting a BREEAM 'Very Good' rating.

The Chocolate Factory | BREEAM 2014 Refurbishment | Context

BREEAM Non-Domestic Refurbishment and Fit-Out (2014) is an Environmental Assessment Methodology developed and administered by the BRE and is aimed at refurbishments and fit-outs. Its purpose is to reduce the office's impact on the environment by:

- Incorporating beneficial management processes (e.g. considerate construction);
- Improving health and wellbeing (e.g. comfort, amenity, accessibility)
- Reducing energy use and CO₂ emissions;
- Promoting sustainable modes of transport;
- Reducing potable water use;
- Promoting responsibly sourced materials with the lowest environmental impact;
- Managing construction and operational waste;
- Enhancing the site's ecology;
- Minimising pollution.

One credit in each category has a different weight in the score:



There are five BREEAM ratings depending on the overall score and whether the specific mandatory credits have been met.

BREEAM 2014 Rating	Minimum score
Outstanding	85%
Excellent	70%
Very Good	55%
Good	45%
Pass	30%

It should be noted that many credits require actions to be carried out by specific design stages in order to be awarded.

Block A at the Chocolate Factory is targeting a 'Very Good' rating.

Caution

This document is a BREEAM 2014 pre-assessment report. Its aim is to indicate which credits could be targeted in order to achieve an 'Very Good' rating and to summarise the requirements associated with each credit. For these credits to be delivered, it is crucial for all team members to review the full requirements associated with each credit contained in the BREEAM Technical Manual. The latest version of this Manual (SD216 – 1.0: 2014) has been used to prepare this pre-assessment and can be obtained:

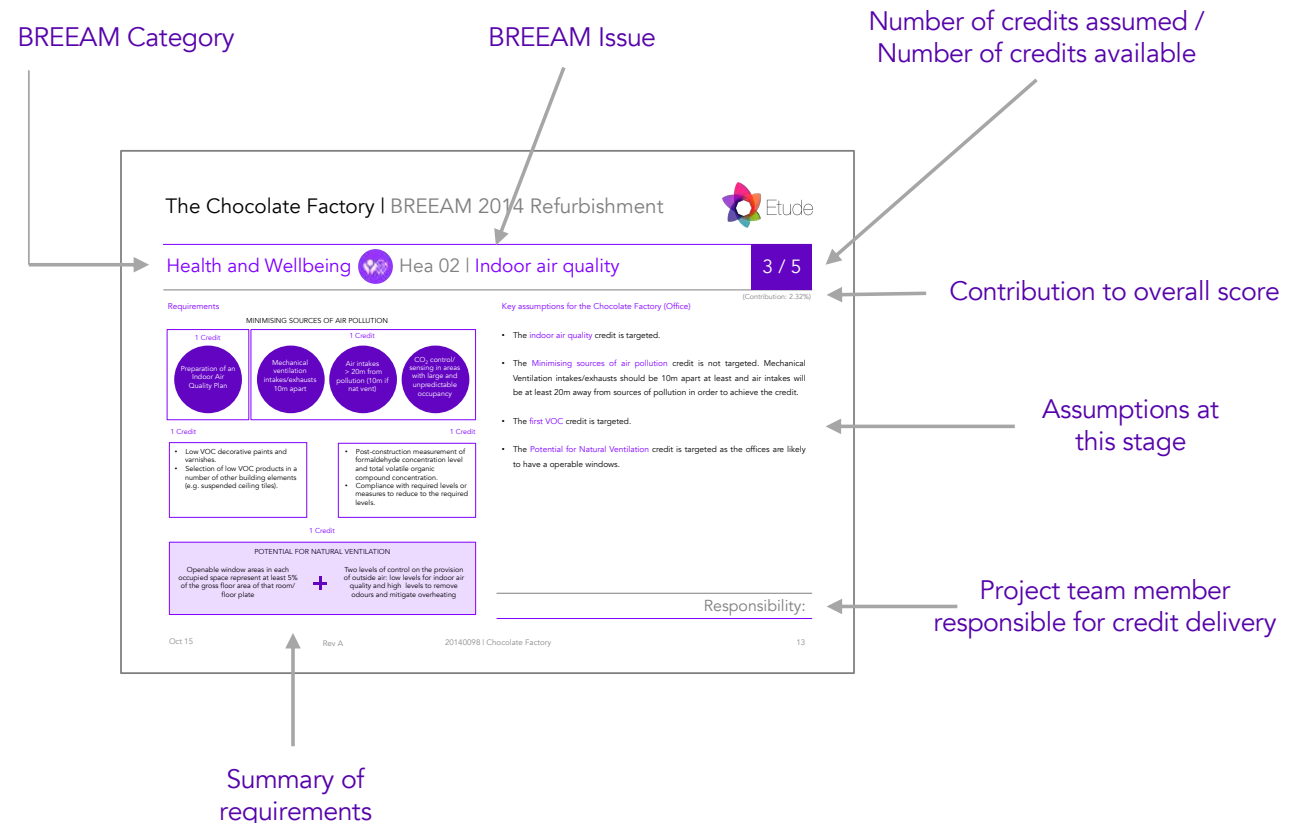
- at <http://www.breeam.org/page.jsp?id=109>
- by contacting Etude at london@etude.co.uk

It should also be noted that the assumptions made in this document are valid for this stage of the design and should be refined and re-evaluated as the design progresses so that their accuracy and validity reflect the design and the full credit requirements.

Purpose

One page has been prepared for each applicable credit. Its aim is to summarise clearly the credit name, its requirements, the number of credits assumed and the assumptions made at this stage of the design.

The figure below illustrates how each credit is presented:

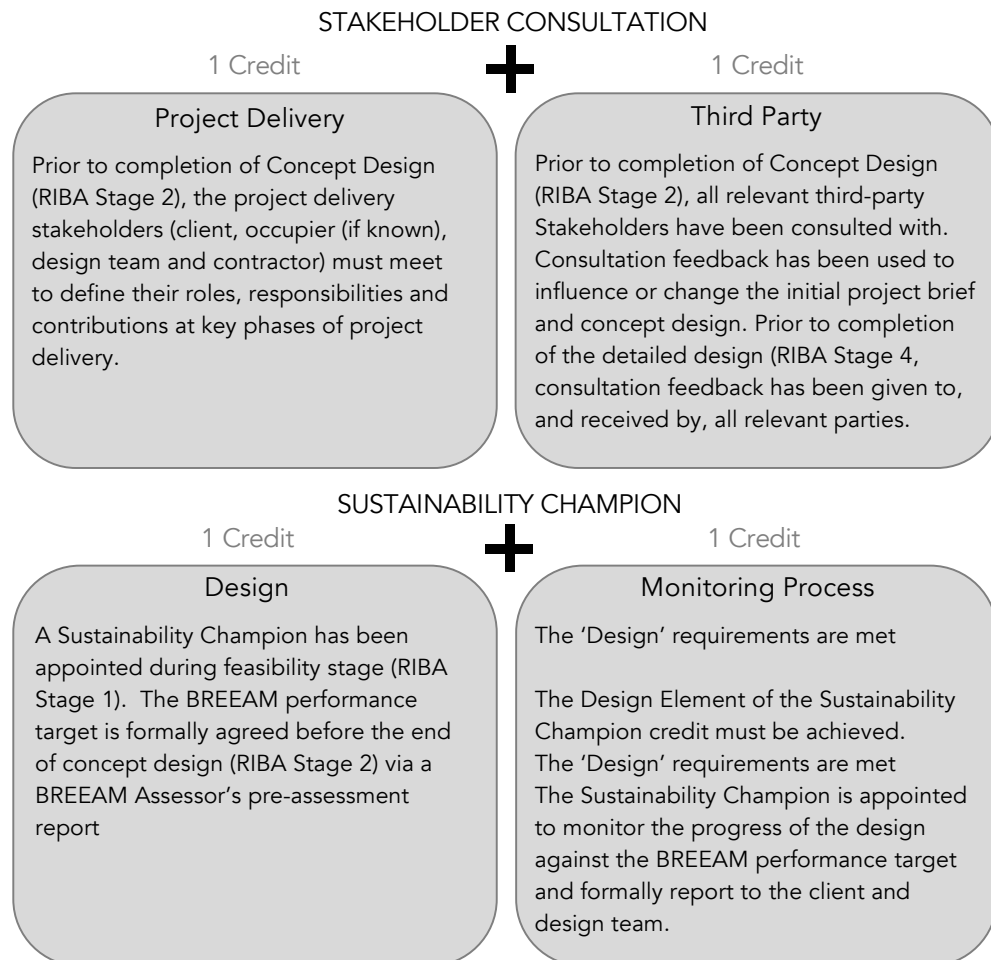


Management Man 01 | Project brief and design

2 / 4

(Contribution: 1.30)

Requirements



Key assumptions for the Chocolate Factory (Block A)

The Project Delivery Consultation and Third Party Consultation credits are targeted:

- Project Delivery - Roles and responsibilities between Workspace, the design team and other relevant 'delivery' stakeholders (e.g. Workspace project manager);
- Third Party – Consultation should be documented in a Consultation Plan / Statement of Community Involvement identifying all key third-party stakeholders. Feedback should be recorded and influence the design.

It is very important that the above consultation credits are documented in the formal manner required by BREEAM, and must cover the content required by the BREEAM guidance.

The Sustainability Champion credits are not targeted.

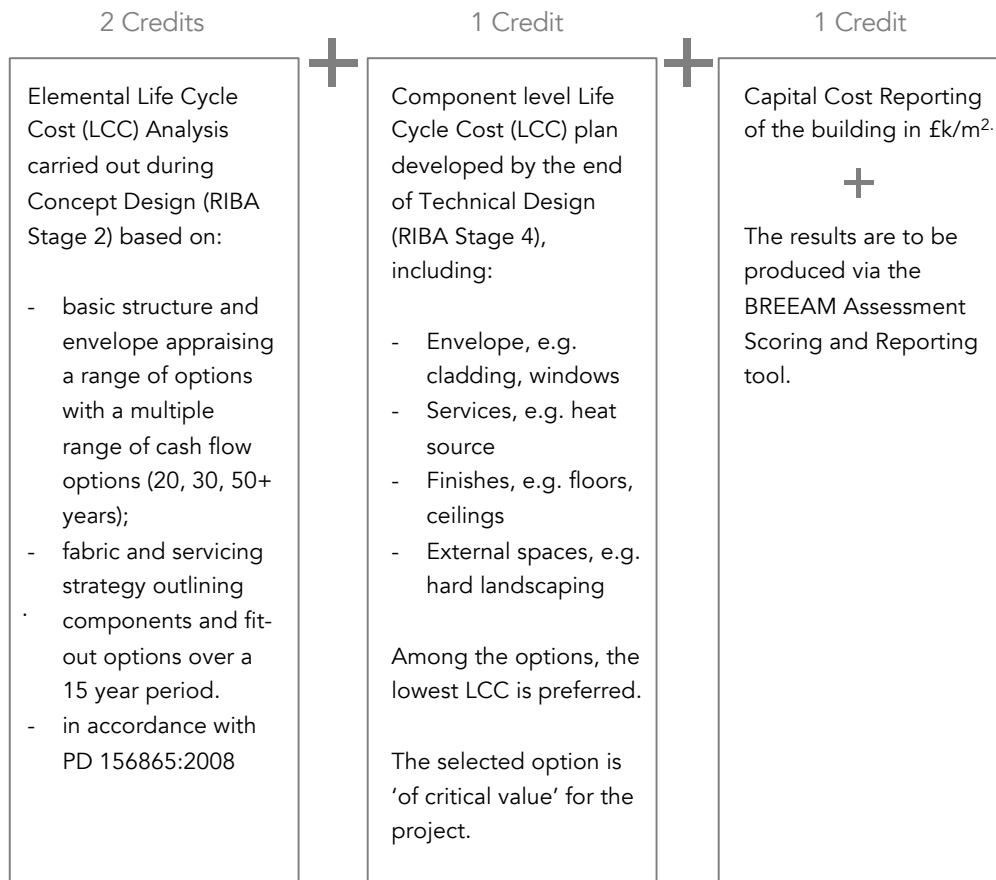
Responsibility: **Workspace + Barton Willmore**

Management Man 02 | Life cycle cost and service life planning

1 / 4

Requirements

In order to achieve these credits, the following requirements must be complied with:



Key assumptions for the Chocolate Factory (Block A)

(Contribution: 0.65)

- The first two credits require an Elemental Life Cycle Cost (LCC) Analysis to be carried out during Concept Design (RIBA Stage 2). These credits could be targeted but have not been assumed at this stage.
- The third credit would require a Life Cycle Cost (LCC) plan to be instructed and carried out prior to the end of Technical Design (RIBA Stage 4). This credit is not targeted at this stage.
- The fourth credit for reporting the capital cost of the project is targeted.

Responsibility: **Workspace**

Management Man 03 | Responsible Construction Practices

6 / 6

Requirements

Prerequisite

All timber used on project must be legally harvested and traded.

1 Credit

1 Credit

ENVIRONMENTAL MANAGEMENT

Principal Contractor operates an environmental management system (EMS) to BS14001 or equivalent standard
+
Operates best practice pollution prevention policies and procedures on-site in accordance with PPG6

2 Credits

SUSTAINABILITY CHAMPION

A Sustainability Champion is appointed to monitor ongoing compliance with the relevant sustainability performance criteria and targets (e.g. BREEAM target rating)
+
Will be based on site or will visit regularly to carry out spot checks during Construction, Handover and Close Out Stages

2 Credits

CONSIDERATE CONSTRUCTION

Principal Contractor registers with a compliant national 'considerate construction scheme' and awarded the following scores:

1 Credit: Scores between 25 and 34 (and at least 5 in each section) – This level is a minimum mandatory requirement for achieving an 'Excellent' rating.

OR

2 Credits: Scores between 35 and 39 (and at least 7 in each section)

MONITORING OF REFURBISHMENT SITE IMPACTS

An individual is appointed for monitoring, recording and reporting energy use, water consumption and transport data resulting from all on-site construction processes.
+

The individual must have the authority to request and access the data required (e.g. the Sustainability Champion)

Key assumptions for the Chocolate Factory (Block A)

(Contribution: 3.90)

- It is assumed that Workspace will appoint a contractor operating an EMS to BS14001 or equivalent standard;
- The building will be registered under the new Considerate Constructor Scheme and a score of more than 35 will be targeted;
- It is assumed that a sustainability champion will be appointed by the contractor to monitor on-going compliance with all relevant sustainability performance criteria, and to carry out the monitoring of construction-site impact actions.



Responsibility: Contractor

Management Man 04 | Commissioning and handover

4 / 4

(Contribution: 2.60)

Requirements

In order to achieve these credits, the following is required to achieve compliance:

1 Credit

COMMISSIONING AND TESTING SCHEDULE AND RESPONSIBILITIES

Contractor to account for the building commissioning and testing programme, appointing suitable project team member(s) to monitor and programme pre-commissioning, commissioning, testing and re-commissioning, where necessary.

1 Credit

COMPLEX BUILDING SERVICES

Building with complex systems require a specialist commissioning manager to be appointed during the design stage (by client or contractor) to carry out design reviews and provide commission management input to the design of the systems.

1 Credit

TESTING AND INSPECTING BUILDING FABRIC

A post-construction thermographic survey and air tightness test is carried out to test and inspect the integrity of the building's fabric, continuity of insulation, thermal bridging and locate any air leakage paths.

1 Credit

BUILDING USER GUIDE

A Building User Guide (BUG) is developed prior to handover, for distribution to the building occupiers and premises managers. A training schedule is prepared for building occupiers/premises managers, timed appropriately around handover and proposed occupation plans.

Key assumptions for the Chocolate Factory (Block A)

- The Commissioning and Testing Schedule and Responsibilities credit is targeted. It is currently assumed that a suitable team member will be appointed to undertake the commissioning monitoring / programming role, and all commissioning works will be carried out in accordance with current Building Regulations, BSRIA and CIBSE guidance documents.
- the Complex Building Services credit is targeted. It is assumed that a specialist commissioning manager will be appointed during the design stage to inform the design and manage the commissioning of all complex systems.
- the Testing and Inspecting Building Fabric credit is targeted. The contractor will have to undertake the relevant fabric testing and inspection works (e.g. thermographic survey) towards the end of the construction programme.
- the Handover credit is targeted. A Building User Guide will be produced and a training plan developed for relevant premises occupiers.

Responsibility: **Contractor**

Management Man 05 | Aftercare

3 / 3

(Contribution: 1.95)

Requirements

In order to achieve these credits, the following requirements must be complied with:

1 Credit

Aftercare Support

Operation infrastructure and resources in place to provide aftercare support to the building occupiers, which includes:

- An initial meeting between the aftercare team and the building occupiers
- On-site facilities management training
- Aftercare support for at least the 1st month with frequent (weekly) site attendance
- Longer term aftercare support for at least 12 months with a helpline, nominated individual, etc.

Energy and water consumption meters to be in place to facilitate the analysis of discrepancies between design and actual performance.

1 Credit

Seasonal Commissioning

Seasonal commissioning for all complex and simple systems to be carried out and completed over the first 12 months of substantial building occupation.

1 Credit

Post Occupancy Evaluation

A Post Occupancy Evaluation (POE) exercise is carried out one year after initial building occupation. The POE is to be carried out by an independent 3rd party.

Exemplary credit

Carry out the POE for a minimum 3 year period

(1 additional credit)

Key assumptions for the Chocolate Factory (Block A)

- The Aftercare Support credit is targeted.
- the Seasonal Commissioning credit is targeted.
- The Post Occupancy Evaluation credit is targeted.

Responsibility: **Workspace + Contractor**

Health and Wellbeing Hea 01 | Visual comfort

2 / 7

(Contribution: 1.55)

Requirements

GLARE CONTROL – 1 Credit

Blinds or permanent shading on all elevations



The glare control measures do not inhibit daylight levels when direct sunlight is not on the facade

DAYLIGHTING – 1-3 Credits

All spaces occupied for 30 minutes or more achieve an average Daylight Factor of 2%



(a) Uniformity ratio of at least 0.3 or minimum point daylight factor of 0.7%
or
(b) View of sky from desk height
and
(c) Room 'depth criterion' met

20, 40 or 60% of the relevant areas to comply

VIEW OUT – 2 Credits

95% of floor area in relevant areas* are within 7m of a window at eye level (1.2-1.3m).

Window area must represent more than 20% of surrounding wall area.

* e.g. frequently occupied areas including near workstations and desks.

INTERNAL AND EXTERNAL LIGHTING – 1 Credit

Internal and external lighting levels compliant with relevant codes (e.g. SLL Code 2012)



Internal lighting is zoned to allow for a high degree of localised occupant control

Exemplary credit

Daylight factor of 3% and minimum point daylight factor of 1.2% or 2.1% for spaces with glazed roofs, such as atria

(1 additional credit)

Key assumptions for the Chocolate Factory (Block A)

- The **Glare Control** credit is currently targeted. This could be achieved through the specification of internal blinds*.
- The **Daylighting** credits are not currently targeted. However, this should be reviewed as the design progresses.
- The **View Out** credits are currently not targeted due to the deep plan nature of the building.
- The **Internal and External Lighting** credit is targeted.

* Applies to spaces expected to be occupied for more than 30 minutes.

Responsibility: **Barton Willmore + FGP**

Health and Wellbeing



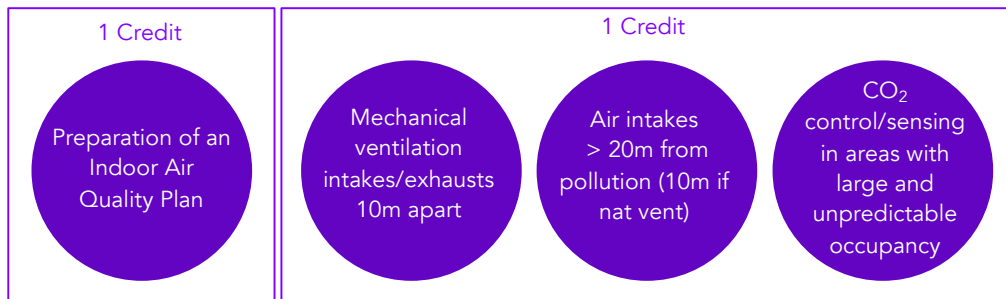
Hea 02 | Indoor air quality

3 / 5

(Contribution: 2.32)

Requirements

MINIMISING SOURCES OF AIR POLLUTION



1 Credit

1 Credit

- Low VOC decorative paints and varnishes.
- Selection of low VOC products in a number of other building elements (e.g. suspended ceiling tiles).

- Post-construction measurement of formaldehyde concentration level and total volatile organic compound concentration.
- Compliance with required levels or measures to reduce to the required levels.

1 Credit

POTENTIAL FOR NATURAL VENTILATION

Openable window areas in each occupied space represent at least 5% of the gross floor area of that room/floor plate



Two levels of control on the provision of outside air: low levels for indoor air quality and high levels to remove odours and mitigate overheating

Key assumptions for the Chocolate Factory (Block A)

- The **indoor air quality plan** credit is targeted.
- The **Minimising sources of air pollution** credit is not targeted. Mechanical Ventilation intakes/exhausts should be 10m apart at least and air intakes will be at least 20m away from sources of pollution in order to achieve the credit.
- The specification of low **VOC** finishes is targeted and should be based on the Indoor Air Quality Plan.
- The credit for carrying out **post construction air quality testing** (prior to occupancy) is targeted
- The **Potential for Natural Ventilation** credit is not targeted.

Responsibility: Barton Willmore + FGP + Etude

Health and Wellbeing Hea 04 | Thermal comfort

2 / 3

(Contribution: 1.55)

Requirements

In order to achieve these credits, the following requirements must be complied with:

1 Credit

THERMAL MODELLING

Dynamic study demonstrating that the design can deliver thermal comfort levels in accordance with CIBSE Guide A (table 1.5), particularly in terms of 'Time Out of Range' (TOR) metric with maximum and minimum temperatures for both winter and summer



1 Credit

ADAPTABILITY FOR CLIMATE CHANGE

The thermal comfort dynamic modelling study is expanded to assess a climate change conditions scenario

1 Credit

TEMPERATURE CONTROL STRATEGY

Developed for heating and cooling systems and addressing issues including thermal zoning, appropriate occupant control, system interaction and manual override

Key assumptions for the Chocolate Factory (Block A)

It is currently assumed that a thermal comfort model and strategy will be produced, in accordance with the credit criteria. Both thermal comfort credits are therefore targeted.

Important notes

- Another industry standard can be used in lieu of CIBSE Guide A if it sets a higher or more appropriate requirement.
- Generally, zoning should allow separate occupant control of each perimeter area and the central zone in areas other than atria, concourses, entrance and reception areas and ancillary spaces (e.g. circulation, plant rooms, etc.)
- CIBSE Guide A table 1.5 sets the following value for offices: 21-23°C in the winter and 22-24°C in the summer if mechanically cooled.

Responsibility: FGP + Etude

Health and Wellbeing Hea 05 | Acoustic performance

0 / 3

(Contribution: 0.00)

Requirements

Sound insulation

Sound insulation between acoustically sensitive rooms and other occupied areas complies with Section 7 of BS 8233:2014 and pre-completion acoustic testing is carried out .



Indoor noise levels

indoor ambient noise levels comply with the design ranges given in Section 7 of BS 8233:2014 and pre-completion acoustic testing is carried out.



Reverberation

Control of reverberation, sound absorption and speech transmission index comply with sound absorption and reverberation times requirements set out in Section 7 of BS 8233:2014 and pre-completion acoustic testing is carried out

Key assumptions for the Chocolate Factory (Block A)

The credit is not currently targeted.

Responsibility: **Waterman**

Health and Wellbeing



Hea 06 | Safety and security

1 / 1

(Contribution: 0.77)

Requirements

1 Credit

SECURITY OF SITE AND BUILDING

1. A Suitably Qualified Security Specialist (SQSS) should conduct an evidence based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent).
1. The SQSS develops a set of recommendations or solutions during or prior to Concept Design (RIBA Stage 2 or equivalent).
1. The recommendations or solutions proposed by the SQSS are implemented

Important note

An actual SbD or SP certificate is not required

Key assumptions for the Chocolate Factory (Block A)

This credit is targeted.

The proposals in terms of access (pedestrians, cyclists, delivery) should be reviewed, and consultation with Haringey's Crime Prevention Design Advisor should take place pre-planning.

Responsibility: **Barton Willmore**

Energy / CO₂ Ene 01 | Reduction of emissions

6 / 15

(Contribution: 3.92)

Requirements



Minimum requirement for	EPR _{NC}	Credits
Pass Good Very Good	0.06	1
	0.12	2
	0.18	3
	0.24	4
	0.30	5
Excellent	0.36	6
	0.42	7
	0.48	8
	0.54	9
	0.60	10
Outstanding	0.66	11
	0.72	12
	0.78	13
	0.84	14
	0.9 AND zero net regulated CO ₂ emissions	15

Key assumptions for the Chocolate Factory (Block A)

It is considered reasonable to target 6 credits at this stage. The following key parameters are assumed:

Responsibility: Barton Willmore + FGP + Etude

Energy / CO₂ Ene 02 | Energy monitoring

2 / 2

(Contribution: 1.31)

Requirements

One credit is awarded based on the extent of sub-meters provided, which should all have a pulsed output, be connected to the Building Energy Management System (BEMS), be clearly identifiable to the building user and be easily accessible.

1 Credit

MAJOR ENERGY USES

- Space Heating
- Domestic Hot Water
- Humidification
- Cooling
- Fans (major)
- Lighting
- Small power
- Other major energy-consuming systems



1 Credit

TENANTED / MAIN AREAS

- All tenanted areas
- Main function areas/departments (in the case of a single occupancy building)

Must cover at least 90% of each fuel use type.

Important notes

- If sub-metering is provided for each floor plate, it is acceptable to combine lighting and small power in a single sub-meter on each floor plate.
- 'Other major energy-consuming systems may include kitchen plant, cold storage, lifts.
- For a development consisting of small units a single meter per unit is sufficient to achieve this credit.

Key assumptions for the Chocolate Factory (Block A)

The first energy monitoring credits is targeted. Sub-meters connected to the BMS will enable the following energy uses to be monitored:

- Space Heating
- Domestic Hot Water
- Cooling
- Lighting
- Major fans and pumps
- Small power
- Other major energy-consuming systems (e.g. catering areas)

The different tenants will also be separately metered.

Responsibility: FGP

Energy / CO₂ Ene 03 | External lighting

1 / 1

(Contribution: 0.65)

Requirements

All external lighting systems must meet the below requirements:

The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt.



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

OR

If there is no external lighting, this credit can be awarded by default

Key assumptions for the Chocolate Factory (Block A)

This credit will be targeted and the requirements (both in terms of lighting efficacy and controls) will be included in the specifications.

Responsibility: FGP

Energy / CO₂ Ene 04 | Low carbon design

2 / 3

(Contribution: 1.31)

Requirements

PASSIVE DESIGN¹

1 Credit

PASSIVE DESIGN ANALYSIS AT RIBA STAGE 2

The project carries out a building specific analysis of passive design measures to minimise the demand for heating, cooling, mechanical ventilation, lighting and other uses in order to achieve a meaningful reduction in CO₂ emissions.



1 Credit

FREE COOLING

The passive design analysis includes an assessment of free cooling strategies. At least one strategy is implemented into the design of the building to result in there being no significant use of any active cooling systems

LOW AND ZERO CARBON FEASIBILITY STUDY

1 Credit

LZC FEASIBILITY STUDY AT RIBA STAGE 2²

Low or Zero Carbon (LZC) energy source feasibility study covering various aspects including life cycle cost and payback + Specification of recommended technology.

Key assumptions for the Chocolate Factory (Block A)

The Energy Strategy submitted in support of the planning application covers some aspects of the credit requirements.

It includes a [Passive Design analysis](#) and a [LZC Feasibility Study](#) as they need to be undertaken at Stage 2.

¹ To target these credits the Hea 4 – Thermal Comfort credit must also be achieved.

² The LZC feasibility study can be carried out after RIBA Stage 2 however additional criteria would need to be satisfied.

Energy / CO₂ Ene 06 | Energy efficient transportation

3 / 3

(Contribution: 1.96)

Requirements

1 Credit ENERGY CONSUMPTION

Analysis of transportation demand and usage patterns to determine the optimum number and size of lifts (including counter-balancing ratios), escalators and/or moving walks.

Assessment of energy consumption and **selection** of strategy/system with the lowest energy consumption.



2 Credits ENERGY EFFICIENT FEATURES

LIFTS specified must have the 3 energy efficient features:

- a) Stand-by operation during off-peak periods
- b) Energy efficient lighting, display lighting and lighting controls
- c) Drive controller capable of variable-speed, variable-voltage, variable frequency control of the drive motor

Regenerative drive units must also be specified where they are demonstrated to save energy

FOR ESCALATORS, specification of either of the following energy efficient features:

- a) Stand-by operation and auto-walk
- b) Load sensing device coupled with variable speed drive

Important note

Any lift with a rated speed greater than 0.15 m/s must be assessed inclusive of passenger, impaired mobility lifts, goods and vehicle.

Key assumptions for the Chocolate Factory (Block A)

- The **Traffic Analysis and Selection** credit is targeted: a traffic analysis will be undertaken and an assessment of the lifts' energy consumption carried out in order to specify the most energy efficient system.
- The **Energy Efficient Specifications** credit is also targeted. It is assumed that the following three key energy efficient features will be included in the lifts' specifications:
 - a) Stand-by operation during off-peak periods;
 - b) Energy efficient lighting, display lighting and lighting controls;
 - c) Drive controller capable of variable-speed, variable-voltage, variable frequency control of the drive motor;

Additionally where a regenerative drive unit can be demonstrated to save energy, this will also be specified.

Responsibility: FGP

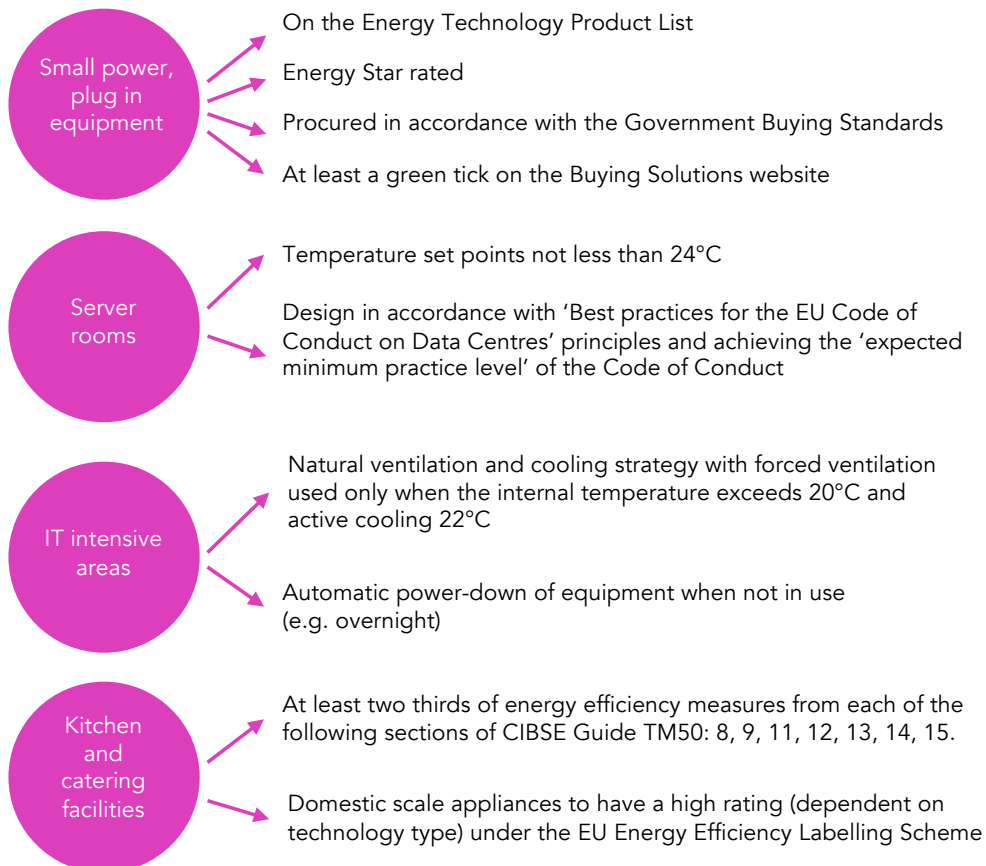
Energy / CO₂ Ene 08 | Energy efficient equipment

0 / 2

(Contribution: 1.96)

Requirements

2 credits are awarded if energy efficient equipment is specified for those functions below which will be responsible for the significant majority of unregulated energy consumption in the building:



Key assumptions for the Chocolate Factory (Block A)

Both credits have not been assumed. All relevant equipment installed during the fit-out works, and provided by Workspace, would need to be procured to the appropriate energy efficiency standard in order to achieve these credits.

Responsibility: **Workspace**

Transport Tra 01 | Sustainable transport solutions

3 / 3

Requirements

Credits are awarded based on the following criteria:

Distance to/from public transport node(s) ¹

Public transport type(s), e.g. bus, rail

Average number of services per hour ²

These criteria are inputted into the BREEAM Tra 1 calculator which determines the site's public transport Accessibility Index (AI) ³. From this AI, the following number of credits are achievable for an office building:

Public Transport Accessibility Index (AI)	Number of credits
≥ 2	1
≥ 4	2
≥ 8	3

Important notes

¹ Any bus stop within 650m and any railway station within 1000m of the main entrance (safe pedestrian route)

² Number of stopping services per day divided by the number of hours within the operating period of the building

³ For buildings in Greater London, the AI can be calculated using TfL's Planning Information Database available at www.webptals.org.uk

Key assumptions for the Chocolate Factory (Block A)

The location of the site has been inputted in the TfL Planning Information Database.



The site's PTAL is 4 and the Accessibility Index is 18. Therefore, 3 credits can be achieved.

Responsibility: **SDG**

Transport Tra 02 | Proximity to amenities

1 / 1

Requirements

Up to 1 credit is available if the building is located in an area that meets the following requirements

1 Credit

At least 2 of the following amenities are within a 500m walking distance from the building.

CORE AMENITIES

Grocery or
food outlet

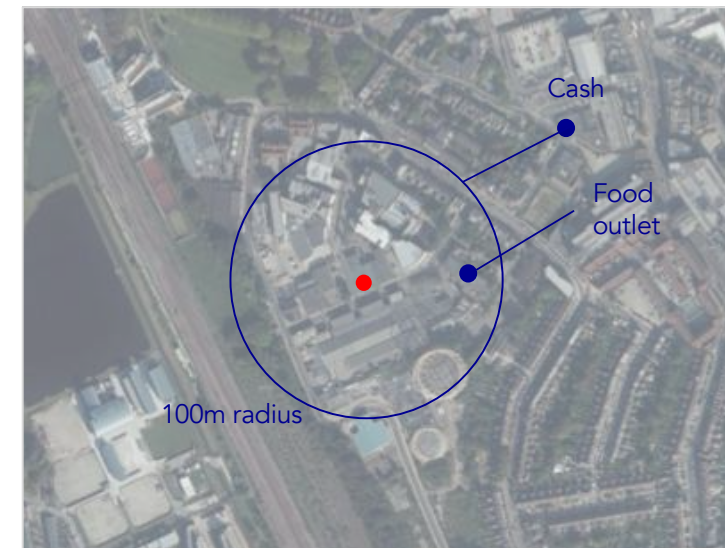
Leisure /
sport
facilities

Cash machine

Key assumptions for the Chocolate Factory (Block A)

(Contribution: 0.76)

The map below illustrates the position of the site and the initial assessment of the amenities.



The site is located within a 500m walking distance of several food outlets and a cash machine.

Responsibility: **Barton Willmore**

Transport Tra 03 | Cyclist facilities

2 / 2

Requirements

These credits are awarded on the basis of the provision of cyclist facilities, i.e:

CYCLE SPACES + SHOWERS + CHANGING FACILITIES + LOCKERS + DRYING SPACE

1st credit

At least 1 cycle space
per 10 building
occupants (staff
members) provided



2nd credit

At least 2 cyclist
facilities for staff
members (showers,
changing rooms,
lockers and drying
space

Important notes

- The majority of the cycle spaces should ideally be within 50m of a building entrance.
- One shower must be provided for every 10 cycle spaces (however, any development with more than 8 showers will comply).
- The number of lockers must be at least equal to the number of cycle spaces and they should be located adjacent to the changing facilities.
- The drying space must be a designated space with adequate heating/ventilation (not a plant room).
- The requirements can be reduced by 50% when more than half of the credits have been achieved under Tra 01.

Key assumptions for the Chocolate Factory (Block A)

(Contribution: 1.51)

The number of future building users is unknown at this stage. However, if the building accommodates 922 people (estimate based on a net floor area of 7,900 sqm and the BREEAM occupancy rate of 0.111 sqm/person) the following would be required to achieve **two credits**:

- 51 cycle spaces

AND at least two of the following cyclist facilities:

- 5no showers
- Associated changing facilities and drying spaces
- 51 lockers

It is currently assumed that 2 credits can be targeted.

Responsibility: Barton Willmore + SDG

Transport Tra 05 | Travel plan

1 / 1

(Contribution: 0.76)

Requirements

One credit is awarded if a travel plan has been prepared **before the end of the design** in accordance with the following requirements:

1. It considers **all types of travel** relevant to the building and its users.
2. It takes into consideration the findings of a **site-specific transport survey and assessment** which takes into consideration the opinion of existing building users towards cycling and walking (if applicable), travel patterns and transport impact of the future users, disabled access, public transport and cyclist facilities.
3. It includes a **package of measures to minimise car-based travel patterns**, e.g.
 - Parking priority spaces for car sharers;
 - Cycle storage and facilities;
 - Information about public transport or car sharing in the lobby area.
4. The **Occupier must be involved with developing the travel plan** and will be supported by the building's management team.

Key assumptions for the Chocolate Factory (Block A)

A transport assessment will be prepared for the scheme.

A full Travel plan will also be produced which will meet BREEAM and TfL standards.

Responsibility: **SDG**

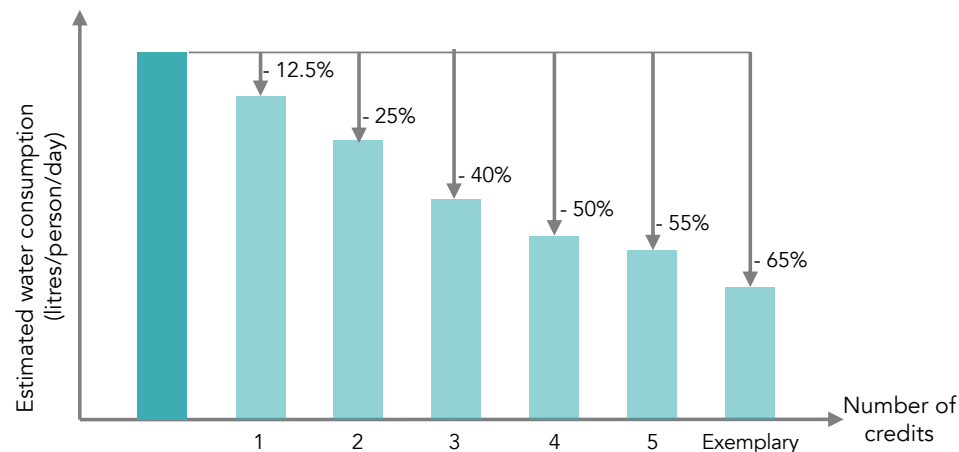
Water Wat 01 | Water consumption

3 / 5

(Contribution: 2.27)

Requirements

Credits are awarded based on the water efficiency of WCs, urinals, taps, showers and dishwashers (if provided). Up to 5 credits can be achieved depending on the calculated reduction over the 'baseline performance' using the BREEAM Wat 01 calculator:



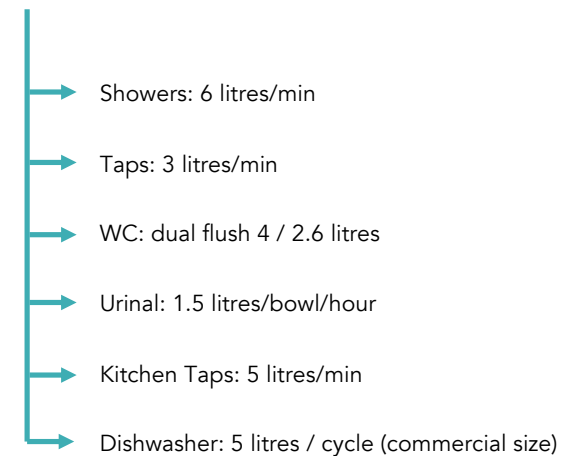
Important notes

- A rainwater/greywater recycling system specified and installed in accordance with BS8515:2999 / BS8525-1:2010 can be used to off-set non potable water demand as long as a minimum level of water efficiency has been achieved.
- Water consumption figures inputted into the BREEAM Wat 01 Calculator need to be collected from manufacturers' product information.

Key assumptions for the Chocolate Factory (Block A)

The following flow rates are assumed at this stage. This would represent a reduction in water consumption over the BREEAM baseline of approximately 40% and therefore 3 credits can be targeted.

40% reduction on benchmark



Responsibility: FGP + Barton Willmore

Water Wat 02 | Water monitoring

1 / 1

(Contribution: 0.76)

Requirements

This credit is awarded if water consumption can be monitored and managed:

Water meter on the
mains water supply

Water-consuming
plant/areas sub-
metered ¹

All meters with a pulsed
output to enable BMS
connection

Key assumptions for the Chocolate Factory (Block A)

A water meter connected to the BMS will be installed on all mains water supply to the building.

Important notes

¹ Plant / areas are considered 'water-consuming' when they are consuming more than 10% of the building's total water demand.

The sub-meter requirement does not apply where a building has only one or two small sources of water demand (e.g. office with sanitary fittings and small kitchens) or where the building has two sources of water demand with one significantly larger than the other one and masking it.

Responsibility: FGP

Water Wat 03 | Water leak detection and prevention

2 / 2

(Contribution: 1.52)

Requirements

1 Credit

LEAK DETECTION SYSTEM

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 system must be audible and programmable.

1 Credit

FLOW CONTROL DEVICES

One of the following types of flow control device is fitted to each WC area in order to control water supply:

- time controller
- volume controller
- presence detector and controller
- central control unit

Key assumptions for the Chocolate Factory (Block A)

- the [Leak Detection System](#) credit is targeted. An audible, programmable and compliant system will be specified.
- the [Leak Prevention](#) credit is targeted. Each WC area will be fitted with a water supply control device to prevent leaks.

Important notes

- A system that directly detects water leakage along part or the whole length of the water supply system is not necessarily required as the credit can usually be achieved by a system which detects higher than normal flow rates at meters and/or sub-meters.
- If there is an existing utility water meter, a separate flow meter may be required just after the utility meter, unless the utility company agrees to some form of leak detection being installed on their meter.
- Flow control devices are not required for each individual sanitary appliance but for each WC block. Their aim is to isolate water supply to each block.

Responsibility: FGP

Water Wat 04 | Water efficient equipment

1 / 1

(Contribution: 0.76)

Requirements

IRRIGATION FOR INTERNAL/EXTERNAL PLANTING AND/OR LANDSCAPING

Compliance with any one of the following:

- a) Drip feed subsurface irrigation with soil moisture sensors, zoning and rainstat
- b) Rainwater/greywater supply
- c) No irrigation required other than precipitations
- d) Specification of species with no irrigation requirements
- e) Manual watering only



VEHICLE WASH SYSTEM

The system uses a full or partial reclaim unit with at least one of the following:

- a) Hydro-cyclone
- b) Sand or activated carbon filter
- c) Sump tank
- d) Three chamber interceptors
- e) Cartridge filter or bag filter

Important notes

Where there is no planting or vehicle wash facilities this issue is not applicable.

If there are any additional uses of non-regulated water use, these will need to be assessed.

Key assumptions for the Chocolate Factory (Block A)

It is assumed that any landscaping and planting will be irrigated manually. Therefore, this credit can be targeted at this stage.

There will be no vehicle wash system.

Responsibility: FGP

Materials Mat 01 | Environmental impact of materials

3 / 5

(Contribution: 3.28)

Requirements

Credits are awarded according to the Green Guide rating of materials used in the building (see www.thegreenguide.org.uk) for the following building elements:

- External and internal walls
- Windows
- Roof
- Upper and ground floors (including separating floors)
- Floor finishes/coverings



Green guide rating of each building element

BREEAM MAT 01
Calculator

Number
of Mat 01
points

Number
of credits

Number of Mat 01 points	≥ 4	≥ 5	≥ 8	≥ 10	≥ 12
Number of credits	1	2	3	4	5

- When an independently verified third party Environmental Product Declaration (EPD) is available for a material/product which forms part of an assessed building element, this can be used to increase this element's Mat 01 performance.
- Retained and re-used elements as part of the structure are A+ rated.

Key assumptions for the Chocolate Factory (Block A)

It is considered that 3 credits under Mat 01 is a reasonable assumption at this stage.

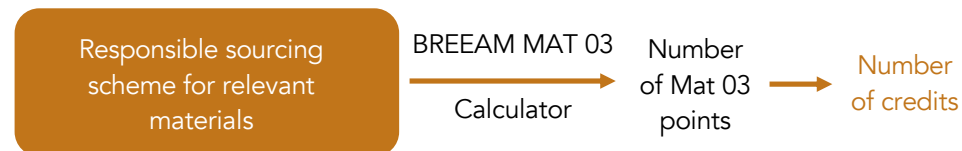
Responsibility: **Barton Willmore**

Materials Mat 03 | Responsible sourcing of materials

3 / 4

Requirements

Where **new** materials are being introduced in any **building element**, up to 3 credits are achievable if at least 80% of the materials that make-up that element comply with tier levels 1-8 for responsible sourcing. **One further credit** can be awarded if the principle contractor is committed to having a Sustainable Procurement Plan in place.



Credits	% of available points achieved
1	≥ 18%
2	≥ 36%
3	≥ 54%
Exemplary	≥ 70%

Example of materials (the relevant EMS scope will vary depending on materials)

Brick	Concrete	Glass	Plastics and rubber
Metals	Timber	Wood panels	Plasterboard and plaster
Insulation	Insulation	Building stones	Resin-based composite

Additionally (**and for all rating levels**) all timber used in the project must be sourced in accordance with the UK Government's Timber Procurement Policy.

The **Sustainable Procurement Plan** credit is targeted.
At least **36%** of available points should be achieved.

Examples of Compliant Schemes	Tier level
BES6001 (or similar) 'Excellent' / 'Very Good' / 'Good' / 'Pass'	2/3/4/5
Re-used materials	3
Forest Stewardship Council (FSC)	3
Programme for the Endorsement of Forest Certification (PEFC)	3
Canadian Standards Association (CSA) Chain of Custody Scheme	3
Recycled materials	6
Certified EMS for the Key Process and Supply Chain	6
Certified EMS for the Key Process	7

Confirmation of claims should be sought from the relevant scheme provider, many of which list on their website certified companies and products (e.g. downloadable BES 6001 certificate copies are available at www.greenbooklive.com).

Responsibility: **Barton Willmore**

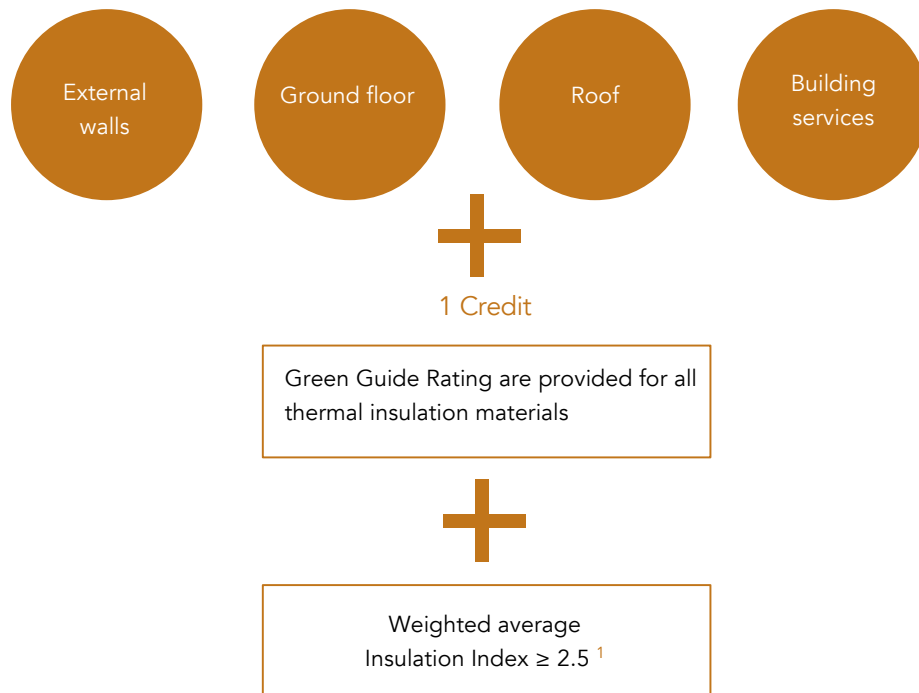
Materials Mat 04 | Insulation

1 / 1

Requirements

Pre-requisite

Any new insulation specified within the following building elements must be assessed:



¹ Determined using the BREEAM Mat 04 calculator. A third party Environmental Product Declaration (EPD) can be used to improve Mat 04 performance.

Key assumptions for the Chocolate Factory (Block A)

(Contribution: 1.09)

All new insulation specified will be assessed using the Green Guide.

Therefore this credit is currently being targeted under Mat 04.

For information, A-rated insulation materials under the Green Guide currently include:

- Cellular glass insulation with a density of less than 130 kg/m²
- Glass wool insulation
- EPS
- Stone wool insulation with a density of less than 100 kg/m²
- Corkboard insulation
- Sheep's wool insulation
- XPS with zero ozone depletion blowing agent

Responsibility: Barton Willmore + FGP

Materials Mat 05 | Designing for durability and resilience

1 / 1

(Contribution: 1.09)

Requirements

One credit is awarded if adequate protection of exposed elements of the building and landscape will increase their durability. The following is required:

1. Areas where vehicular, trolley and pedestrian movement occur have been identified.
2. Suitable durability measures / design solutions have been incorporated in order to protect the following areas from the following effects:

Areas

Main entrances, public areas, corridors, lifts, stairs

Within 1m of internal fabric in storage, delivery, corridor, kitchen

External building façade of car parking areas and delivery areas

All external areas of the building and hard landscaping

Protection from

Effects of high pedestrian traffic

Internal vehicle/trolley movement

Potential vehicle collision

Environmental factors and materials degradation effects

Examples

Hard-wearing and easily washable floor finishes

Corridor walls specified to Severe Duty as per BS 5234-2

Bollards, barriers, raised kerbs

Anti-corrosion treatments, waterproofing, timber treatment

Key assumptions for the Chocolate Factory (Block A)

The vulnerable areas of the building will be identified and the adequate protection measures specified.

Responsibility: Barton Willmore

Materials Mat 06 | Material Efficiency

0 / 1

(Contribution: 0.00)

Requirements

One credit is awarded where opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life..

The above study is carried out by the relevant members of the design / construction team at the following RIBA stages:

- a. Preparation and Brief
- b. Concept Design
- c. Developed Design
- d. Technical Design
- e. Construction

Key assumptions for the Chocolate Factory (Block A)

This credit is not targeted.

Responsibility: -

Waste Was 01 | Construction waste management

4 / 7

(Contribution: 2.84)

Requirements

PRE-REFURBISHMENT AUDIT 1 credit

Carry out a pre-refurbishment audit (at RIBA stage 2) and prior to strip-out / demolition

REUSE AND DIRECT RECYCLING OF MATERIALS

1 credit

or

2 credits

50% of the total available points

75% of the total available points

CONSTRUCTION RESOURCE EFFICIENCY

Preparation of a compliant Resource Management Plan (RMP), which includes target benchmarks for resource efficiency



Incorporation in the RMP of procedures and a commitment to minimise the amount of non-hazardous construction waste per 100 m² (gross floor area):

1 credit

2 credits

3 credits

Exemplar

≤ 11.3 m³
or 3.5 t

≤ 4.5 m³
or 1.2 t

≤ 2.1 m³
or 0.4 t

≤ 1.6 m³
or 1.9 t

DIVERSION OF RESOURCES FROM LANDFILL

1 credit

Exemplar

Non-demolition
70% (volume)
or 80% (weight)

Demolition
80% (volume)
or 90% (weight)

Non-demolition
85% (volume)
or 90% (weight)
Excavation
95% (volume)
or 95% (weight)

Demolition
85% (volume)
or 95% (weight)

Key assumptions for the Chocolate Factory (Block A)

A pre-refurbishment and demolition audit should be carried out by the contractor to determine if reuse is possible and, if not, to maximise the recovery of material.

No reuse and direct recycling credits have been targeted, but this should be reviewed.

A Resource Management Plan (RMP) will be prepared with targets relating to:

- the minimisation of non-hazardous construction waste
- the diversion of non-hazardous demolition waste from landfill
- the diversion of non-hazardous construction waste from landfill
- the following quantified targets are assumed:

Non-hazardous construction
waste
≤ 4.5 m³ or 1.2 t /
100m² GEFA

Diversion rates from landfill

Non-demolition
85% (volume)
or 90% (weight)

Demolition
85% (volume)
or 95% (weight)

The RMP will include procedures in order to achieve the targets above.

Responsibility: Contractor

Waste Was 02 | Recycled aggregates

0 / 1

(Contribution: 0.00)

Requirements

Proportion of recycled and/or secondary aggregate specified in the total high-grade aggregate



1 Credit
25%
(by weight or volume)

Exemplar
35%
(by weight or volume)

Key assumptions for the Chocolate Factory (Block A)

The use of recycled or secondary aggregates for at least 25% of high-grade aggregates is not considered likely to be achievable at this point in time.

Proportion of recycled and/or secondary aggregate	1 Credit	Exemplar
Structural frame	15%	30%
Bitumen or hydraulically bound base, binder, and surface courses for paved areas and roads	30%	75%
Concrete road surfaces	15%	45%
Pipe bedding	100%	N/A
Building foundations	20%	35%
Granular fill and capping	100%	N/A

Recycled aggregates: obtained on site OR from construction waste processing site(s) within a 30km radius of the site (e.g. demolition waste)

Secondary aggregates: obtained from a non-construction post-consumer/industrial by-product source (e.g. PFA, recycled glass, tyres)

Responsibility: -

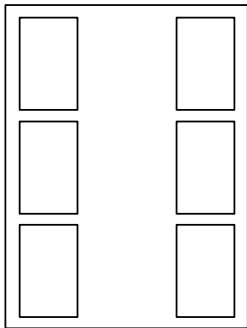
Waste Was 03 | Operational waste

1 / 1

(Contribution: 0.71)

Requirements

Dedicated space(s) for recyclable waste



(where appropriate)

Specific waste facility



- Of an appropriate capacity based on likely waste arisings
 - At least 2m² per 1000m² for buildings < 5000 m²
 - At least 10m² per for buildings ≥ 5000 m²
 - Additional similar requirements where catering is provided
 - Clearly labelled
 - (Ideally) within 20m of a building entrance
 - Accessible for collections by waste management contractors
-
- Static waste compactor or baler if consistent generation in volume of packaging
 - Composting vessel or compostable waste storage if consistent generation in volume of organic waste for delivery to a composting facility (on-site or off-site)

Key assumptions for the Chocolate Factory (Block A)

An operational waste management strategy will be prepared. It is assumed at this stage that this credit will be achieved.

Responsibility: Etude + Barton Willmore

Waste Was 05 | Adaption to climate change

0 / 1

(Contribution: 0.00)

Requirements

STRUCTURAL AND FABRIC RESILIENCE

Climate change adaption strategy appraisal by the end of Concept Design (RIBA Stage 2) to identify and evaluate the impact of expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. As a minimum the assessment should cover:

- Hazard identification and assessment;
- Risk estimation and evaluation;
- Risk management.

EXEMPLARY CREDIT

In addition to the above requirements the following credit criteria should be achieved:

- Hea 04 Thermal Comfort – Criterion 6 is achieved
- Ene 01 Reduction of Energy Use and Carbon Emissions – At least 8 credits have been achieved
- Ene 04 Low Carbon Design – The passive design credit has been achieved
- Wat 01 Water Consumption – At least 3 credits have been achieved
- Mat 05 Design for Durability and Resilience – Criterion 2 linking to material degradation has been achieved
- Pol 03 Surface Water Runoff – A minimum of 1 credit has been achieved for Flood Risk and at least 2 credits have been achieved for Surface water run-off

Key assumptions for the Chocolate Factory (Block A)

This credit is not targeted.

Responsibility: -

Waste Was 06 | Functional adaptability

0 / 1

(Contribution: 0.00)

Requirements

One credit is awarded where a building-specific functional adaptation strategy study has been carried out by the client / design team by Concept Design (RIBA Stage 2). The function adaptation measures are to be implemented during Technical Design (RIBA Stage 4), where these are practical and cost effective.

Key assumptions for the Chocolate Factory (Block A)

This credit is not targeted.

FUNCTION ADAPTATION STRATEGY

Should consider:

1. The potential for major refurbishment, including replacing the façade.
2. Design aspects that facilitate the replacement of all major plant within the life of the building e.g. panels in floors/walls that can be removed without affecting the structure, providing lifting beams and hoists.
3. The degree of adaptability to accommodate changes in working practices.
4. The degree of adaptability to accommodate change in-use.
5. Accessibility to local services, such as local power, data infrastructure etc.

ADAPTATION IMPLEMENTATION

Should account for:

1. The feasibility for multiple/alternative building uses and area functions
2. Options for multiple building uses and area functions based on design details
3. Routes and methods for major plant replacement
4. Accessibility for local plant and service distribution routes
5. The potential for the building to be extended, horizontally and/or vertically.

Responsibility: -

Land use and Ecology Le 02 | Protection of ecological features

1 / 1

Requirements

Encourage the protection of existing ecological features from substantial damage during refurbishment or fit-out works.

Protection of all existing features of ecological value surrounding the construction zone and site boundary area during clearance, site preparation and construction activities, in accordance with the SQE's recommendations and BS 42020:2013

e.g. trees of over 100mm trunk diameter, hedges, watercourses

Important notes

- If features of ecological value have been removed as part of the site clearance, this credit cannot be achieved, even if they are to be replaced.
- For sites cleared prior to purchase of the site and less than five years before assessment, the ecologist should estimate the ecological value prior to clearance using available desktop information. If impossible, the credit must be withheld.

Key assumptions for the Chocolate Factory (Block A)

It is assumed that this credit can be achieved by default but this should be confirmed by the Ecologist.

(Contribution: 2.27)

Responsibility: **Aspect Ecology**

Land use and Ecology Le 04 | Ecological enhancement

1 / 1

(Contribution: 2.27)

Requirements

1 Credit

Appointment of a suitably qualified ecologist at RIBA Stage 1

Site survey undertaken by the end of RIBA Stage 2

Preparation of Ecology Report with recommendations on protecting and enhancing the site's ecology

Implementation of the report's recommendations in the final design and build

Key assumptions for the Chocolate Factory (Block A)

An ecologist has been appointed and will advise on potential ecological enhancements

The recommendation should be adopted by the landscape architect and the architect.

Important notes

Ecological recommendations to increase the site's ecological value may include:

- the planting of native species or those with a known attraction to local wildlife
- the installation of bird / bat / insect boxes at appropriate locations
- the integration of SuDS and biodiverse roofs
- the development of a full Biodiversity Management Plan

Responsibility: **Aspect Ecology**

Land use and Ecology Le 05 | Long term impact on biodiversity

2 / 2

Requirements

Pre-requisite



Credits	Commitment to achieve:
1	2 of the following additional criteria
2	4 of the following additional criteria

Additional criteria

1. Creation of a new ecologically valuable habitat, appropriate to the local area
2. Nomination of a 'Biodiversity Champion by the principal contractor
3. Site workforce trained by the principal contractor to protect site ecology
4. Actions taken to protect biodiversity are recorded by the principal contractor
5. Where flora and/or fauna habitats exist on site, consideration given to minimising disturbance in the programme.

Key assumptions for the Chocolate Factory (Block A)

These credits are currently targeted.

(Contribution: 4.54)

Responsibility: **Aspect Ecology**

1 / 3

Responsibility: **FGP**

Pollution Pol 02 | NOx emissions

0 / 3

(Contribution: 0.00)

Requirements

Credits are awarded based on the level of NOx emissions of the space heating and hot water energy generation equipment.

Credits	Dry NOx Level (mg/kWh)
1	≤ 100
2	≤ 70
3	≤ 40

Important notes

- Dry NOx emissions are the NOx emissions resulting from the combustion of a fuel at zero percent excess oxygen levels and expressed in mg/kWh.
- Where building types required to assess NOx emissions from water heating do not have a large water demand for hot water (i.e. hot water represents less than 10% of the combined space heating and hot water energy demand) and as a result they are installing point-of-use electric hot water heaters only (grid-sourced electricity) such installations may be exempt from the above requirements.

Key assumptions for the Chocolate Factory (Block A)

It is currently assumed that the community heating system and VRF system will limit the number of credits which can be achieved under Pol 02.

Responsibility: FGP

Pollution Pol 03 | Surface Water Runoff

2 / 5

(Contribution: 1.75)

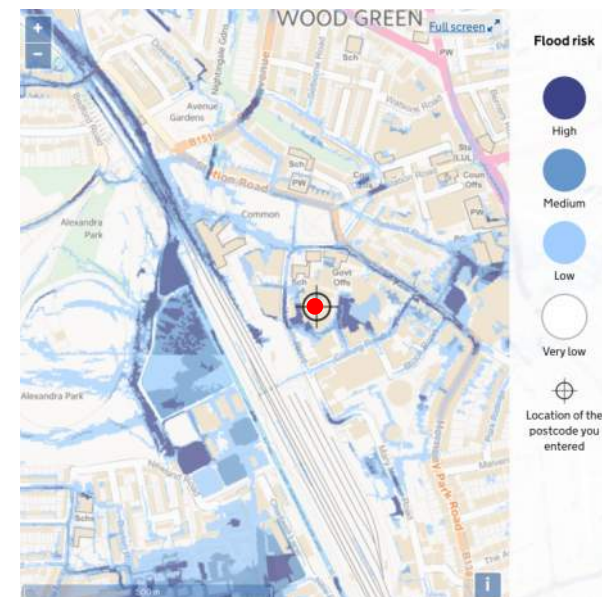
Requirements

FLOOD RISK	
1 Credit	2 Credits
Specific Flood Risk Assessment (FRA)¹ + Medium or High annual probability of flood risk from <u>all sources</u> + Ground level and access 600mm above the flood level	Specific Flood Risk Assessment (FRA)¹ + Low annual probability of flood risk from <u>all sources</u>
SURFACE WATER RUN-OFF	
1 Credit	1 Credit
Appropriate consultant appointed + Peak run-off rate for the 1 in 100 year event no greater than pre-development, including an allowance for climate change	No flooding as a result of local drainage failure + Run-off volume no greater than pre-development (over the lifetime) and SUDS to manage additional volume for the 100 year 6-hour event OR Justification why these criteria cannot be achieved and limitation of the post development peak rate of run-off in accordance with BREEAM requirements
MINIMISING WATER COURSE POLLUTION	
1 Credit SUDS + No discharge from the site for rainfall up to 5mm + petrol interceptors + drainage plan + shut-off valves if chemical storage in the building	

¹ for sites of less than 2000 m², the FRA can be prepared by the Contractor's Engineer

Key assumptions for the Chocolate Factory (Block A)

The first Flood Risk credit is targeted. The site is located in an area with a low annual probability of flood risk from rivers, however there is potentially a high risk from other sources (surface water, reservoir). This has been confirmed by the FRA. The peak run off credits is targeted, but the volume run-off credit is not. The minimising water course pollution credits is not targeted.



The Surface Water Run-off credits are also targeted at this stage.

Responsibility: Furness Partnership

Pollution Pol 04 | Reduction of night-time light pollution

1 / 1

(Contribution: 0.87)

Requirements

EXTERNAL LIGHTING STRATEGY

Designed in compliance with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011 ¹



EXTERNAL LIGHTING CONTROL

All external lighting (except for safety and security) can be switched off between 2300 and 0700 (e.g. timer)
+
Safety and security lighting complies with the lower levels of Table 2 of the ILP Guidance notes (e.g. automatic switch to reduce lighting levels after 2300)



ILLUMINATED ADVERTISEMENT

Designed in compliance with ILE Technical Report 5 – the Brightness of Illuminated Advertisements

Key assumptions for the Chocolate Factory (Block A)

- the External Lighting Strategy will be designed in compliance with Table 2 of the ILP guidance notes;
- External Lighting Strategy Controls will switch off (reduce in the case of safety and security lighting) external lighting between 2300 and 0700;

Illuminated advertisement are not assumed to be present but this should be confirmed as the design progresses.

Important notes

- If there is no external lighting on or around the assessed development the credit can be awarded by default.

¹ The ILP Guidance notes are available free of charge from www.ilp.org.uk

Responsibility: FGP

Pollution Pol 05 | Reduction of noise pollution

1 / 1

(Contribution: 0.87)

Requirements

NOISE IMPACT ASSESSMENT

Carried out by a suitably qualified acoustic consultant and in compliance with BS 7445



Indicating existing background noise levels at the nearest or most exposed noise-sensitive area (or at a location where they will be similar)



Indicating the rating noise level resulting from the new noise-source



PERFORMANCE

The impact of the new development results in an increase of less than:

+ 5 dB
between
0700 and
2300

+ 3 dB
between
2300 and
0700

OR

Attenuation measures are being implemented to comply with the above requirement

Key assumptions for the Chocolate Factory (Block A)

The Acoustic Consultant should confirm that these credits are achievable. They are assumed at this stage.

Important notes

- Noise sensitive areas include residential areas, hospitals and health centres, education buildings, libraries, places of worship, parks, etc.
- The credit can be awarded by default where there are or will be no noise-sensitive areas or buildings within 800m radius of the assessed development.

Responsibility: **Waterman**

Innovation Innovation credits

0 / 10

(Contribution: 0.00)

Requirements

Up to a maximum of 10 credits are available in aggregate from a combination of the following (where applicable):

EXEMPLARY LEVEL OF PERFORMANCE

Where the building meets defined exemplary level performance criteria in:

- Man 03 | Responsible construction practices
- Man 05 | Aftercare
- Hea 01 | Visual comfort
- Hea 02 | Indoor air quality
- Ene 01 | Reduction of CO₂ emissions
- Wat 01 | Water consumption
- Mat 01 | Life cycle impacts
- Mat 03 | Responsible sourcing of materials
- Wst 01 | Construction site waste management
- Wst 02 | Recycled aggregates
- Wst 05 | Adaptation to climate change

INNOVATION

Where any new technology, design or construction process can potentially be recognised as 'innovative'.

One innovation credit can be awarded for each innovation application submitted to and approved by the BRE

Key assumptions for the Chocolate Factory (Block A)

No innovation credits have been assumed at this stage.

Responsibility: -

Status of this report

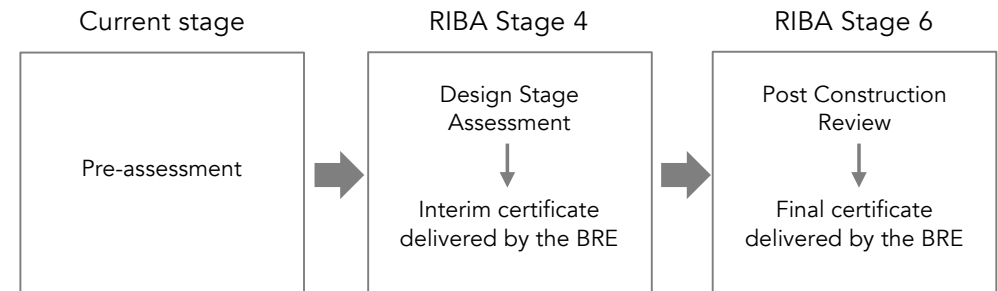
This pre-assessment, which has been prepared by Etude on behalf of Workspace allows an initial evaluation of the likely rating to be achieved under a formal assessment. It indicates that a rating of Very Good can be achieved for Block A.

The following targeted credits should particularly be noted:

- The improved building fabric and services, combined with the integration to the potential community heating system should lead to a significant improvement in terms of energy performance;
- Water-efficient fittings, a leak detection system and flow control devices coupled with isolation valves should reduce water consumption;
- Cyclist facilities (including showers and changing facilities) should be provided;
- A pre-demolition audit should be carried out early during design development and best practice procedures should be put in place to manage the environmental impact of construction (e.g. Considerate Constructors Scheme, Monitoring) and of materials (Green Guide, Responsible sourcing);
- Opportunities to re-use as much as possible for the building fabric and structure will be investigated.
- Cyclist safety and consultation on Secured by Design should inform the design.

Based on the assumptions summarised in this pre-assessment report, a score of 62.1% is achieved, i.e. 7.1% above the minimum score required to achieve a rating of Very Good under BREEAM 2014 Refurbishment (i.e. 55%).

Next steps



The project team and contractor should always work with reference to the BREEAM 2014 pre-assessment and BRE's technical manual when undertaking design changes.

The latest version (SD216 – 1.0: 2014) of this manual has been used to prepare this pre-assessment and can be obtained :

- at <http://www.breeam.org/page.jsp?id=109>
- by contacting Etude at london@etude.co.uk.



Three methodologies are recommended for managing design risks:

- A dedicated architectural series of BREEAM drawings, highlighting all features installed to discharge criteria, with a BREEAM credit reference;
- Credit references adjacent to any items required to discharge BREEAM criteria, listed in specifications and RIBA stage summary documents e.g. energy sub-meters (BREEAM 2014 credit: Ene 02).
- The BREEAM score should be reviewed periodically to reflect changes.