



NAVIGATOR QUARTER, LAND ADJACENT TO SOUTHAMPTON AIRPORT

ENVIRONMENTAL STATEMENT (VOLUME 3)

TECHNICAL ANNEX D. CLIMATE CHANGE

HYBRID PLANNING APPLICATION

MAY 2025

**blocwork (Eastleigh) LLP
&
Southampton International Airport Ltd**



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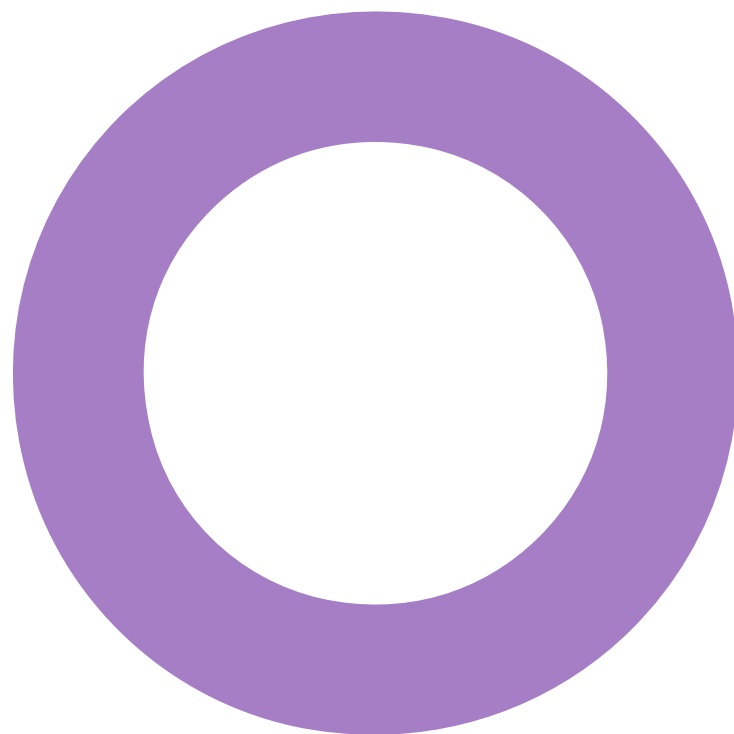
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**Navigation Quarter, Land Adjacent to Southampton Airport.
Southampton.**
**blockwork (Eastleigh) LLP and Southampton International Airport
Limited (SIAL).**

SUSTAINABILITY
ENERGY STRATEGY

REVISION 02 – 30 MAY 2025



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
01	14/03/2025	Draft issue for comment	E. Jolly	B. Lambert	G. Jones
02	30/05/2025	Following client review	E. Jolly	B. Lambert	T. Brown

This document has been prepared for blockwork (Eastleigh) LLP and Southampton International Airport Limited (SIAL) only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This report has been based solely on the specific design assumptions and criteria stated herein.

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Executive summary.

This Energy Strategy has been prepared on behalf of blockwork (Eastleigh) LLP and Southampton International Airport Limited (SIAL), the 'Applicant', in relation to the proposed redevelopment of the land adjacent to Southampton Airport to be known as Navigation Quarter. The Energy Strategy proposed is one that works with nature and seeks to minimise the impact of the Proposed Development on the local and global environments. This document sets out the Energy Strategy for the Proposed Development.

The Proposed Development

Hybrid Planning Application - Outline application for development of the land adjacent to Southampton Airport to provide employment floorspace of up to 92,000 sqm (GIA) within Use Classes E(g) (ii & iii), B2 and B8 with ancillary offices and areas for service yards, car parking, landscaping, ancillary buildings and associated activities, and access from Wide Lane (all matters reserved except for access). Full planning application for initial infrastructure works and construction of new access road including site levelling and other engineering works.

Relevant policy and regulations

Planning policy

The applicable planning policies to the scheme with regards to energy and sustainability include the following:

- National Planning Policy Framework
- Eastleigh Borough Local Plan (2016-2036) (April 2022)
- Local development framework: Environmentally Sustainable Development (March 2009)

Building Regulations Approved Document Part L 2021

Approved Document Part L 2021 is the Building Regulation relating to the conservation of fuel and power in buildings, Part L1 relates to dwellings and Part L2 relates to buildings other than dwellings. For new buildings, ADL 2021 has three performance metrics as follows:

- high thermal performance fabric materials (low U-Value),
- minimised thermal bridging junctions, and
- highly efficient, low carbon heating, hot water, ventilation, and cooling systems.

At the time of writing, the Proposed Development would be required to achieve compliance with Building Regulations Part L 2021.

Outline approach

In preparing the energy strategy for the development proposals, the Design Team has applied the Energy Hierarchy: 'Be Lean', 'Be Clean', 'Be Green'. This means that the energy use and carbon emissions will first be reduced as much as possible via passive methods, adopting a 'fabric first' approach by specifying building fabric energy efficiency measures, followed by designing highly efficient building systems and services that are connected to renewable sources of energy.

The figures presented in this report reflect the regulated carbon emissions associated with the employment areas of the site which are submitted as Outline. Therefore, no emissions associated with the full application are reported. The figures have been calculated using benchmark data from equivalent projects with similar use type to reflect and indicative performance.

Energy strategy summary

It is proposed that the project targets up to a ~10% reduction in emissions via passive design and energy efficiency measures, before achieving further reduction from the incorporation of on-site solar photovoltaics which could result in an overall saving of ~79% compared to the Part L 2021 baseline.

On this basis, the following initial calculations indicate the potential emissions reductions could be achieved on a site-wide basis.

Be Lean.

Passive Energy Efficiency measures

Sitewide	Up to ~10% reduction over Part L 2021 baseline Specification of high fabric efficiency, low energy lighting and high performing ventilation and cooling systems.
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Be Clean.

Heat network connection

Sitewide	No additional saving There are no existing or proposed district heat networks available for connection within reasonable proximity to the site. Therefore, no additional saving can be demonstrated at this stage. This will continue to be reviewed during Reserved Matters.
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Be Green.

Renewable energy

Sitewide	Up to an additional ~70% further reduction from renewable energy. An indicative allowance of 25% of suitable roof area has been identified for PV installation. Detail of specification and area as well as resultant savings will be reviewed during Reserved Matters. All space heating will be provided by on site Air Source Heat Pumps.
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Sitewide Total Reduction

Total	Up to ~79% reduction in emissions over Part L 2021 baseline.
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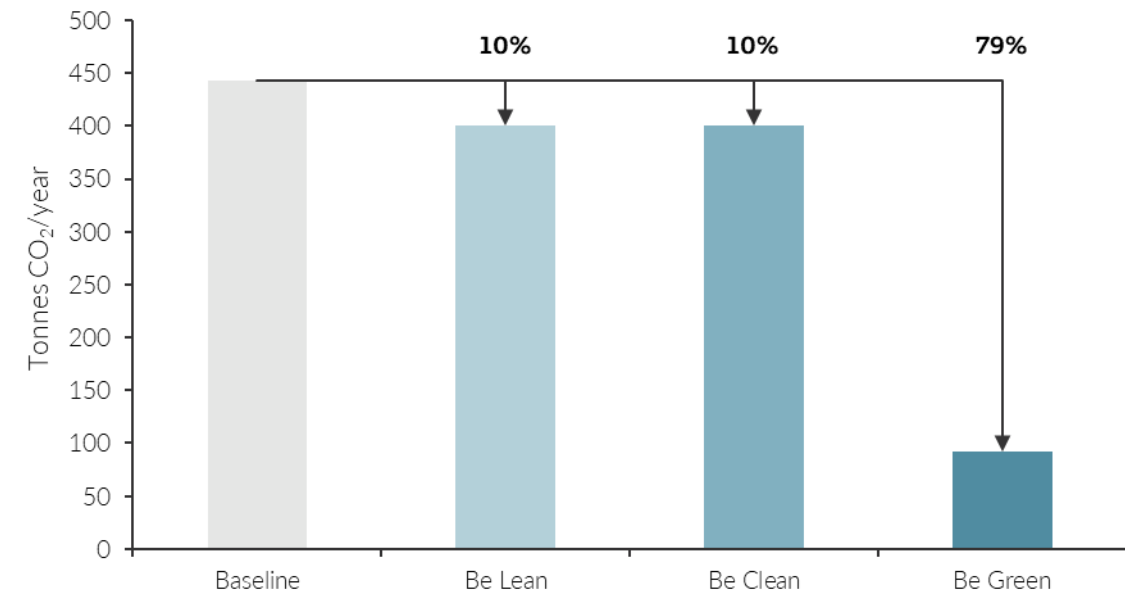


Figure 1 Site wide regulated carbon reduction per each stage of the energy hierarchy

1. Introduction.

This document sets out the Energy Strategy for the Proposed Development, outlining the key local policy, current and emerging, as well as detailing the methodology of the assessment approach.

Site description

The application site is 34 hectares in size and located between the town of Eastleigh and the city of Southampton, falling within the boundary of Eastleigh Borough Council.

Southampton Airport is located immediately to the south and west of the site, on the edge of the city's suburbs. To the immediate north of the site is a train depot, located at the convergence of trainlines from Southampton and Portsmouth.

Sandwiched between the train depot land there is a residential area on Campbell Road, which is in a conservation area and Barton Park Industrial Estate is located beyond the depot to the north.

The site is formed of 2 plots, a larger area immediately adjacent to the Airport that is known as the South Plot, and an area of land to the north of this, known as the North Plot, which is separated from the South Plot by an area of landscape that has established on a now raised railway embankment that is now redundant and has become overgrown. The nearby railway lines form the northern boundaries to the application site, with the railway raised on an embankment.

In policy terms, the site is designated for employment use including airport related activities but is currently made up of greenfield land, divided in places by strips of vegetation. The only structure on the site is a radar tower next to the site's eastern boundary, which is no longer needed for airport operations and is to be removed.

Southampton Airport is located immediately to the south and west of the site, on the edge of the city's suburbs. To the immediate north of the site is a train depot, located at the convergence of trainlines from Southampton and Portsmouth. Sandwiched between the train depot land is a residential area on Campbell Road whilst the Barton Park Industrial Estate is located beyond the train depot to the north.

Existing access to the site is limited and informal. From the airport's long stay car park off Mitchell Way, there is a track which loops to the south of the train depot onto the site. This route has been designated as the route for a longer-term link road to meet up with Eastleigh to the north. There is also an access to the North Plot through the raised railway embankment which provides a connection to land owned by HCC and which now has planning permission for a waste processing use.

Southampton Airport has direct access onto the M27, a major road linking Portsmouth with South West England. The airport also has good access onto the M3, which connects Southampton with London.

There are options for sustainable travel in the area including Southampton Airport Parkway train station which supports six different services, with routes to London, Manchester, Cardiff, and key cities on the South Coast. The UC1 bus also provides a local service between Southampton city centre, the airport and Eastleigh town centre. In terms of walking, a public footpath runs by the site along the River Itchen, which links Eastleigh with Southampton. National Cycle Route 23 also runs by Southampton Airport and connects Southampton with Reading via Eastleigh.

In accordance with the site's allocations, this hybrid application proposes to bring forward employment development at the site.

2. Policy context.

National policy and legislation

Approach to the strategy

This Energy Strategy summarises the pertinent regulations and planning policies applicable to the Proposed Development. The Strategy addresses the requirements of Policy DM2 – Environmental Sustainable Development, demonstrating the application of the energy hierarchy, and setting out how overall energy use will be minimised through the design (including through additional energy efficiency measures) to achieve energy performance beyond Building Regulations and renewable energy incorporation to reduce CO₂ emissions.

The Energy Strategy has been developed using a 'fabric first' approach, applying the 'Be Lean', 'Be Clean', 'Be Green' energy hierarchy.

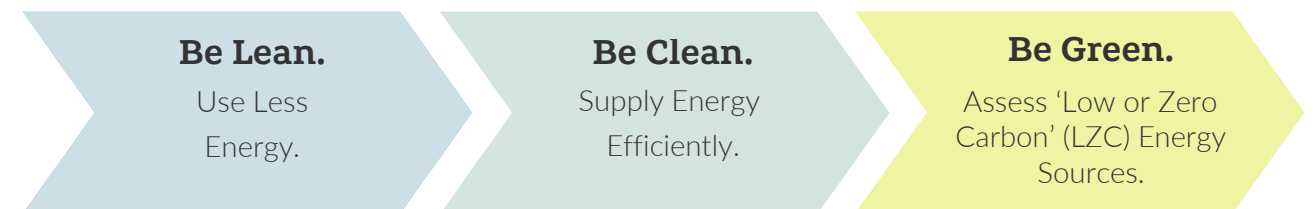


Figure 2: Energy hierarchy

Definitions and limitations

Definitions:

The following definitions should be understood throughout this statement:

- **Energy demand:** the 'room-side' amount of energy which must be input to a space to achieve comfortable conditions. In the context of space heating, this is the amount of heat which is emitted by a radiator, or other heat delivery mechanism.
- **Energy requirement:** the 'system-side' requirement for energy (fuel). In the context of a space heating system using a gas boiler, this is the amount of energy combusted (e.g. gas) to generate useful heat (i.e. the energy demand).
- **Regulated CO₂ emissions:** the CO₂ emissions emitted as a result of the combustion of fuel, or 'consumption' of electricity from the grid, associated with regulated sources (those controlled by Part L of the Building Regulations including heating, cooling, hot water, fans, pumps and lighting).
- **Unregulated CO₂ emissions:** the CO₂ emissions emitted as a result of the combustion of fuel, or 'consumption' of electricity from the grid, associated with unregulated sources, such as IT equipment, laboratory equipment, catering facilities, etc.

Disclaimer

The appraisals within this statement are based on benchmark Part L data from similar developments and should not be understood as a predictive assessment of likely future energy requirements or otherwise. Occupants may operate their systems differently, and / or the weather may be different from the assumptions made by Part L approved calculation methods, leading to differing energy requirements. The calculations presented have only considered emission rate target and have not taken into account the primary energy target, however this is considered for Part L 2021 compliance and can be shown in the BRUKL reports for assessed plots. The target emission rate is the first metric used to assess compliance under Part L 2021. It is defined as the maximum CO₂ emission rate for the building, expressed as kgCO₂/m²year. The primary energy target is the second metric used to assess compliance under Part L 2021. It is defined as the maximum primary energy use for the building in a year, expressed in kWh_{PE}/(m²year).



National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2024 sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced.

Building Regulations: Approved Document Part L

Approved Document Part L (2021, England edition), here forward referred to as ADL 2021, is the Building Regulation relating to the conservation of fuel and power in buildings. ADL 2021 has two parts, Part L1 relates to dwellings and Part L2 relates to buildings other than dwellings.

Part L of the Building Regulations is the mechanism by which government is driving reductions in the regulated CO₂ emissions from refurbished, change of use and new buildings.

For new buildings ADL 2021 has four performance metrics as follows:

- Primary energy target
- CO₂ emissions target
- Fabric Energy Efficiency (FEE) target (for dwellings only)
- Minimum standards for fabric and fixed building services

Local drivers



Eastleigh Borough Local Plan (2016-2036)

All pertinent policies from the Eastleigh Borough Council local development framework have been considered and addressed in this Energy Strategy.

A summary of the pertinent applicable policies (i.e. Strategic Policy S1 – Delivering sustainable development and Policy DM2 – Environmentally Sustainable Development) includes:

- Prioritise passive design and energy efficiency measures prior to low and zero carbon technologies.
- Assess the development in accordance with the heat hierarchy.
- Achieve BREEAM “Excellent” rating or 15% reduction against Part L 2021 and Passivhaus certification

3. Emerging Strategy.

3.1 Emerging targets.

As the risks of climate change become clearer, there has been a drive to make buildings more sustainable, energy efficient and ultimately net zero carbon. While there are policies in place to reference, there are a few noteworthy targets emerging on the horizon (Figure 3).

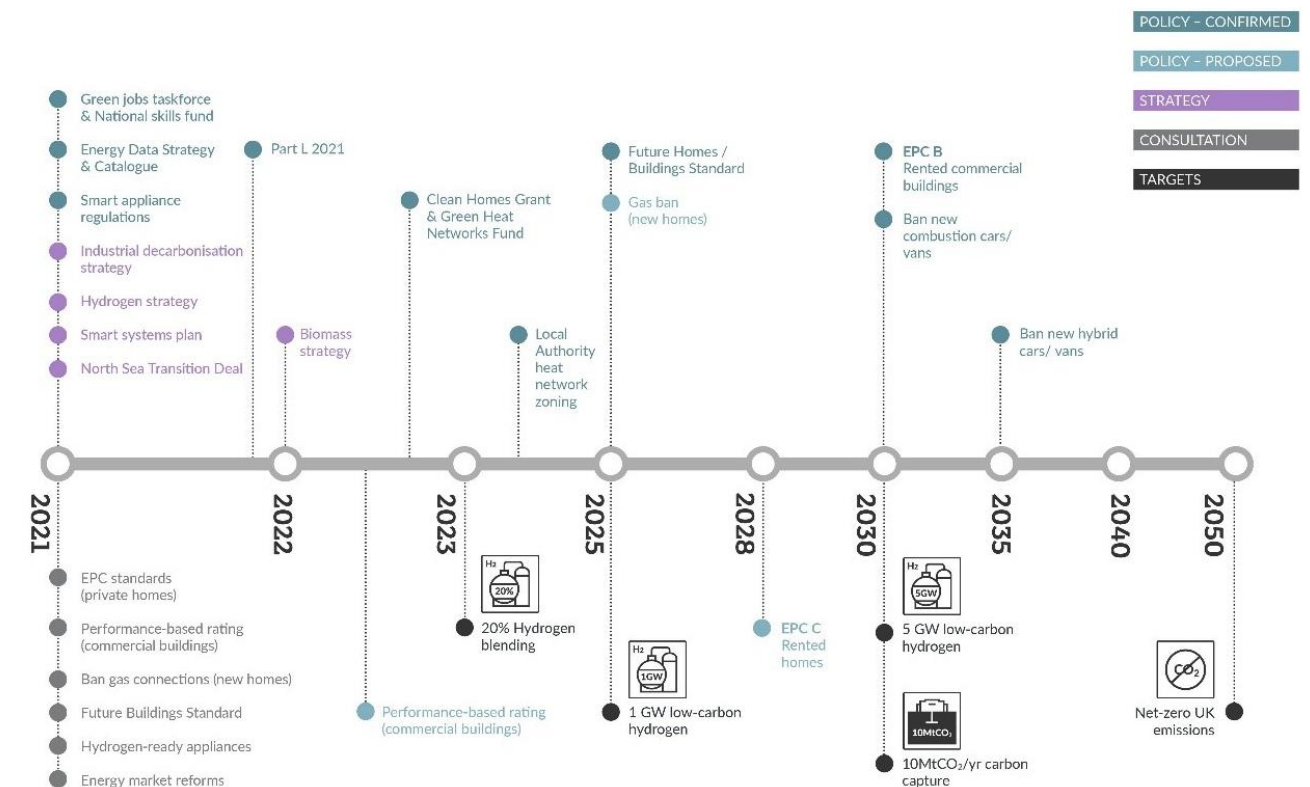


Figure 3 - Roadmap for current and emerging policies and targets

3.2 Future Buildings Standard (FBS) Consultations.

Part L 2021 is intended as a steppingstone to the Future Building Standard (FBS), to be achieved by all new development from 2025.

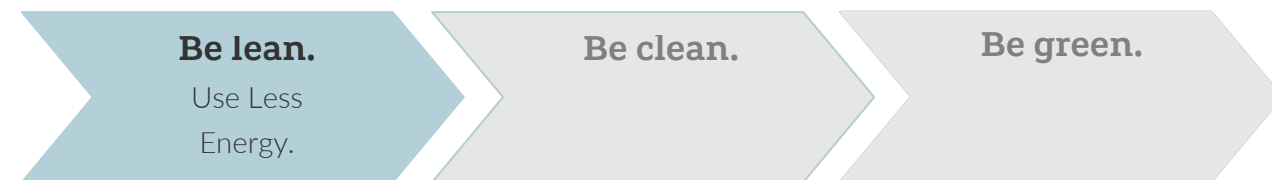
The consultation response confirms that a development built to the Standard would achieve a reduction in emissions of 75% over a development built to Part L 2013 standards, calculated using updated carbon factors. Minimal further detail is available at this time. However, the FBS was consulted on in early 2024 and is anticipated to require higher performance than Part L 2021.

4. Be Lean.

Purpose and key principles

A form and fabric first approach will maximise efficiency of the Proposed Development, taking overall building layout and form into consideration, as well as the fabric thermal performance of the buildings' envelopes. Further efficiency could be achieved through solutions such as low U-values, air permeability and efficient glazing to minimise heat losses in winter and maximise coolth retention in summer months.

Reducing energy demand as a priority has several benefits; it reduces operational energy costs and carbon emissions in the most robust and reliable way, without the need for ongoing maintenance or the replacement of plant.



Building orientation

Where feasible, arranging buildings generally so that the longer axis is oriented with ends running east to west, can reduce energy use due to less façade area being exposed to lower angle morning and evening direct solar gain. The larger exposed south façades (where glazing is present) should be provided with external shading for high angle summer sun but be enabled to benefit from low angle winter sun for passive solar heating.

This approach will vary for other building use types depending on whether the building is predominantly heating or cooling load driven. In office areas, peak cooling gains may occur towards the afternoon period when cumulative internal gains and solar gains occur. The approach would be to reduce internal gains where feasible considering occupancy densities, equipment gains and providing glazing areas with adequate solar shading to balance with daylight and views out.

Future cooling loads are projected to increase with climate change, therefore considering means to reduce operational cooling loads through no cost passive design measures such as building orientation are important.

Building form

A building's form factor is the ratio of it exposed external surface area to the internal floor area. Having a more efficient form factor, will contribute towards lower heat losses to the outdoors, and reduced space heating demands.

The proposed development offers building massing that contains repeatability and non-complex shapes to ensure fabric efficiency can be achieved and thermal bridges reduces.



Measures to reduce the Urban Heat Island effect

Materials in the urban landscape with low surface albedos, such as concrete and tarmac, absorb and retain the majority of the sun's energy, causing an increase in local microclimate temperatures often seen in dense urban cities. This effect is known as the 'urban heat island' effect.

Reducing the 'urban heat island' effect would avoid the rise in local external temperatures. Mechanical cooling plant operates more efficiently when external temperatures are closer to the internal design cooling temperature. Therefore, any approach which supports reducing local

external temperatures will increase mechanical cooling plant efficiencies and lower overall operational energy use.

Measures to reduce the 'urban heat island' effect include:

- Orientate buildings to maximise shading on streets
- Orientate streets to encourage air flow in summer months
- Incorporate trees to provide additional shading
- Use light coloured materials (where appropriate for hardscaping and roof areas) with high albedo to reflect solar irradiation rather than absorbing heat
- Use grass, planting or permeable paving solutions to promote evaporative cooling.
- Use water bodies. Water features along prevailing summer wind direction to provide evaporative cooling of the air.

The proposed landscape strategy incorporates creation of new green spaces and planting for the spaces between buildings. This green infrastructure can also provide a cooling effect to neighbouring buildings to reduce cooling demand.

However, due to the nature of the Employment Development and associated loadings required, concrete service yards are an operational requirement. The buildings will be design to meet occupiers needs and be fit for purpose while ensuring environmental impact is minimised/mitigated.

Roof materials will be specified to be light coloured to reflect solar gains as opposed to absorb.

Overheating

As a result of the warming climate and improving thermal performance of building fabric, the risk of overheating in dwellings is an ever more present concern. Through good design, this risk can often be mitigated without the need for active cooling, though this requires careful consideration. For areas of the site that will be predominantly occupied (i.e. office areas), the reduction in solar gain through considered glazing ratios and shading solutions alongside maximising natural ventilation where possible are key passive design measures that help reduce the risk of overheating in buildings. Where openable windows are not appropriate due to acoustic or security constraints the application of mechanical ventilation and cooling should be considered as the next options.

To support the BREEAM "Excellent" requirement set by the adopted policy, thermal comfort assessments will be completed during detailed design to support credit Hea 04 (Thermal Comfort). This assessment will be undertaken in accordance with CIBSE TM52 and CIBSE Guide A design criteria and will consider current and future climates to ensure climate resilience is achieved in operation.

Glazing and daylighting

The importance of exposure to good daylighting in workplaces is well documented. It improves comfort, wellbeing, and productivity.

Glazing is required to provide adequate daylight. However, higher proportions of glazing can increase heat loss in winter months and increase risk of overheating in summer months due to excessive heat gains.

The Proposed Development would seek to both reduce energy demand and ensure occupant comfort and wellbeing through appropriate form, fabric and glazing.

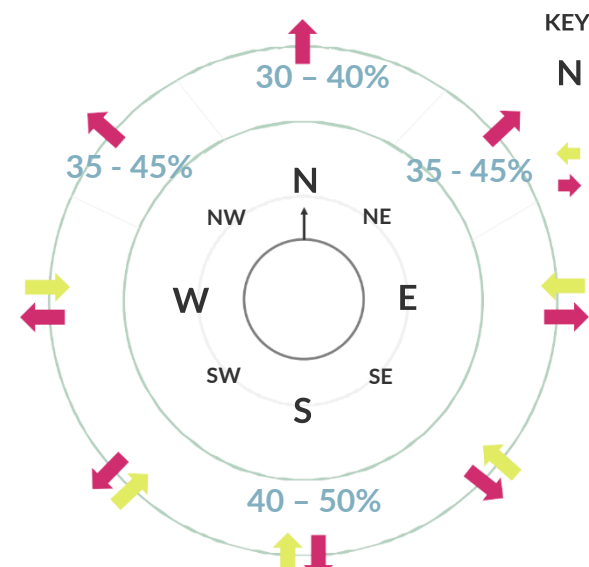


Figure 4: Suggested glazing ratio by orientation.

During detailed design a full appraisal of glazing ratios will be undertaken for the Outline plots to ensure the risk of summertime overheating is balanced with the benefit of winter solar gains.

To support the BREEAM “Excellent” requirement set by the adopted policy, thermal comfort assessments will be completed during detailed design to support credit Hea 04 (Thermal Comfort). This assessment will be undertaken in accordance with CIBSE TM52 and CIBSE Guide A design criteria and will consider current and future climates to ensure climate resilience is achieved in operation.



Natural ventilation

Considering the opportunity for natural ventilation within buildings can reduce the operational energy needs. Benefits of natural ventilation can be optimised through minimising floor plate depths and size and location of openings to allow airflow to contribute to better levels of natural ventilation. Utilisation of natural ventilation reduced requirement for mechanical ventilation and therefore has a positive impact on operational energy.

Cross-ventilation can be most beneficial as the difference in temperature between two aspects of a building can be used to generate a pressure differential which can draw external air into the space. Building orientation to allow for cross ventilation due to pressure differentials caused by prevailing wind direction should be considered. Building heights and distances in between buildings can be optimised to encourage advantageous air movement for ventilation.

Any ventilation strategy must be cognisant of the air quality and acoustic environment in the vicinity and a natural ventilation strategy may not always be appropriate. As noted in the section on overheating, an alternative strategy to natural ventilation may be required to manage overheating risk in dwellings, which is likely to be in the form of mechanical ventilation with tempered air.

Suitability of openable windows within office areas will be reviewed for feasibility during detailed design. This will be used to inform the ventilation strategy. As the industrial spaces are considered “transient” in regard to operation, the ventilation strategy will be developed to align with Part F of Building Regulations as a minimum.



Fabric performance

Fabric performance is an integral part of sustainable design development. By taking a fabric first approach to building design, the Proposed Development would seek to reduce energy demand passively as a priority. These measures are the most reliable, robust, and long-lasting compared with technological solutions.

The overriding objective for the façade design of the buildings at the Proposed Development would be to achieve the optimum balance between providing natural daylighting benefits to reduce the use of artificial lighting, the provision of passive solar heating to limit the need for space heating in winter, and limiting summertime solar gains to reduce space cooling demands.

Thermal insulation

Typically, the demand for space heating is dominant in new homes, whereas non-domestic buildings can be either heating- or cooling-led, dependent on their use. For office and industrial uses, it is anticipated that demand will be led by cooling.

In either case, the Proposed Development would seek to design so that solar gains can be controlled through the optimisation of the fabric and approach to fenestration i.e. ensuring appropriate levels of glazing to control winter heat loss and summer heat gain.

Glazing energy and light transmittance

The design of new buildings would seek to benefit from passive solar heating in winter where appropriate, minimising unwanted summer heat gains whilst optimising the transmittance of light for internal daylight.

Fabric air permeability

Fabric air permeability is a measure of the volume of air that can penetrate through the fabric of a building, leading to ventilation heat loss and gain. High air permeability can lead to uncomfortable drafts and dramatically increase the demand for space heating in winter and space cooling in summer. The buildings at the Proposed Development would aim to achieve good practice levels of air permeability.



Space heating

The strategy for delivering space heating to the Proposed Development aims to remain as flexible as possible, with the aim of delivering low carbon, affordable heat in the most appropriate way as; this is discussed further in the Be Clean and Be Green sections.

In order to establish a ‘business as usual’ case against which to compare technologies, a ‘baseline’ of energy demand and CO₂ emissions for the development was established using benchmark demands for the equivalent building types, taken from existing Part L 2021 compliant buildings. This is presented on the following pages.

A fossil fuel heating strategy would not be targeted for the Proposed Development. Please refer to the Be Clean and Green section for full detail on the proposed heating strategy for the site.



Domestic hot water (DHW) system

As fabric performance improves, the proportion of new buildings’ energy consumption represented by the demand, domestic hot water (DHW) will increase.

To reduce the demand for hot water in all buildings, the use of water-efficient fixtures and fittings including flow reducers in the taps of wash hand basins and aerated shower heads will be considered and installed where appropriate.

To support the adopted policy requirement to achieve a BREEAM “Excellent” rating, the Proposed Development will target 2 credits under Wat 01 (Water Consumption) as a minimum. This will be established and confirmed as part of detailed design.

Please refer to the Be Clean and Green section for full detail on the proposed heating strategy for the site



Space cooling

Active cooling is often critical for the comfortable operation of many non-domestic buildings, required as the internal gains from equipment and people can result in a propensity to overheat which cannot be mitigated with conventional ventilation. However, effective building design, both from the perspective of architectural form and specification, as well as the building services strategy, can often be used to reduce the risk of overheating prior to any active measures.

These passive measures are the most robust and lowest carbon solutions to mitigating the risk of overheating and the adoption of the cooling hierarchy would be sought to prioritise passive solutions in the design of both the domestic and non-domestic elements of the Proposed Development.

The development will intend to mitigate the need for active cooling where technically possible while ensuring overheating risk is mitigated. It is anticipated that some form of cooling will be required in occupied spaces given emerging climate trends.

To support the BREEAM “Excellent” requirement set by the adopted policy, thermal comfort assessments will be completed during detailed design to support credit Hea 04 (Thermal Comfort). This assessment will be undertaken in accordance with CIBSE TM52 and CIBSE Guide A design criteria and will consider current and future climates to ensure climate resilience is achieved in operation.



Heat recovery

Mechanical ventilation with heat recovery (MVHR), can be used to maintain sufficient air supply to occupants as well as reduce heating demand through recirculation of waste heat.

Where mechanical ventilation is incorporated within the strategy, heat recovery has been included.



LED lighting

For retail and office buildings, lighting often represents the majority of energy demand. Commercial buildings at the Proposed Development will seek to specify the highest performance in efficacy (lumens/circuit Watt) to reduce lighting demand and reduce operational costs to building users.

The development will endeavour to specify market leading products that can demonstrate a high lighting efficacy.



Metering and controls

The Proposed Development will explore opportunities to incorporate smart energy systems and controls to intelligently use energy to minimise energy cost and consequent carbon emissions. These tools can also be used to educate building occupants on energy management and use to implement behavioural change to provide long term positive impacts on and off site.

Building fabric

These are the most robust and effective measures for reducing CO₂ emissions as the performance of the solutions, such as wall insulation, is unlikely to deteriorate significantly with time, or be subject to change by future property owners. In this sense, it is possible to have confidence that the benefits these measures will continue at a similar level for the duration of their installation.

The table below provides indicative thermal performance parameters for building elements compared to the Part L 2021 notional specification. All thermal fabric performance parameters associated with outline plots would be confirmed under each Reserved Matters Application.

Table 1: Indicative fabric performance specification.

Building element	Part L 2021 notional specification	Proposed targets
Air permeability (m ³ /h.m ² at (50Pa))	3.00	<3.00
External wall (solid) u-value (W/m ² .K)	0.18	0.15 – 0.18
Floor U-value (W/m ² .K)	0.15	0.12 – 0.15
Roof U-value (W/m ² .K)	0.15	0.12 – 0.15
Glazing performance		
Windows (W/m ² .K)	1.40	1.20 – 1.40
Window g-value	0.40	0.35 – 0.40

Be lean summary.

Passive Energy Efficiency measures	
Sitewide	Up to ~10% reduction over Part L 2021 baseline Specification of high fabric efficiency, low energy lighting and high performing ventilation and cooling systems.

Table 2: 'Be Lean' site wide carbon performance.

Be Lean emission rate:	~443 tCO ₂ /year
Part L 2021 Notional emission rate:	~400 tCO ₂ /year
Percentage variance:	Up to ~10%

Cooling and overheating

In tandem with the energy and CO₂ emissions appraisal, the risk of summertime overheating, and subsequently consideration of measures for the minimisation of cooling demand and mitigating risk of overheating has been reviewed.

Cooling hierarchy

The adopted policy DM3 (Adaption to climate change) requires that developments should reduce potential overheating risk and reliance on air conditioning systems. A ‘cooling hierarchy’ is provided below and the Proposed Development would seek to follow this hierarchy.

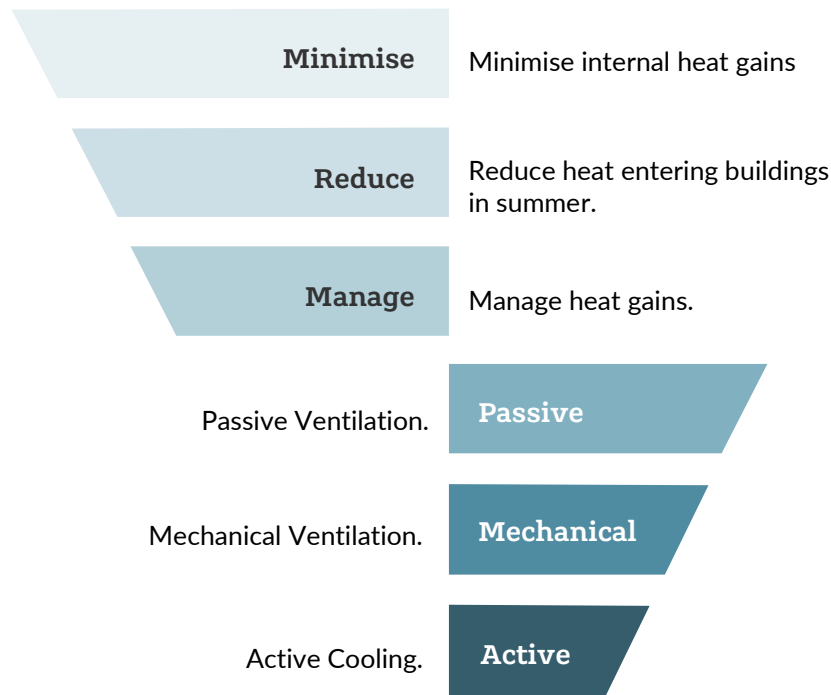


Figure 5: Cooling hierarchy.

Minimising internal heat gains

The following mitigation methods are examples that would be considered at future design stages to minimise the internal heat generation through energy efficient design at the Proposed development:

- Energy efficient lighting (i.e. LED) with low heat output.
- Insulation to heating and hot water pipework and minimisation of dead-legs to avoid standing heat loss.
- Energy efficient equipment with low heat output to reduce unnecessary heat gain.

Reducing the amount of heat entering the building in summer

The following mitigation methods would be considered at future design stages to reduce the amount of heat entering the building in summer within the proposed development:

- Facades would be developed with suitable glazing-to-solid ratios, with particular focus on south facing orientations.
- External shading devices would be considered to manage heat gain, and where feasible, enable occupants to adapt their environment through the use of moveable devices
- Suitable g-values would be targeted where feasible to further control solar heat gains as required; and

- Buildings would seek have the capability for internal blinds to be installed in the future to improve occupant comfort.

Noise assessment and ventilation strategy

In designing a response to the energy hierarchy and managing overheating risk, the noise environment of the Site must also be considered. As part of the outline design process, an initial site noise risk assessment has been undertaken and has identified that the sound climate of the site is dictated by road traffic noise, pedestrians and the nearby airport (i.e. aviation traffic) – the latter being a dominant noise source. This noise assessment has been used to provide initial indications of the likely acoustic performance required for the building fabric and opportunity for utilising natural ventilation as means of mitigating overheating. Please refer to the submitted Acoustics Report for full detail.

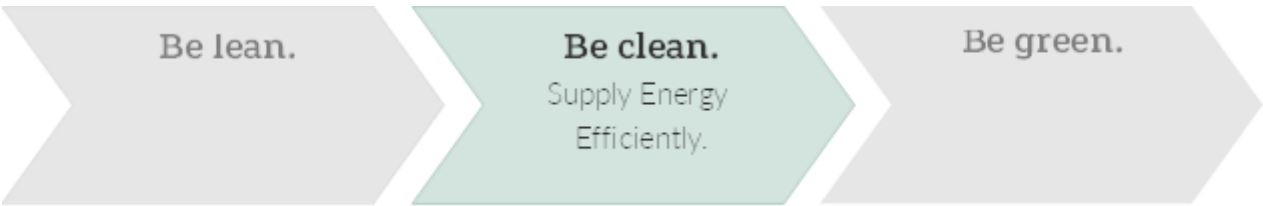
Through the detailed design stages, the noise assessment and overheating strategy will be reviewed further, with a focus also on managing heat gains passively through the façade design, specification and shading devices.

Assessment of overheating risk

To support the BREEAM “Excellent” requirement set by the adopted policy, thermal comfort assessments will be completed during detailed design to support credit Hea 04 (Thermal Comfort). This assessment will be undertaken in accordance with CIBSE TM52 and CIBSE Guide A design criteria and will consider current and future climates to ensure climate resilience is achieved in operation.

5. Be Clean.

This stage of the energy hierarchy includes consideration of connection to available district heat networks, or the use of on-site heat networks and decentralised energy production such as Combined Heat and Power (CHP) in order to provide energy and reducing consumption from the national grid and gas networks, through the generation of electricity, heating and cooling on-site.



The strategy for the Proposed Development would be finalised at Reserved Matters and would be in line with the building regulations enforced at that time.

Be clean: network and technologies.

The following sections detail considerations of the infrastructure and low-carbon energy supply measures that have been considered as part of the outline application, and would be considered in further detail and future design stages and Reserved Matters applications.

- 

All-electric servicing strategy
An all-electric servicing strategy is considered a likely suitable approach for the Proposed Development.

The carbon intensity of grid-supplied electricity in the UK has reduced by almost 70% since 2012 and is projected to continue decarbonising to be zero at some point in the mid-2030s, according to National Grid projections. By leveraging this continuing decarbonisation, the Proposed Development would be inherently low carbon on day 1.
- 

Combined heat and power (CHP)
Changes to the carbon factor of grid electricity have meant that previously favoured systems such as Combined Heat and Power (CHP) are becoming much less carbon efficient. In fact, CHP systems are now expected to lead to greater carbon emissions than conventional gas-fired boilers due to their lower efficiency.

Due to the decarbonisation of the electricity grid, alongside air quality concerns, CHP is not proposed.
- 

Decentralised heat networks
There are currently no existing or proposed district heat networks within proximity to the Proposed Development, therefore connection is not feasible at this stage.
- 

This will continue to be reviewed for feasibility during Reserved Matters should a network come forward at a later date.

Be Clean

As detailed within this section of the strategy, it is not anticipated that connection to a District Heat Network (existing or proposed) is likely or appropriate for the Proposed Development. Therefore no additional savings can be demonstrated at this stage.

Be Clean summary.

Heat network connection	
Sitewide	No additional saving There are no existing or proposed district heat networks available for connection within reasonable proximity to the site. Therefore, no additional saving can be demonstrated at this stage. This will continue to be reviewed during Reserved Matters.

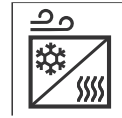
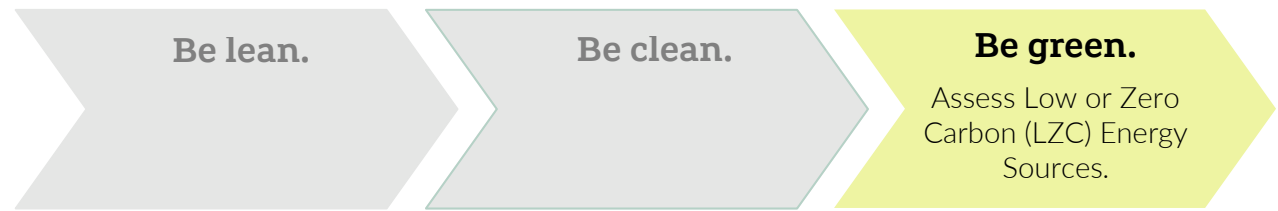
The table below provides a summary of the carbon reduction at the Be Clean step.

Table 3: 'Be Clean' site wide carbon performance.

Be Clean emission rate:	~400 tCO ₂ /year
Be Lean emission rate:	~400 tCO ₂ /year
Percentage variance:	No additional saving

6. Be Green.

Low and zero carbon (LZC) technologies can be used to extract or generate onsite renewable energy. This can be in the form of renewable heat, such as from the atmosphere or ground, or as renewable electricity, to be used on site or sold back to the national grid to offset emissions.



Air source heat pump (ASHP)

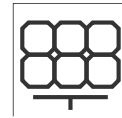
ASHPs work to extract heat from the air at efficiencies much higher than can be achieved by electric resistance heaters. This improved efficiency of heat generation significantly reduces the energy consumption to heat and provide hot water to a building, reducing bills and carbon emissions, whilst also minimising impact on local grid resilience. Heat pumps can also provide cooling in applications which require it, though the design of buildings at the Proposed Development would seek to minimise the need for active cooling.



Ground/water source heat pump (GSHP/WSHP)

GSHPs and WSHPs operate in much the same way as ASHPs, instead using the ground or appropriate water body (rather than the atmosphere) as the heat source. This has benefits to the overall efficiency of the system, as the ground/water source typically has a more stable temperature than the air throughout the year, particularly during heating season.

However, these systems are more complex and come with increased constraints, with ground source systems typically requiring a large area of land or deep boreholes to operate and water source systems requiring careful consideration, as extracting or rejecting significant amounts of heat to a natural water body can have implications for the local environment and ecology.



Photovoltaic (PV) panels

PV panels can be used to generation renewable electricity from the sun. this energy can be exported back to the National Grid or directly used on site.

The masterplan has areas of available roofscape which could be used for the deployment of PV.



Solar thermal panels

Solar thermal panels can be used to meet a proportion of a building's thermal demand renewably. PV systems are much simpler and require minimal maintenance, unlike solar thermal systems which are complex and require regular inspection. Additionally, given the proposed use of the site, thermal demand is anticipated to be a minority of the regulated energy demand. therefore greater savings could be achieved through electricity generation technologies.



Energy storage

Energy storage, be that in the form of an electric battery or simply a hot water cylinder, can complement the energy strategy. By storing electricity or heat generated during off-peak times for use when the demand on the grid is greatest, the impact of new development on the resilience of local grid infrastructure can be minimised. Off-peak electricity is also lowest cost and lowest

carbon, so deployment of energy storage can also reduce energy bills and consequent carbon emissions. Opportunities for both grid-scale and local energy storage could be explored during future design stages.

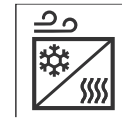


Wind turbines

Onshore wind has not seen the prevalence in the UK it is arguably due. This is a consequence of multiple factors. Building-level wind turbines have been plagued with acoustic and vibration issues, leading to them being turned off permanently even in the early developments that deployed them. Additionally, given the Site's proximity to the airport, consideration of this technology would not be appropriate.

Proposed Technologies

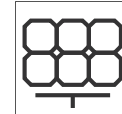
The following provides a summary of the likely technologies to be provided, and this would be confirmed through future design stages and Reserved Matters applications.



Air source heat pump (ASHP)

To support an all-electric strategy, it is proposed that all space heating will be met via on site ASHP. There is a potential for a proportion of hot water (e.g. shower provision) to be supplied via ASHP. Remaining thermal demand will be met via direct electric plant.

A target specification of plant efficiency (i.e. COP) of >3.0 has been set within the outline strategy. Plant performance will be established and specified during detailed design.



Photovoltaics

Solar irradiance analysis on the site has shown a good opportunity for the deployment of solar Photovoltaic technologies for onsite electricity generation.

The provision of solar photovoltaic panels would provide a reduction in operational energy of the site due to the generation of renewable on-site electricity. Due to the extensive areas available, an initial allowance of 25% of suitable roof space on the industrial areas has been included within the strategy. It is expected that PV specification will be optimised during detailed design.

An indication of the array performance has been provided within Table 4 for reference.

Table 4: Boundary conditions and PV parameters.

Key	Values
Panel capacity	>180 kWh/m ² (panel area)
Roof PV panel Efficiency [%]	22%
Spacing between rows [m]	To be established at RMA
Roof Edge Offset [m]	To be established at RMA
PV-Tilt Angle	30°
PV-Azimuth Angle	South facing as preference

Be Green summary.

Renewable energy	
Sitewide	Up to an additional ~70% further reduction from renewable energy. An indicative allowance of 25% of suitable roof area has been identified for PV installation. Detail of specification and area as well as resultant savings will be reviewed during Reserved Matters. All space heating will be provided by on site Air Source Heat Pumps.

Table 5: 'Be Green' site wide carbon performance.

Be Green emission rate:	~92 tCO ₂ /year
Be Clean emission rate:	~400 tCO ₂ /year
Percentage variance:	Up to ~70%

7. Summary.

This strategy has shown that the Proposed Development would seek to deliver a highly efficient, low-carbon scheme.

New, high efficiency servicing equipment and efficient façades would provide the cornerstone of energy minimisation of the Proposed Development. Using the energy hierarchy, the strategy has been developed to ensure that the Proposed Development has prioritised the use of low carbon heating and cooling sources as well as integration of renewable energy technologies.

This strategy has been prepared to demonstrate that at the hybrid planning application stage, the Applicant and design team have given due consideration to the principles of energy strategy, and how these could be implemented for the Proposed Development. The anticipated carbon reduction for the outline application is shown in the Figure 6: Sitewide carbon reduction summary.

The carbon emissions from regulated energy uses at the Proposed Development have been compared with the Eastleigh Borough Council policy DM2 (Environmentally Sustainable Development) and the associated SPD that sets a requirement of 20% reduction against Part L 2021 baseline (if BREEAM Excellent not achieved). It can be confirmed that the policy target has been met, with the sitewide demonstrating a potential ~79% reduction in carbon emissions,

The energy strategy

For the outline elements of the development, the Energy Strategy has been applied the 'Be Lean, Clean and Green' energy hierarchy which utilises a fabric-first approach to maximise reduction in energy through passive design measures. It is proposed that the site-wide development targets a ~10% reduction in emissions via passive design and energy efficiency, before achieving further reduction through implementation of on-site solar photovoltaics. On this basis, a total reduction of up to ~79% could be achieved sitewide.

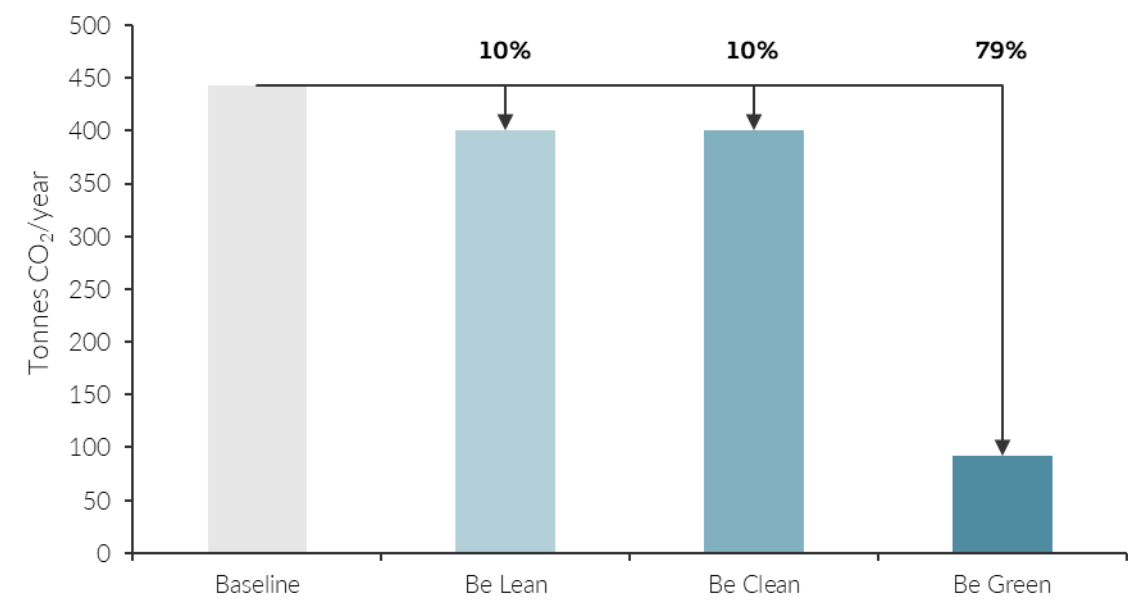


Figure 6: Sitewide carbon reduction summary.

Be Lean.

Passive Energy Efficiency measures	
Sitewide	Up to ~10% reduction over Part L 2021 baseline Specification of high fabric efficiency, low energy lighting and high performing ventilation and cooling systems.

Be Clean.

Heat network connection	
Sitewide	No additional saving There are no existing or proposed district heat networks available for connection within reasonable proximity to the site. Therefore, no additional saving can be demonstrated at this stage. This will continue to be reviewed during Reserved Matters.

Be Green.

Renewable energy	
Sitewide	Up to an additional ~70% further reduction from renewable energy. An indicative allowance of 25% of suitable roof area has been identified for PV installation. Detail of specification and area as well as resultant savings will be reviewed during Reserved Matters. All space heating will be provided by on site Air Source Heat Pumps.

Sitewide Total Reduction

Total	Up to ~79% reduction in emissions over Part L 2021 baseline.
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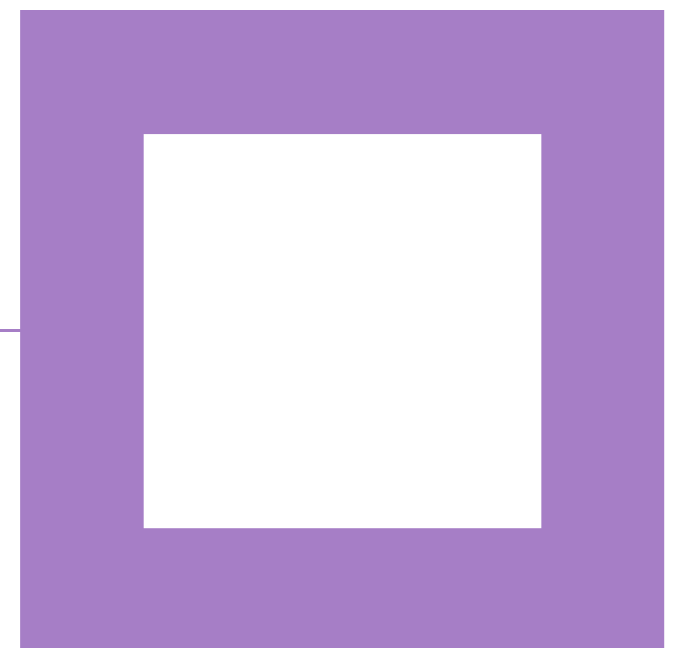


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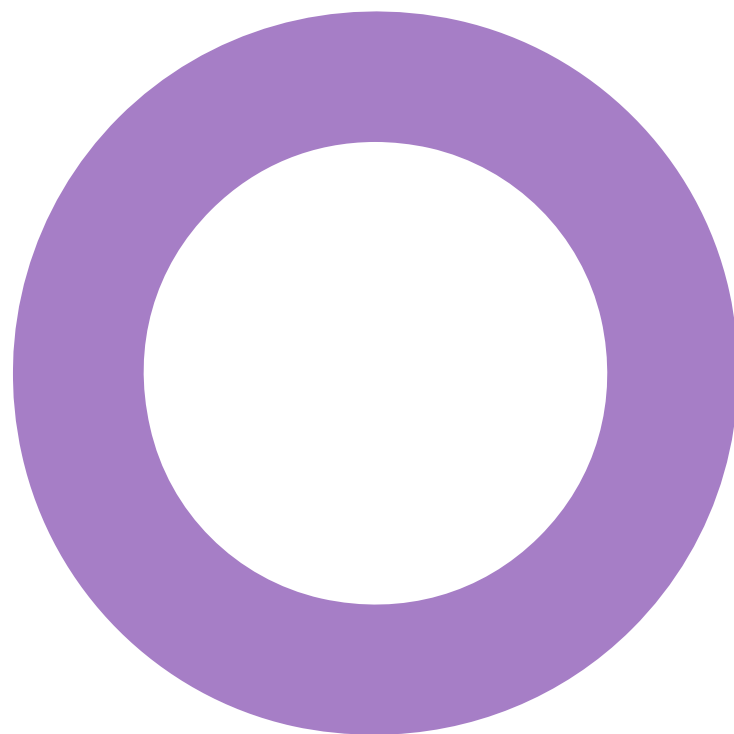
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Navigator Quarter, Land Adjacent to Southampton Airport. Southampton. blockwork (Eastleigh) LLP and Southampton International Airport Limited (SIAL).

SUSTAINABILITY
SUSTAINABILITY STRATEGY

REVISION P01 – 30 MAY 2025



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
P01	30/05/2025	For issue	B. Lambert	E. Jolly	G. Jones

This document has been prepared for blockwork (Eastleigh) LLP and Southampton International Airport Limited (SIAL) only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This report has been based solely on the specific design assumptions and criteria stated herein.

Project number: 56/25721
Internal document reference: 5625721-HLE-XX-XX-RP-ST-402026-P01.docx
External document reference:

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Executive summary.

This Sustainability Strategy has been prepared on behalf of blockwork (Eastleigh) LLP and Southampton International Airport Limited (SIAL), the 'Applicant', in relation to the proposed redevelopment of the land adjacent to Southampton Airport to be known as Navigation Quarter.

Development description.

Hybrid Planning Application - Outline application for development of the land adjacent to Southampton Airport to provide employment floorspace of up to 92,000 sqm (GIA) within Use Classes E(g) (ii & iii), B2 and B8 with ancillary offices and areas for service yards, car parking, landscaping, ancillary buildings and associated activities, and access from Wide Lane (all matters reserved except for access). Full planning application for initial infrastructure works and construction of new access road including site levelling and other engineering works.

Key drivers.

Local and regional planning policy

A policy review has been undertaken and is summarised at a high level in Section 2.0. Under each section of the sustainability strategy the relevant policy is summarised.

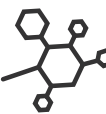
National drivers - Approved Document Part L of the Building Regulations.

Part L of the Building Regulations is the mechanism by which government is driving reductions in the regulated CO₂ emissions from new buildings. The assessment of the Proposed Development against policy targets has been carried out using Building Regulations Part L 2021 methodology.

Sustainability strategy summary.

The Proposed Development's design is based on sustainable design and construction principles as informed by planning requirements and industry best practice. The table below provides a summary of the sustainable measures to be implemented.

Table 1: Sustainable measures to be implemented at the Proposed Development.

Theme	Measures to be implemented
	Energy and Carbon Reduction - A BREEAM Communities 'Excellent' rating is being targeted for by the Proposed Development. - The design will include high standards of energy efficiency and include low/zero carbon technologies including a high efficiency heat pumps and PV array. - Overall, an ~79% reduction in CO₂ emissions will be achieved beyond the Building Regulations Part L2 2021 baseline.
	Drainage - The Proposed Development sits within Flood Zone 1. - A Flood Risk Assessment has been completed confirming the Proposed Development can be considered as 'low risk' for all sources of flooding. - Sustainable drainage systems have been incorporated and these include permeable paving, rain gardens and attenuation tanks.
	Water - All water systems will be designed in compliance with relevant Code of Practice and industry/sector best practice guidance. - The Proposed Development will install low water consumption sanitary fittings which comply with BREEAM standards. - A mains water leak detection system will be installed, where feasible, to reduce the volume of potable water which may be lost due to leaking sub-surface pipework.
	Waste - A refuse store will be provided on the ground floor of the office to ensure ease of transport operational waste. Separate bins will be provided to allow for both municipal and recyclable waste to be separated. - A 'Site Waste Management Plan' will be produced for the Proposed Development for each phase of construction to define measures for how to minimise the volume of waste arising from demolition and construction activities, which is sent to landfill. The plan will include targets for minimising waste per 100m² and for diverting waste from landfill.
	Materials - Façade specification will be developed to contribute to local character of the area. - Materials will be specified to be durable, responsibly sourced, have environmental product declarations and locally manufactured where feasible to reduce the embodied carbon of the Proposed Development. - A Sustainable Procurement Plan will be adopted and inform the building specification and Contractors procurement strategy.
	Green infrastructure and ecology - An Ecological Assessment and Mitigation Strategy has been completed which features enhancement recommendations for wildlife. - The development layout will be designed to retain, protect and enhance the most valuable ecological features. - Overall, the development is targeting a minimum Biodiversity Net Gain of >10%.

Theme	Measures to be implemented
	Travel – The site can be accessed via sustainable modes of transport, including walking, cycling, and bus. – Car parking spaces will be provided, of which a proportion will be 'EV ready'. – Cycle storage will be provided in secure and sheltered storage. Suitable shower, changing and storage facilities will also be provided. – BREEAM credit 'Tra 05: Travel plan' will be adhered to.
	Health and wellbeing and pollution control – The design has ensured that the occupants will not be subject to excessive noise, high temperatures or flickering lights. – BREEAM credit 'Hea 08: Indoor Air Quality' will be adhered to. – All lighting is to be highly efficient and controlled appropriately. External lighting will be selected to reduce light spill and provide natural surveillance to maintain site security. – The all-electric strategy means local air quality is not impacted by the new development and reduces the building user's exposure to harmful air pollution.
	Noise – The Proposed Development will meet the standards for acoustic design and achieve the associated and targeted BREEAM criteria. – The design and specification of equipment will be selected to adhere to the sustainable environmental noise limits determined. – A noise survey has been undertaken by a suitably qualified acoustician. It has been determined that the noise effects of the Proposed Development will generally be localised and the impact on receptors negligible.
	Community – The principal contractor will be required to sign up to the Considerate Constructors Scheme and achieve a best practice score. – The principal contractor will also be required to implement responsible construction management techniques and contribute to achieving a BREEAM 'Excellent'. – A robust security strategy has been developed for the Site and includes a combination of management and mitigation measures to ensure security is maintained. This comes in the form of access control and movement measures, surveillance and physical protection measures.

1. Introduction.

1.1 Site description and location.

Hoare Lea have been commissioned by blockwork (Eastleigh) LLP and Southampton International Airport Limited (SIAL) (hereafter known as 'the applicant') in relation to the proposed redevelopment of the land adjacent to Southampton Airport to be known as Navigation Quarter.

Figure 1 is a copy of the site layout and red line boundary.



Figure 1: Phase 1 Site Plan (Source: Michael Sparks Associates – Proposed Site Plan Phase 1)

1.2 Key drivers.

National policy

National Planning Policy Framework

The National Planning Policy Framework 2024 sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Future Buildings Standard and Part L consultations

Approved Document (AD) Part L 2021 came into force on the 15th June 2022. It is acting as an interim update to the Future Building Standard 2025 which is expected to come into full application by 2025.

The Environment Bill on Biodiversity Net Gain

Following the consultation on mandating biodiversity net gain (BNG) in development last year, the government used their autumn Environment Bill to mandate 'biodiversity net gain'. New developments must achieve a biodiversity net gain of 10% using the Defra BNG toolkit.

Local Policy

Eastleigh Borough Local Plan (2016-2036), local development framework - Environmentally Sustainable Development

The Eastleigh Borough Council's energy and sustainability policies focus on creating environmentally resilient developments through ambitious carbon reduction targets, energy efficiency measures, and resource management strategies. Non-domestic buildings must adhere to BREEAM standards, progressing from "Very Good" to "Excellent" ratings, and incorporate renewable energy systems to achieve net-zero emissions. Key initiatives include the use of green roofs to enhance biodiversity, rainwater harvesting, and greywater recycling to conserve water, as well as strategies to reduce surface water runoff and manage flood risks. These policies aim to integrate sustainability into all aspects of development, contributing to a greener, low-carbon future.

As a summary, planning policy applicable to the Proposed Development includes the following relevant targets related to energy and sustainability:

Table 2: High level policy summary for energy and sustainability policy relevant to the Proposed Development.

Eastleigh Borough Local Plan (2016-2036)
- Building Regulations Part L 2021 - No loss of open space and maintain existing Green Belt. - Ensure new development is sustainable and located in accessible locations, reducing need for travel and the creation of congestion. - Minimise consumption and unnecessary use of energy - Recycle waste - Generate energy from renewable sources - Reduce water consumption - Incorporate sustainable construction techniques (recycled and energy efficient materials) - Respect location, provide public space, amenity space and landscaping. - Manage surface water arising from the site sustainably. - Protect and enhance water environment and its margins. - Development will only be permitted where it can be demonstrated that there is minimal risk of flooding to the property and there is appropriate infrastructure. - Enhance and preserve natural habitats and the biodiversity of the District. - Development shall not give rise to unacceptable levels of noise, air and light pollution. - Detailed landscaping plan is required. - Suitable on site cycle parking facilities and cycling access through the Site. - 10% Biodiversity net gain (Environment Bill)

2. Sustainability strategy.

2.1 Energy and carbon reduction.

The following sections detail the passive design and energy efficiency measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary.

Table 3 provides a summary of local policy requirements relating energy and carbon reduction.

Table 3: Eastleigh Borough Local Plan energy and carbon reduction planning policy.

Policy Reference	Target
Policy DM2 – Environmentally Sustainable Development	- Non-residential developments and conversions above 500 sqm of floor space must achieve BREEAM “Excellent” certification or equivalent. - For developments unable to meet BREEAM “Excellent,” developers must achieve BREEAM “Very Good” certification alongside Passivhaus certification and a 15% improvement in carbon emissions compared to current Building Regulations. - All developments must incorporate energy-efficient passive design principles (e.g., maximizing natural light and ventilation).
Policy DM4 – Zero or Low Carbon Energy	- Development of infrastructure for zero or low-carbon energy generation is permitted. - Encouragement for projects deploying combined heat and power systems (CHP) to improve energy efficiency. - Developments must avoid areas where low-carbon installations would adversely impact biodiversity or heritage assets.
Supplementary Planning Document: Environmentally Sustainable Development	- Encourages the achievement of BREEAM “Excellent” across all applicable developments. - Proposes on-site renewable energy measures to reduce dependency on non-renewable sources. - Strong emphasis on meeting Passivhaus standards to ensure high building efficiency and reduced heating needs.

Proposed Development response

The Energy Strategy has been developed using a ‘fabric first’ approach and follows the ‘Be Lean’, ‘Be Clean’, ‘Be Green’, ‘Be Seen’ energy hierarchy. It sets out the proposed approach to reducing regulated carbon dioxide (CO₂) emissions and optimising energy performance of the development. The strategy summarises the pertinent regulatory and planning policies applicable to the Proposed development, and sets targets commensurate with these policies, which the Proposed Development will seek to achieve. This includes targeting Part L2 2021 compliance.

Be Lean.

Passive Energy Efficiency measures

Sitewide	Up to ~10% reduction over Part L 2021 baseline Specification of high fabric efficiency, low energy lighting and high performing ventilation and cooling systems.
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Be Clean.

Heat network connection

Sitewide	No additional saving There are no existing or proposed district heat networks available for connection within reasonable proximity to the site. Therefore, no additional saving can be demonstrated at this stage. This will continue to be reviewed during Reserved Matters.
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Be Green.

Renewable energy	
Sitewide	Up to an additional ~70% further reduction from renewable energy. An indicative allowance of 25% of suitable roof area has been identified for PV installation. Detail of specification and area as well as resultant savings will be reviewed during Reserved Matters. All space heating will be provided by on site Air Source Heat Pumps.

Sitewide Total Reduction

Total	Up to ~79% reduction in emissions over Part L 2021 baseline.
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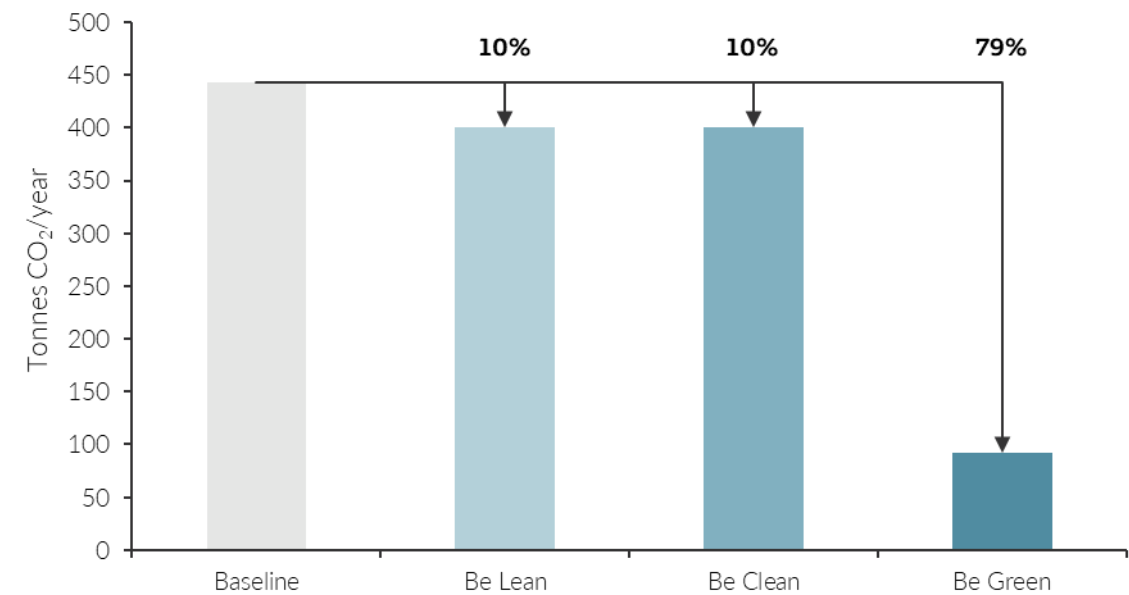


Figure 2 Site wide regulated carbon reduction per each stage of the energy hierarchy

2.2 Water and drainage.

Water is in increasingly short supply; a problem that is set only to exacerbate as a consequence of climate change, with concerns that we will not have enough water to supply our needs within 25 years if drastic action is not taken to reduce water consumption. Even today, being water efficient is key to minimising the Proposed Development's footprint holistically.

The following sections detail the sustainability measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary

Table 4 provides a summary of local policy requirements relating water and drainage.

Table 4: Eastleigh Borough Local Plan water and drainage planning policy.

Policy Reference	Target
Policy DM5 – Managing Flood Risk	- Development will only be permitted in areas at risk of flooding if it meets the sequential and exception tests outlined in government guidance. - A site-specific flood risk assessment is required to demonstrate safety from flooding without increasing risks elsewhere. - Measures must include flood resilience and resistance. - Development should incorporate natural flood management techniques, including restoring river bends, creating coastal salt marshes, and modifying land use to increase water absorption. - Drainage systems must be designed for events exceeding normal standards and account for climate change impacts.
Policy DM6 – Sustainable Surface Water Management and Watercourse Management	- New developments must integrate Sustainable Drainage Systems (SuDS) to manage surface water at its source. - On sites over 1 hectare, or within 100m of the River Itchen SAC or Solent Maritime SAC, at least three forms of naturalised filtration must be included in the SuDS system. - Policy sets out green roofs, vegetated swales, basins, and wetlands as good filtration examples - Existing watercourses on development sites must be retained or restored to a natural state. - Culverting is generally not permitted. Removal of existing culverts and increased on-site flood storage are encouraged. - Smaller sites (0.5–1 hectare) require two forms of naturalised filtration, and even smaller sites can use mechanized solutions if justified. - For sites draining into waterways connected to Natura 2000 or Ramsar networks, a Construction Environment Management Plan (CEMP) is mandatory. Waste and Drainage Integration: SuDS (Sustainable Drainage Systems) must handle solid waste debris to ensure drainage remains effective. Wastewater Filtration: Requires naturalized systems to manage waste materials in surface runoff.
Policy DM2 – Environmentally Sustainable Development	- Water Efficiency Standards: Non-residential and multi-residential developments must incorporate water-efficient appliances, fittings, and leak detection devices. - Rainwater harvesting: Developments are encouraged to include rainwater harvesting systems and greywater recycling. - Drought resistance: Landscape designs must prioritize drought-resistant planting to reduce water demand.

Policy Reference	Target
STRATEGIC POLICY S9 – Green Infrastructure	- Water-Related Green Infrastructure: Developments must integrate blue infrastructure, such as ponds and wetlands, into the green infrastructure framework. - Green spaces must support water retention and filtration.
Policy DM7 – Flood Defences, Land Reclamation and Coast Protection	- Flood Risk Management: Developments near Southampton Water and River Hamble estuaries must adhere to flood defence plans, including the North Solent Shoreline Management Plan. - Coastal Flood Resilience: Developments must consider the risk of coastal inundation and propose mitigation measures.
STRATEGIC POLICY S2 – Approach to New Development	Infrastructure Requirements: Development proposals must demonstrate that water supply and drainage infrastructure are sufficient and can accommodate growth.
STRATEGIC POLICY S1 – Delivering Sustainable Development	- Protection of Water Resources: development must avoid negative impacts on water quality in the Hamble and Itchen catchments. - Preservation of water flows for public water supplies is required.
Supplementary Planning Document: Environmentally Sustainable Development	- Developers are responsible for ensuring the long-term maintenance of SuDS, either through public adoption or private agreements. - Developments must incorporate innovative water-saving technologies like dual-flush systems, aerated taps, and low-flow showerheads.
Policy DM10 – Waste and Wastewater	Integrated Wastewater Management: Wastewater infrastructure must avoid environmental degradation, especially impacting water bodies under the Water Framework Directive.

Proposed Development response – flood risk and drainage

A Flood Risk assessment has been carried out by the drainage consultants. The likelihood of flooding has been determined for all flood sources. The following levels of flood risk (Table 5) have been identified for the project and proposed mitigation will be implemented.

The quantification of flood risk and proposed drainage measures include for a 40% allowance for climate change.

Table 5: Flood risk from sources and proposed mitigation (adapted from Curtin’s FRA/drainage report).

Flood source	Risk	Mitigation
Watercourses / tidal	Very low	Proposed finished floor levels set above the 1% flood level.
Groundwater	Low	- No basement or related lower ground floor levels. - Proposed site levels will be maintained or raised. - SUDs will be lined to prevent groundwater ingress, and a new surface water drainage system will intercept and store run-off, reducing ground saturation.
Surface water and overland flows	Very low	SUDs proposed to reduce peak run-off rates from site receiving sewers.
Reservoirs	Low	Whilst reservoir failure is considered very low, occupants should seek refuge on upper levels and wait for advice.

Flood source	Risk	Mitigation
Sewers	Very Low	SUDs proposed to reduce peak run-off rates from site to receiving Thames Water infrastructure

Sustainable Urban drainage

As noted in the table above, there will be a number of Sustainable Urban Drainage (SUDs) systems implemented at the Proposed Development. The possibility of implementing SUDs was assessed using a hierarchy of preferred surface water management methods:



- Permeable paving** – will provide attenuation storage and water quality benefits. It is to be maximised throughout the Site and provided on ‘Other Roofs’, in car parking areas and low traffic roads.
- Bioretention Area** – these are proposed on the ‘Other Roofs’ and low traffic roads. The bioretention areas will provide attenuation and remove pollutants from water runoff.
- Attenuation Tank** – proposed within the site to manage and store surface water

A comprehensive SUDs water maintenance strategy will also be implemented to ensure efficient operability throughout the lifetime of the Proposed Development. Please refer to the drainage strategy for further information.

Proposed Development response – water consumption



Low flow rate fittings will be explored to minimise water demand and enhance water efficiency measures within the building. The building services engineering design and architectural fit out specification will incorporate low flow rate and reduced capacity fittings. The exact nature of the water performance levels of the fittings will be specified and explored during the next design stages.

2.3 Waste and materials.

The Proposed Development will reduce the amount (volume and mass) of waste sent to landfill during construction and throughout the lifetime of the buildings, by effective management and with regard to the waste management hierarchy.

Eastleigh Borough Local Plan policy summary

Table 6 provides a summary of local policy requirements relating waste and materials.

Table 6: Eastleigh Borough Local Plan waste and materials policy.

Policy Reference	Target
Policy DM9 – Public Utilities and Communications	– Utilities Infrastructure: New development is only permitted if utilities, including waste management systems, are adequate. – Waste Collection: Developers must contribute to off-site waste infrastructure if existing systems are insufficient.
Policy DM2 – Environmentally Sustainable Development	– On-site Waste Management: Developments must incorporate plans for waste segregation, storage, and recycling. – Construction Waste: Developers are required to use materials with low embodied carbon and prioritize waste minimization during construction. – Green Standards: Encouragement of BREEAM “Excellent” certification includes compliance with sustainable waste management.
Policy DM8 - Pollution	– Contaminated Sites: Developers must remediate sites with historical waste issues before construction. – Waste Pollution Mitigation: Provisions to prevent watercourse pollution from improperly managed waste.
STRATEGIC POLICY S1 – Delivering Sustainable Development	– Minimizing Waste: Development must promote reduced material use and waste recycling – Circular Economy: Encourages the reuse and recycling of construction and demolition waste to meet sustainability goals.
Supplementary Planning Document: Environmentally Sustainable Development	– Waste Management Planning: Developments must include detailed waste management strategies at design and post-occupancy stages. – Compliance Checks: Developers must submit evidence of waste management protocols during pre-application and planning phases.

Proposed Development response



Materials

Materials which demonstrate robust environmental credentials and low impact will be considered and encouraged where possible. This could include consideration of the resilience and robustness over their lifetime, including in a changing, more extreme climate. The ability to reuse and recycle materials at the end of their life will also be considered when specifying materials.

Procurement of materials used in construction will follow a Sustainable Procurement Plan, which could help to ensure materials are responsibly sourced where feasible to do so. Procurement of materials with environmental product declarations will also be considered and implemented where feasible to do so. Additionally, opportunities will be explored to source materials locally, reducing the emissions associated with transport materials to Site, whilst also supporting businesses in the local area.



Construction waste management

The Principal Contractor will be required to develop and implement a Site Waste Management Plan (SWMP). This will include targets for monitoring site waste, diverting waste from landfill and ensuring waste per m² of floor has been minimised. For example, for BREEAM, the Proposed Development is targeting waste arisings of 4.7-6.5 tonnes per 100m² of GIA. This is subject to review at future design stages.



Operational waste

Space provision has been allowed for a operational waste store as part of the proposed development. This will be sized to cater for a combination of recyclable waste streams and general waste.

2.4 Green infrastructure and ecology.

Green space and infrastructure provide health and wellbeing benefits, but it is also important for increasing biodiversity and climate change mitigation. The following sections detail the sustainability measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary.

Table 7 provides a summary of local policy requirements relating Green infrastructure and ecology.

Table 7: Eastleigh Borough Local Plan Green infrastructure and ecology planning policy.

Policy Reference	Target
STRATEGIC POLICY S1 – Delivering Sustainable Development	– Habitat Preservation: Focus on creating and enhancing habitats to support diverse ecosystems. – Climate Resilience: Green infrastructure is central to improving resilience against flooding, heatwaves, and other climate impacts.
STRATEGIC POLICY S9 – Green Infrastructure	– Multifunctional Green Infrastructure: Development must provide green spaces that connect habitats, settlements, and recreation areas. – Green Features: Requires the inclusion of street trees, green roofs, pocket parks, and urban copses to mitigate urban heat and improve air quality.
Policy DM11 – Nature Conservation	– Protection of Designated Sites: No development is permitted if it adversely affects international (e.g., SAC, SPA), national (SSSI), or local (SINC) nature conservation sites. – Net Gain in Biodiversity: Development proposals must demonstrate a net biodiversity gain through habitat protection, restoration, and creation. – Buffers: Protective buffers around sensitive ecological sites must be included to minimize disturbance from development.
Policy DM6 – Sustainable Surface Water Management	– Habitat Protection via SuDS: Promotes naturalized filtration systems to enhance biodiversity while managing surface water. – Restoration of Watercourses: Requires retaining or restoring watercourses to their natural state, contributing to green infrastructure.
Policy DM3 – Adaptation to Climate Change	– Cooling Strategies: Incorporates green infrastructure to provide shade and mitigate urban heat. – Drought-Resilient Landscapes: Promotes planting that reduces water demand and sustains local biodiversity during extreme weather.

Policy Reference	Target
Policy DM12 – Trees and Landscaping	– Tree Retention and Planting: Requires the retention of existing trees and planting of new trees in all developments. – Urban Greening: Green spaces and tree planting must contribute to biodiversity, air quality, and visual appeal.
Supplementary Planning Document – Environmentally Sustainable Development	– Integration of Green Infrastructure: Developments must integrate green spaces, wildlife corridors, and tree planting into site layouts. – Green Roofs: Encouraged for urban cooling, biodiversity enhancement, and stormwater management. – Maintenance Plans: Long-term management plans are required for green infrastructure.

Proposed Development response

Ecological surveys have been undertaken for the Proposed Development. This has been undertaken to establish the existing habitats on Site and to inform the design response to limit ecological impacts and maximise change in ecological value.



The proposed development has been strategically located to provide the necessary offsets for optimal retention and protection of the existing vegetation. The development’s design and access routes are intended to safeguard the vegetation to the south and east of the site, while preserving most of the woodland belt separating the two plots and some of the scrub adjacent to the site’s northern boundary.

Landscape proposals aim to retain and enhance existing landscape features, screen the development from sensitive receptors, provide ecological enhancement, and add amenity value to the site, carefully considering constraints and future management and maintenance requirements

2.5 Travel.

According to the Department for Business, Energy and Industrial Strategy (BEIS), transport is the single greatest contributor to the UK’s greenhouse gas emissions, accounting for 27% of annual emissions in 2018. Recognising the need to decarbonise this sector, future development must do everything possible to encourage a shift to sustainable modes.

The following sections detail the sustainability measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary.

Table 8 provides a summary of local policy requirements relating to community.

Table 8: Eastleigh Borough Local Plan Community Policy Requirements

Policy Reference	Target
STRATEGIC POLICY S11 – Transport Infrastructure	– Enhancements to railway stations and bus services for better accessibility. – Integration of public transport with walking and cycling routes. – Eastleigh River Side development with Chickenhall Lane Link Road. – Botley Bypass and other road corridor improvements – Encourages walking, cycling, and public transport use. – Requires transport assessments for new developments
STRATEGIC POLICY S12 – Strategic Footpath, Cycleway and Bridleway Links	– Proposes new strategic routes connecting settlements, country parks, and the South Downs National Park.- Examples: Eastleigh to Botley, Hedge End to Hamble. – Green Links: Enhances green corridors for both biodiversity and non-motorized transport. – Accessibility: Development must integrate existing public rights of way and avoid severance.
Policy DM13 – General Criteria for Transport Development	– Safety First: Ensures new transport developments do not compromise road safety. – Minimizing Congestion: Developments should demonstrate measures to reduce traffic congestion. – Impact Mitigation: Requires developers to mitigate transport-related environmental impacts.
Policy DM14 – Parking Standards	– Parking Standards: Specifies residential and non-residential parking space requirements and Includes provisions for electric vehicle charging points. – Sustainable Options: Encourages reducing reliance on private vehicles by improving public transport and shared mobility options.

Proposed Development response

The Proposed Development seeks to create a place where employees and visitors feel connected to the local area. This will be implemented through the delivery of a sustainable transport strategy that creates links for active movement across and around the site by ensuring new links connect with existing routes and paths. Sustainable transport measures will encourage physical exercise within nature, reduce air pollution, discourage littering and other antisocial behaviours, can provide habitats and ecosystems, as well as reducing greenhouse gas emissions.



Public transport links will be incorporated into the designs of the area where possible. This could be car share schemes, new bus routes to the site and the provision of Electric Vehicle Charging Points and bike hire schemes.

Cycle and footways should also link through the site and to the wider network to allow people to access work in a sustainable way.

2.6 Health, wellbeing and pollution control.

The Proposed Development will seek to provide a sustainably focused energy and transport strategy that will endeavour to eliminate the risk of poorer air and noise quality as a result of the development’s building and transport emission and noise generation. Part of this involves an air quality assessment being submitted alongside the planning application. The energy and transport strategies include measures for low/zero emission heating systems to contribute to the net zero aspect of the development and encourage a shift to active modes of travel facilitating a transition to walking and cycling.

The following sections detail the sustainability measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary

Table 9 provides a summary of local policy requirements relating to Health, Well-being and Pollution control.

Table 9: Eastleigh Borough Local Plan Health, Well-being and Pollution control Policy Requirements

Policy Reference	Target
Policy DM8 - Pollution	- New developments must not lead to unacceptable levels of air pollution, including particulate emissions or harmful odours. - Proposals near Air Quality Management Areas (AQMAs) or locations already experiencing poor air quality must incorporate measures to mitigate impacts on occupiers and sensitive receptors. - Developments that worsen air quality within AQMAs or create the need for new AQMAs will not be permitted. - Major planning applications must include air quality impact assessments to demonstrate how the development will comply with national and local air quality standards. - Developers must propose specific mitigation measures, such as landscaping, green infrastructure, or reducing car dependency through improved public transport connectivity. - A Construction Environmental Management Plan (CEMP) is required for developments likely to produce significant dust or emissions during construction. - Plans must include measures to control dust and vehicular emissions on-site and prevent adverse impacts on local air quality. - Light Pollution Mitigation: - External lighting must be designed to avoid excessive glare or intrusion onto neighbouring properties and natural habitats. - Proposals near the South Downs National Park must comply with its Dark Sky Reserve standards, maintaining low-light emissions to protect nocturnal species and preserve the natural night environment. - Lighting strategies must be submitted for developments with significant nighttime activities to demonstrate minimal light spillage and energy efficiency.
STRATEGIC POLICY S1 – Delivering Sustainable Development	- New developments must minimize reliance on private vehicles by promoting active travel (walking and cycling) and public transport. - Proposals near sensitive areas must include EV charging points to reduce vehicle emissions. - Development plans must align with carbon reduction strategies, including the integration of green corridors and low-carbon building designs.
Supplementary Planning Document – Environmentally	- Developments must include green roofs and vegetative barriers to absorb pollutants and improve local air quality. - Air quality monitoring must be conducted post-construction to ensure compliance with environmental commitments.

Policy Reference	Target
Sustainable Development	- Developments must use energy-efficient and directional lighting to reduce waste and light pollution. - Encourages the use of smart lighting technologies, such as motion sensors and timers, to limit unnecessary light.
Policy DM13 – Transport and Accessibility	- Development near congested areas must incorporate mitigation measures to reduce vehicle emissions, including EV infrastructure. - Requires Transport Assessments for developments generating significant vehicular movement.
Policy DM32 – Recreational and Open Space Facilities	- Developments must include accessible open spaces that meet local recreational needs and enhance physical and mental wellbeing. - Green spaces must be designed to encourage physical activity, such as walking trails, playgrounds, and fitness areas. - Developments are required to contribute to local sports facilities to meet the increased demand from new residents.
STRATEGIC POLICY S9 – Green Infrastructure	- Green infrastructure must integrate natural features like woodlands, rivers, and urban greenery to improve air quality and provide spaces for relaxation and exercise. - New developments must ensure green corridors link residential areas to parks and recreational facilities to promote walking and cycling.
Policy DM11 – Nature Conservation	- Lighting near sensitive habitats must minimize disruption to nocturnal wildlife, especially in areas with priority species. - Proposals must incorporate dark corridors or no-light zones to protect ecological networks.

Proposed Development response



Air Quality

The Proposed Development will implement an effective air quality strategy that addresses air pollution present during construction and during operation. The energy strategy is adopting an approach that is low and zero carbon, to minimise carbon emissions as far as possible.

The Air quality assessment, provided in support of the application, has assessed the air quality impact of the all-electric strategy and additional traffic. It has been concluded that:

- Additional traffic on the local road network is shown to be above the relevant screening thresholds, however due to local monitoring concentrations and Defra background concentrations, the impact of additional operational traffic is not significant.
- Best practice mitigation will be implemented during construction to reduce dust emissions and the overall effect considered to be ‘not significant’ and a Dust Management Plan for the works will be produced.
- Overall, the operational air quality effects of the proposed development are judged to be ‘not significant’ for existing human health receptors.

In addition, the fit out will use products with low volatile organic compound content to ensure there is minimal detriment on internal air quality.



Lighting strategy

The external lighting design and strategy for the Proposed Development has considered the local context, the Applicant needs, aviation requirements and ecological concerns. The Proposed

Design will include a balanced approach between the security needs of the Site and the ecological and biodiverse features that must be maintained:

- Light spill past the Site boundary is to be kept to an absolute minimum to not disturb migration or foraging patterns for species.
- Brightest areas to be dimmed when not in use and lighting will include internal glare shield accessories to remove light spill onto the perimeter tree line.
- Luminaires to be chosen to be least disruptive to circadian rhythm.
- Lighting levels to access routes, loading bay, car parking etc to be designed and used to the required illumination during use, and dimmed down out of use.
- For security, final location and specification of luminaires will need to ensure sufficient illumination of people and routes.



Pollution prevention

As noted above, an air quality assessment has been undertaken for the Proposed Development which includes management and mitigation measures to ensure pollution from construction is minimised which includes implementing a Dust Management Plan (DMP).

The drainage strategy includes measures to ensure water quality is maintained, through the use of SUDs as discussed in previous sections. This includes the use of permeable paving and rain gardens to provide suitable prevention from pollution to the receiving public sewer systems and water courses.

2.7 Noise.

Unwanted noise can at best be a nuisance, but at worst can cause longer term health issues. Acoustic design and noise control are another key element for the design of stress-free restorative environments. Noise has been shown to elevate blood pressure and stress hormones in children.

The following sections detail the sustainability measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary.

Table 10 provides a summary of local policy requirements relating to noise.

Table 10: Eastleigh Borough Local Plan Noise Policy Requirements

Policy Reference	Target
Policy DM8 - Pollution	- Developments must avoid causing unacceptable levels of noise pollution to surround areas. - Where noise-generating activities are planned, developers must conduct a noise impact assessment and propose appropriate mitigation measures, such as soundproofing or landscaping buffers. - Noise-sensitive developments (e.g., residential areas) near existing noise sources like airports, railways, or major roads must include mitigation strategies, such as double-glazing, noise barriers, or orientation of buildings to minimize exposure.
STRATEGIC POLICY S1 – Delivering Sustainable Development	- Developments must protect and enhance environmental quality by minimizing noise and light pollution. - Proposals must incorporate design elements like green barriers and setbacks to shield sensitive receptors from pollution.
Policy DM1 – General Criteria for New Development	- Developments must protect the health and wellbeing of residents by avoiding excessive noise or light exposure. - Landscaping and building orientation should reduce direct impacts from nearby noise sources.
Policy DM12 – Transport and Accessibility	- Developments near major roads must include measures to reduce traffic noise, such as acoustic barriers and low-noise road surfaces.

Proposed Development response



Noise

A Noise Impact Assessment has been undertaken, which included an existing noise survey for the Site. The dominant noise source for the site is aviation traffic from the airport. Mitigation to reduce noise impact to building users has been identified and incorporated into the design.

The main noise consideration from the Proposed Development will be from the operation of building services plant, Noise limits will be designed in for external building services plant serving the Proposed Development to protect against adverse noise impacts at nearby sensitive receptors.

It has been concluded that the noise effects of the Proposed Development will be generally localised and the impact on receptors is considered to be negligible.

2.8 Community.

People are at the centre of the built environment, and it is vital that development supports all the communities who are impacted by it. Delivering social value as part of development projects is how we ensure that what we build serves the needs of these communities and contributes to the creation of a more equitable society.

The following sections detail the sustainability measures that have been considered, and those that will be implemented at the Proposed Development.

Eastleigh Borough Local Plan policy summary

Table 11 provides a summary of local policy requirements relating to community.

Table 11: Eastleigh Borough Local Plan Policy Requirements

Policy Reference	Target
Policy DM16 – Skills and Training	- Large developments are required to contribute to local skills development initiatives, fostering job opportunities within the community. - Collaboration with local schools and training providers to ensure educational alignment with future employment needs.
STRATEGIC POLICY S2	- Developments should foster community interaction by including pedestrian-friendly designs and well-connected public spaces. - Emphasis on proximity to schools, shops, and healthcare to reduce reliance on private vehicles.
STRATEGIC POLICY S4 – Employment Provision	- Employment Floorspace: - A target of 103,500 sqm of additional employment floorspace (B2, B8, and E(g)) is set for the plan period, supported by mixed-use regeneration and greenfield developments. - Retention of existing employment sites, with intensification to maximize their use. - Development Locations: - Focus on Eastleigh River Side, Chalcroft Business Park, and district centers at Chandler’s Ford and Hedge End. - Support for High-Value Industries: - Encouragement of high-value growth sectors such as advanced engineering, low-carbon technologies, and creative industries. - Infrastructure and Connectivity: - Provision of transport and utilities infrastructure to facilitate business growth and accessibility. - Development of business parks with improved digital infrastructure, including high-speed broadband.

Proposed Development response



Security

A site Security Risk Assessment (SRA) has been undertaken for the Proposed Development to form the foundation of the security strategy. The Site has been designed with the principles and best practices from Secured by Design in mind. The following measures are proposed to enhance site security.

Access control and movement

Access control will be in the form of mechanical access control (barriers, gates, access-controlled doors):

- Vehicle access could be controlled via the installation of vehicle security barriers to prevent vehicular access outside the dedicated movement and parking areas.

- Security technical system to deter, detect, delay and respond to potential incidents.
- Electronic access points should be used to grant access to restricted areas of the building when a valid card, key fob or biometrics are read.

Surveillance

Both informal (design of spaces and natural surveillance) and formal surveillance (e.g. video) measures will also be provided:

- Uniform lighting strategy to external spaces to design out dark spaces and create a feeling of safety.
- CCTV should also be installed
- Video surveillance to be coordinated with lighting and landscape design to avoid blind spots.
- A suitably designed, fit for purpose, intruder alarm system should be installed.

Physical protection

For a robust approach to security, in addition to the above measures, physical protection will also be provided to the Site:

- Physical security boundary and clear demarcation of owned land areas.
- Physical landscaping designs to be adapted to increase security posture to deter and maintain levels of natural surveillance.



Construction management

All Contractors will be required to sign up to the Considerate Constructors Scheme (CCS) and demonstrate best practice performance during the construction phase. The credits under the BREEAM assessment are targeted, which ensures responsible construction practises will be implemented by the Principal Contractor, including consideration of best practice pollution policies, monitoring of energy and water use and deliveries to and from the site.

Measures that the Contractor would be required to implement, cover the breadth of construction impacts and enable the Contractor to be a ‘good neighbour’ through construction and include:

- Vehicle movement – e.g. management access and egress, dedicated routes for heavy vehicles.
- Pollution management – e.g. minimise risks of air, land, light, noise and vibration pollution.
- Tidiness – e.g. the construction site is clean and clear and safe access is provided around the buildings.
- Health and wellbeing – e.g. processes and practices to promote health and wellbeing of site operatives, robust safety measures are in place.
- Security processes – e.g. minimise risk of site becoming focus of antisocial behaviour such as through CCTV, perimeter fencing

In addition, an Outline Construction Environmental Management Plan (OCEMP) has been produced with proposes mitigation and management techniques to limit the impact of the construction phase. This includes measures to manage noise, air quality, water impact, lighting and contaminated land, to name a few.

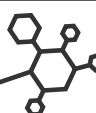


Public engagement

Consultation and community involvement has been considered an essential element in the process of developing the proposals for the Proposed Development. Key stakeholders, including local councillors, business groups and neighbours were consulted in advance of a public exhibition. There were public consultant events, and exhibition and a two-page flyer. It is proposed that there is further consultation and public engagement post planning permission being achieved.

3. Conclusion.

Table 12: Sustainability strategy summary.

Theme	Measures to be implemented
	Energy and Carbon Reduction - A BREEAM Communities 'Excellent' rating is being targeted for by the Proposed Development. - The design will include high standards of energy efficiency and include low/zero carbon technologies including a high efficiency heat pumps and PV array. - Overall, an ~79% reduction in CO₂ emissions will be achieved beyond the Building Regulations Part L2 2021 baseline.
	Drainage - The Proposed Development sits within Flood Zone 1. - A Flood Risk Assessment has been completed confirming the Proposed Development can be considered as 'low risk' for all sources of flooding. - Sustainable drainage systems have been incorporated and these include permeable paving, rain gardens and attenuation tanks.
	Water - All water systems will be designed in compliance with relevant Code of Practice and industry/sector best practice guidance. - The Proposed Development will install low water consumption sanitary fittings which comply with BREEAM standards. - A mains water leak detection system will be installed, where feasible, to reduce the volume of potable water which may be lost due to leaking sub-surface pipework.
	Waste - A refuse store will be provided on the ground floor of the office to ensure ease of transport operational waste. Separate bins will be provided to allow for both municipal and recyclable waste to be separated. - A 'Site Waste Management Plan' will be produced for the Proposed Development for each phase of construction to define measures for how to minimise the volume of waste arising from demolition and construction activities, which is sent to landfill. The plan will include targets for minimising waste per 100m² and for diverting waste from landfill.
	Materials - Façade specification will be developed to contribute to local character of the area. - Materials will be specified to be durable, responsibly sourced, have environmental product declarations and locally manufactured where feasible to reduce the embodied carbon of the Proposed Development. - A Sustainable Procurement Plan will be adopted and inform the building specification and Contractors procurement strategy.
	Green infrastructure and ecology - An Ecological Assessment and Mitigation Strategy has been completed which features enhancement recommendations for wildlife. - The development layout will be designed to retain, protect and enhance the most valuable ecological features. - Overall, the development is targeting a minimum Biodiversity Net Gain of >10%.

Theme	Measures to be implemented
	Travel - The site can be accessed via sustainable modes of transport, including walking, cycling, and bus. - Car parking spaces will be provided, of which a proportion will be 'EV ready'. - Cycle storage will be provided in secure and sheltered storage. Suitable shower, changing and storage facilities will also be provided. - BREEAM credit 'Tra 05: Travel plan' will be adhered to. -
	Health and wellbeing and pollution control - The design has ensured that the occupants will not be subject to excessive noise, high temperatures or flickering lights. - BREEAM credit 'Hea 08: Indoor Air Quality' will be adhered to. - All lighting is to be highly efficient and controlled appropriately. External lighting will be selected to reduce light spill and provide natural surveillance to maintain site security. - The all-electric strategy means local air quality is not impacted by the new development and reduces the building user's exposure to harmful air pollution.
	Noise - The Proposed Development will meet the standards for acoustic design and achieve the associated and targeted BREEAM criteria. - The design and specification of equipment will be selected to adhere to the sustainable environmental noise limits determined. - A noise survey has been undertaken by a suitably qualified acoustician. It has been determined that the noise effects of the Proposed Development will generally be localised and the impact on receptors negligible.
	Community - The principal contractor will be required to sign up to the Considerate Constructors Scheme and achieve a best practice score. - The principal contractor will also be required to implement responsible construction management techniques and contribute to achieving a BREEAM 'Excellent'. - A robust security strategy has been developed for the Site and includes a combination of management and mitigation measures to ensure security is maintained. This comes in the form of access control and movement measures, surveillance and physical protection measures.



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