

Sustainability Statement

Land south of Mortimers Lane, Eastleigh

November 2024



Turley
Sustainability

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Client

Bloor Homes Southern Limited

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1. Introduction

This Sustainability Statement has been prepared to demonstrate the sustainability strategy for the development proposals at Land south of Mortimers Lane, Fair Oak, Eastleigh.

1.1 Introduction

This Sustainability Statement has been prepared by Turley Sustainability & ESG, on behalf of Bloor Homes Southern Limited ('the applicant' hereafter), to support an outline planning application to Eastleigh Borough Council for a proposed development at Land south of Mortimers Lane, Fair Oak, Eastleigh. This Statement provides detail of the various measures incorporated into the development proposals at this stage and to be considered as part of the ongoing detailed design to ensure suitable levels of sustainability performance in accordance with local and national planning policy.

1.2 Site Context

The site is located off the B3037, Mortimers Lane, which runs east to west along the northern boundary from Fair Oak to Lower Upham and to Eastleigh. Further connectivity to Southampton and Winchester is via the A331. The site currently comprises two pastured fields which are divided and bounded by mature hedgerows, scattered trees, and post and wire fencing. The site measures approximately 11.05 ha. There are two agricultural points of access into the site via Mortimers Farm to the east and Mortimers Lane to the north. These points are connected by an existing track that runs

adjacent to the northern part of the eastern boundary. The site is not crossed by any Public Rights of Ways (PRoW's) and therefore not currently publicly accessible.

The site is bound to the north by Mortimers Lane (B3037). Further North beyond Mortimers Lane lays the residential development known as 'Pembers Hill Park'.

1.3 Proposed Development

The proposed description of development is as follows:

"Outline application for up to 245 dwellings (Use Class C3), up to 350sqm multi-functional space, mobility infrastructure (Use Class Sui Generis), with associated open space, landscaping, infrastructure, and vehicular access off Mortimers Lane, Fair Oak; All matters reserved except for vehicular access off Mortimers Lane and pedestrian / cycle connections to the site boundary".

Figure 1 overleaf shows the proposed framework development plan.

1.4 Document Structure

Chapter 2 of this report provides an overview of relevant national and local legislation, planning policy and guidance.

Chapter 3 provides detail of the sustainability and energy strategy of the proposed development, in line with local Planning Policy, and **Chapter 4** provides an overall summary.

Please note, the terms "carbon", carbon dioxide (CO₂)" and "greenhouse gas (GHG)" are used interchangeably in this statement depending on the terminology of referenced documents.

Figure 1: Development Framework Plan (Source: Pegasus Group)



2. Policy Context

This chapter provides an overview of the relevant sustainability planning policy and guidance from a national and local perspective.

2.1 National Policy

This section sets out a summary of current national guidance and policy in relation to sustainable development.

2.1.1 National Planning Policy Framework

The National Planning Policy Framework¹ (NPPF) provides a framework for the development of locally prepared plans and the government's planning policies for England and how these are expected to be applied.

Paragraph 7 of the NPPF states that: 'the purpose of the planning system is to contribute to the achievement of sustainable development'.

To deliver sustainable development, the planning system must perform three distinct objectives, aligned to the pillars of sustainability, which must not be taken in isolation and should be pursued jointly:



An **economic** objective to contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure.



A **social** objective supporting strong, vibrant and healthy communities, and by creating a high-quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being.



An **environmental** objective contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

These objectives are key to the development of plans and the NPPF sets out a number of key themes for consideration which guide the preparation of local plans and policies, ensuring the delivery of sustainable development.

The NPPF recognises the role planning has to play in support of the UK's pursuit of the United Nations Sustainable Development Goals (UNSDGs) (**Figure 2**) which address social progress, economic wellbeing and environmental protection.

Figure 2: Example UN Sustainable Development Goals



2.1.2 Planning Practice Guidance

Planning Practice Guidance (PPG) provides further advice on various planning issues associated with

¹ [UK Government | NPPF](#)

development, including those linked to sustainability and renewable energy and underpins the policies within the NPPF.

PPG is a material consideration in planning decisions and should generally be followed unless there are clear reasons not to. It sets out how local authorities should include policies that protect the local environment and strategies to mitigate and adapt to climate change and supports developments that are functional and adaptable for the future.

2.2.3 National Design Guide

The National Design Guide is based on the national planning policy practice guidance and objective for good design as set out in the NPPF. The Guide introduces ten characteristics of well-designed places which work together to create developments Character and Community, while positively addressing environmental issues affecting climate.

2.1.4 Building Regulations

Whilst not planning policy, the Building Regulations (and specifically Approved Document Part L: Conservation of Fuel and Power) set out the requirements for energy and carbon performance in new buildings. Periodic updates to these national regulations will drive energy efficiency and carbon reduction improvements.

Part L, Conservation of Fuel and Power - On 15th June 2022, the Building Regulations were updated as an interim step towards part of the roadmap to the 'full' Future Homes and Buildings Standard, which comes into effect in 2025.

In December 2023 the Government published the 2025 Future Homes Standard (FHS) and Future Buildings Standard (FBS) consultation. The standard, which is expected to come into force in 2025, will require homes and buildings to achieve a c.75-80% reduction in carbon emissions beyond Part L 2013. Homes and buildings will be 'zero-carbon ready', meaning that they will need no retrofitting to produce zero carbon emissions as the electricity grid decarbonises.

For dwellings, two options are currently being consulted on:

- **Option 1:** High efficiency solar PV panels covering 40% of ground floor area (equiv.), airtightness of 4 m³/m².h @ 50Pa, wastewater heat recovery, and decentralised mechanical extract ventilation (dMEV).
- **Option 2:** No renewable energy, airtightness of 4 m³/m².h @ 50Pa, no wastewater heat recovery, and natural ventilation with intermittent extract fans.

For non-residential development, there are different sets of proposals for top-lit spaces (such as warehouses) and side-lit spaces (such as offices). Performance targets are based on a building with good fabric standards, and efficient heating, lighting and heat recovery.

Two options are then presented:

- **Option 1** (recommended): Solar PV equivalent to 40% of floor area for side-lit spaces and 75% for top-lit spaces.
- **Option 2** (not recommended): Solar PV coverage equivalent to 20% of floor area for side-lit spaces and 40% for top-lit spaces.

Part S, Infrastructure for Charging Electric Vehicles - Part S sets out guidance for electric vehicle (EV) charging infrastructure. For residential development, EV charge points must be provided for each dwelling (or where the total number of parking spaces is less than each dwelling, all spaces should be provided with an active EV charging point). Any remaining spaces must have cable routes for charge points to be installed. For new non-residential buildings with over 10 parking spaces, at least 1 charge point must be provided, with cable routes to the remaining 20% of spaces.

Part O, Overheating - Part O sets out new requirements for mitigating overheating in residential buildings, specifying that residential developments must limit unwanted solar gains in the summer and provide means to remove heat. Compliance with Part O can be demonstrated using two methods, either following a simplified prescribed glazing and free area ratio or using Dynamic Simulation Modelling to demonstrate the

risk of overheating from rising summer temperatures has been mitigated.

2.2 Local Planning Policy

2.2.1 Eastleigh Borough Local Plan (2016-2036)²

The Eastleigh Borough Local Plan (2016-2036) was adopted in April 2022. It sets out the policies and plans to guide future development to 2036 and will be used to determine planning applications in the Borough. The key sustainability policies relevant to the proposed development at Mortimers Lane are noted below.

Policy S1 Delivering sustainable development – All new development in the Borough should:

- have regard to the potential impacts of climate change, and the need to limit greenhouse gas emissions including through carbon sequestration and by promoting measures to design buildings and spaces which are adaptable to predicted climate change, and restrict development in areas at risk from flooding, minimise energy use and encourage the generation of renewable energy, and by minimising emissions from motorised transport, industrial activity, and domestic uses.
- minimise the need to travel longer distances, and, where travel is necessary, prioritise more sustainable forms of transport, such as active travel, other alternatives to car use, or a combination of active travel and other alternatives to car use.
- use resources wisely and minimise the generation of waste in the construction, occupation and use of buildings.

Policy S9 Green Infrastructure – Through new development and other initiatives, the Council will seek to achieve the provision, retention and/or enhancement of the following forms of multi-

functional green infrastructure, including provision of:

- green infrastructure incorporated into all new development with multifunctional spaces connected by primary, secondary and tertiary green links.
- interconnected urban green infrastructure within the fine grain of existing and new development including green, cycle ways, paths and linkages between community facilities and open spaces to link community facilities.

Policy DM2 Environmentally sustainable development – All new build residential development (C3 Use Class only) must achieve at the time a Reserved Matters or Full Planning Application is submitted:

- a 19% improvement in predicted carbon emissions, compared with the building regulations standard current at the time, through increased energy efficiency of the building fabric, unless this is superseded by an updated building regulations requirement equivalent to 'zero carbon homes'; and
- a predicted mains water consumption of no more than 110 litres/person/day.

Policy DM3 Adaptation to climate change – All development should be designed to adapt to the predicted climate change impacts for the Borough. Measures include:

- incorporate sustainable drainage systems (SuDS) as part of an integrated SuDS strategy and as part of the landscape framework for the site including green open space and green roofs where appropriate.
- adopt a cooling strategy which can include cooling through generous green infrastructure and trees, areas of shade, water cooling, building design and orientation, 'cool roofs' or green roofs and green walls, porous cool pavements;

² <https://www.eastleigh.gov.uk/media/11806/to-be-published-final-local-plan-april-2022-v4.pdf>

- relieve water stress by reducing residential mains water consumption, installing water efficient appliances, fittings and leak detection devices; installing rainwater harvesting and grey water recycling; and adopting drought resistant landscape design and planting.

Policy DM6 Sustainable surface water management and watercourse management – New development will only be permitted if it incorporates SuDS. On sites within 100m of the River Itchen SAC (Special Area of Conservation), SuDS schemes should include at least three forms of naturalised filtration. SuDS schemes should:

- be designed and monitored in accordance with the CIRIA C753 SuDS Manual or equivalent national or local guidance;
- manage surface water runoff as close to its source as possible;
- ensure that discharge rates are reduced as far as possible and that on greenfield sites these should at least mirror greenfield rates before development;
- be provided as part of any application for outline or full planning permission;
- where discharge is to a wetland or wet woodland habitat, flows off site must mirror the natural hydrological pathways;
- include clear arrangements for their whole life management and maintenance.

Policy DM11 Nature conservation – A net gain of biodiversity on all development sites should be sought through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils.

2.3.2 Climate Emergency

Eastleigh Borough Council declared a climate change and environmental emergency in 2019. The

declaration sets out its aim to be carbon neutral by 2025 and to support communities and businesses across the Borough to achieve carbon neutrality by 2030. To reaffirm its commitment on this issue, the Council have produced a Climate and Environment Emergency Strategy (2020-2030)³ which sets out progress to date, baseline assessment and the strategy that the council is taking to meet these targets in all aspects of development.

2.3.3 Environmentally Sustainable Development Supplementary Planning Document⁴

The SPD was adopted in March 2009 and details the requirements new development should achieve in Eastleigh. The SPD was adopted in 2009 and is therefore quite out of date. The key elements of the SPD are set out as below;

ESD 1 Minimum Code For Sustainable Homes – It is noted that the Code has been superseded by updates to the Building Regulations.

ESD 3 External Water Consumption – requests that water for irrigating private or communal gardens will come from rainwater.

ESD 4 Reducing Surface Water Runoff – requests that run-off rates and annual volumes of run-off post development will be no greater than the previous conditions for the site.

ESD 5 Passive Solar Heat Gain - The Council requires all new buildings in residential development of 10 dwellings or more to: make full use of potential passive solar heat gain through orientation, building design and landscape design (while avoiding excessive summer heat gain and glare) within a framework of good urban design unless there are particular site or building use factors which make it unfeasible.

ESD 6 Carbon Dioxide Reduction - The Council requires all buildings in new residential development of 10 dwellings or more to achieve

³ <https://www.eastleigh.gov.uk/media/6355/climate-change-and-environmental-emergency-strategy-2020-2030.pdf>

⁴ [Microsoft Word - 2EC4BFB3.doc](#)

from January 2012 two Code Ene 7 credits (15% carbon dioxide emissions reductions via local low/zero carbon energy) Noted that the Code has now been superseded.

ESD 8 Trees - The Council requests in all residential developments of 10 dwellings or more;

- all new streets created for residential development to provide at least 1 street tree per 30 linear metres of street
- All new off-street car parks to provide at least 1 tree per 6 vehicle spaces
- All new private back gardens to retain existing trees or (if no existing trees to retain) receive at least 1 newly planted tree.

2.3.4 Eastleigh Validation Checklist⁵

A Sustainability Statement is required for all developments involving the provision of new dwellings. The statement should demonstrate how the proposed development complies with the sustainability principles and requirements as set out in the Council's adopted planning policies.

2.4 Planning Policy Summary

Local and national policy aims to ensure the delivery of sustainable and well-designed buildings which mitigate and adapt to the impacts of climate change.

The adopted Local Plan requires development to consider a range of sustainable design measures, including sustainable design and resource management, green infrastructure, SuDS, energy efficient and low carbon buildings, water efficiency, and enhancing biodiversity. This demonstrates the Council's commitment to the creation of sustainable new developments.

Latest national planning policy and guidance confirms the Government's approach to sustainable development is being driven through the updates to the Building Regulations to ensure that new buildings are well designed and reduce emissions in line with the UK's national carbon targets.

The following sections of this Sustainability Statement set out the sustainability measures incorporated into the design of the development to ensure the delivery of a sustainable development and address the requirements of local policy.

⁵ <https://www.eastleigh.gov.uk/media/14224/local-validation-checklist-temp-apr24.pdf>

3. Sustainability Strategy

This section summarises the sustainability strategy for the proposed development at Land south of Mortimers Lane, Fair Oak, Eastleigh.

This section of the report outlines the sustainability strategy for the proposed development at Land south of Mortimers Lane, demonstrating how the development responds to both national and local planning policy.

In this context the sustainable design measures incorporated into the development masterplan at the outline application stage and measures to be considered during the detailed design are set out under the following headings which reflect the themes of the NPPF.

3.1 Building a Strong and Competitive Economy

3.2 Promoting Sustainable Transport

3.3 Delivering a Wide Choice of High Quality Homes

3.4 Requiring Good Design

3.5 Promoting Healthy Communities

3.6 Meeting the Challenge of Climate Change

3.7 Conserving and Enhancing the Natural Environment

3.8 Sustainable Waste Management

3.1 Building a Strong and Competitive Economy

The proposed development will contribute to positive economic growth for the borough through construction and occupation of the proposed residential led development, supporting the aims of the NPPF.

Construction – The economic benefits of construction are well known with considerable direct and indirect positive impacts.

A study by the Confederation of British Industries (CBI) in February 2020⁶⁶ demonstrates that construction projects have a significant benefit on the local and wider economy. The report concludes that for every £1 of construction expenditure £2.92 is injected into the economy.

The construction of up to 245 dwellings and multi-functional space will therefore provide opportunities for local employment as well as increased revenue locally for materials, services and goods.

Occupation – The construction of 245 dwellings and multi-functional space will increase the population resulting in local benefits through the demand for goods and services. Furthermore, the increase in local population will also help support local facilities, groups and stores helping promote the vitality of the local area and beyond.

3.2 Promoting Sustainable Transport

A Transport Assessment has been prepared by Glanville. This section summarises the existing conditions in the vicinity of the site, the accessibility of the site relative to local facilities and services, and outlines the development proposal for the site.

⁶⁶ <https://www.cbi.org.uk/media/4121/fine-margins-february-2020-cbi.pdf>

The site is located to the south of Mortimers, approximately 1.4km to the east of Fair Oak Village Centre (Fair Oak Road) and approximately 6km to the east of Eastleigh town centre. The site is bounded by Mortimers Lane/B3037 to the north, Pembers Hill Drive and residential properties to the west and open/agricultural land to the east and south.

Local Services and Amenities – The majority of facilities and amenities are located in Fair Oak to the west of the site. There are also several facilities and amenities in reasonably close proximity to the site, including Deer Park Farm Industrial Estate, East Horton Business Park, and Knowle Park, accessed off Knowle Lane. Additionally, nearby amenities include a pharmacy, a library, Fair Oak Village hall, several restaurants / takeaways / cafes / pubs / convenience stores, hairdressers, retail units, a post Office, educational facilities and leisure facilities in Fair Oak.

Walking/Cycling Services – The existing pedestrian facilities between the site and Fair Oak generally comprise of footways c.2m in width running parallel to the carriageway and a combination of uncontrolled and controlled pedestrian crossing facilities. The proposed development includes measures such as providing a 3m shared pedestrian/cycle footways on both sides of the site access road, adding dropped kerbs and tactile paving to enhance safety, connectivity and inclusivity.

There are several Public Rights of Way (PRoW) in the vicinity of the site, which can be use by pedestrians, cyclists and equestrians. There are also two cycle routes in the vicinity of the site: Route 280 and 339. As part of the development, a link is proposed between the site and the two routes, providing a good opportunity to link the proposed development with the outskirts of Fair Oak and the wider area, including Eastleigh Town Centre.

Bus Services – The closest bus stop is located on Mortimers Lane, approximately 730m to the west from the centre of the site (equivalent to a 9-minute walk). This bus stop is served by bus route 69 and

route 649. Bus route 69 runs between Winchester to the north and Fareham to the south. The westbound bus stop is provided with shelter, seating, bus timetable information, a flag and a pole. The eastbound bus stop is provided with a flag, pole and bus timetable information. The existing bus services are detailed in the supporting Transport Assessment.

Rail Services – The closest train station is Hedge End, approximately 5km to the south of the site, with the second closest being Eastleigh Railway Station, approximately 5.7km, both providing regular reservice to London Waterloo and Portsmouth Harbour. More detailed train services and station accessibility can be found in the supporting Transport Assessment.

Electric Vehicles – electric vehicle charging points will be provided in line with Part S of the Building Regulations, one charge point per parking space.

Cycle infrastructure – the below measures are proposed to support cycle infrastructure;

- Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide;
- Decluttering of street furniture;
- Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes;
- Installation of shared use cycle infrastructure;
- Tightening of radiuses of the Stubbington Way junction;
- Side road junctions upgraded to LTN 1/20 compliance for pedestrian / cycling priority;
- Fair Oak Court junction formalisation for vehicles and cyclists; and
- Pelican crossings upgraded to Toucan.

Multi-purpose community hub - The community hub could include vehicle charging points, an Automated Teller Machine (ATM) or other facilities subject to local views / commercial interest. The purpose of this community use is to primarily serve the residents of the development and to reduce the reliance on a private car. Therefore, it is considered

that majority of trips generated by this use will be by walking and cycling by the residents of the development reducing the propensity for off-site travel and residents from nearby streets.

It is proposed that the multi-functional community hub will include a mobility hub which will include the provision of electric charging points at the mobility hub available for the use of future users to encourage the use of low and ultra-low emission vehicles when travelling to and from the site.

Summary – There is a good range of amenities and services within walking distance of the proposed site, meaning it provides an excellent opportunity to create a sustainable development. Given the accessibility of the site with the nature of the development, existing pedestrian network and bus services, the site can currently be considered to be a good location to produce a sustainable development.

3.3 Delivering a Wide Choice of High Quality Homes

Up to 245 residential dwellings will be provided as part of the development, with a mixture of types and sizes, including 35% affordable housing in line with Policy DM28 of the Local Plan. The housing mix will be in line with South Hampshire Strategic Housing Market Assessment (SHMA) and will be clarified during detailed design but it is intended to deliver a mix of 1-4 bedroom properties of largely 2 and 3 storey in height.

The precise unit mix will be determined at the reserved matters stage however the site would provide a full range of housing, from one- and two-bedroom apartments through to larger family homes.

Density and scale will vary across the site and when combined with landscape and building form, this will assist in providing different areas of recognisable character. This variety of character will reinforce a sense of place and provide legibility to the scheme.

Most of the development will be 2 storeys with some 2.5 and 3 storey development utilised in key locations. This diversity of scale will add variety and help achieve a rich grain of urban and architectural design, reflecting the character of the local area.

Taller buildings will tend to be situated at key junctions and visually prominent areas such as fronting open spaces and at the end of view corridors, but not in more visually sensitive locations such as the Mortimers Lane frontage or near to Mortimers Farm (and the associated listed buildings).

3.4 Requiring Good Design

The overarching vision for the development will be to deliver a high-quality landscape-led scheme with generous public open spaces and areas of ecological enhancement.

The design of the development at Land south of Mortimers Lane aims to respond to the site-specific constraints and includes sustainable elements, to create a well-designed development. It will include:

- Multi-functional Space offering a community function, with outdoor amenity space and a Mobility Hub including bike parking, car share and electric charging.
- A comprehensive network of attractive open space complemented by on site play, landscaping and ecological improvements.
- Retention of most of the existing trees and hedges with additional planting set within a high-quality landscape and green infrastructure framework.
- A sustainable drainage system and the management of surface water run off to and from the site.
- Energy efficiency, water efficiency and renewable energy measures and targets as detailed in Section 3.6.

Further details on how the design of the development has evolved to incorporate a range of

good design measures are set out in the DAS which accompanies the application.

3.5 Promoting Healthy Communities

The design vision for the development includes promoting the health and wellbeing of the residents. Measures included in the design to achieve this include:

- Multi-functional space for community use;
- Improved access to green spaces will support health and wellbeing for the residents;
- Promoting access to nature will encourage walking, cycling and other recreational activities;
- Access to numerous existing play areas and proposed new play areas.

In addition, the design of new homes and the multi-functional space will consider measures to improve internal living environments to promote health and wellbeing including:

- Prioritisation of natural ventilation, contributing to good internal air quality;
- Homes which are adaptable for the future; and
- Utilisation of materials and services that have low emission rates and pollutants.

More information on how the development has incorporated healthy living opportunities is contained within the DAS which accompanies the outline planning application.

3.6 Meeting the Challenge of Climate Change

One of the main challenges facing the UK and new development is the need to mitigate and adapt to a changing climate. The Government is committed to tackling climate change and in 2019 set out an ambition to extend the UK Carbon reduction target to reduce carbon emissions by 100% by 2050.

Climate change will cause the UK to become warmer, winters will become wetter, and summers will become drier. Adapting to this changing climate

will impact on the design, construction, location, cost and operation of all new buildings in the next few decades. One of the NPPF's core planning principles is to encourage development to consider climate change adaptation and mitigation during the planning process.

The Council's adopted Local Plan support the Government's objectives for sustainable development reducing energy use and carbon dioxide emissions, adapting to and mitigating the effects of climate change.

In 2023 the Government published the next stage of the FHS and FBS consultation which will require homes and non-residential units to reduce carbon emissions by 75% beyond Part L 2013. The Government has confirmed that from 2025 no fossil fuels will be used, and new homes will be 'Zero Carbon Ready'.

In this context the following sections outlines the key climate change mitigation and adaptation measures considered appropriate for this development based on the latest national guidance.

3.6.1 Mitigating Climate Change

Developing energy efficient, low carbon buildings is a key objective of national policy and recent changes to the Building Regulations, supporting the reduction of energy demand through efficient building design to reduce carbon emissions.

Reducing Construction Stage Emissions

As the energy efficiency of buildings improves through the introduction of new building standards the construction stage emissions become increasingly significant.

The embodied carbon of development can be reduced through measures including:

- Use of biofuels in site vehicles which has a lower emissions factor than diesel;
- Use of hydrogen or electric site vehicles and equipment;
- Use of temporary energy storage systems;
- Requiring the contractors to purchase renewable energy;

- Use of renewable energy generating systems such as PV cells on construction site buildings;
- Lean design to minimise materials use;
- Use of natural materials which sequester carbon such as timber;
- Specification of low carbon materials, for example steel and concrete with recycled materials content;
- Use of local supplies and labour where feasible; and
- The use of Modern Methods of Construction (MMC) including off-site prefabrication of building elements.

In support of the Council's **Policy S1 Delivering Sustainable Development**, consideration will be given to measures to reduce the embodied carbon of buildings through ongoing detailed design and material specification.

Reducing Operational Carbon Emissions

The Council's Core Strategy promotes increasing local renewable energy generation and increasing the energy efficiency of homes. **Policy DM2 Environmentally sustainable development** requests that new development achieves 19% beyond current building regulations unless this is superseded by updates to building regulations. In this case, achievement of the proposed FHS/FBS 2025 will supersede the Council's policy requirement.

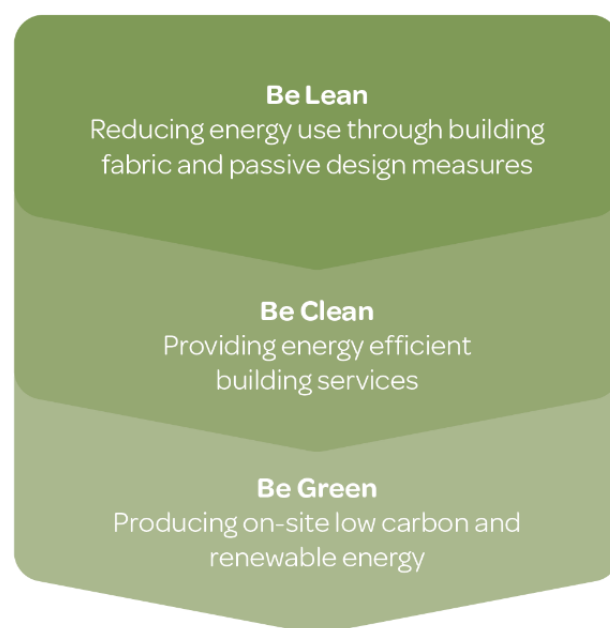
The proposed new homes will target the upcoming FHS 2025. The FHS standard has not yet been released and therefore the requirements are not confirmed. However, the FHS Consultation released in December 2023 anticipates homes and buildings achieving a 75% carbon reduction beyond Part L 2013, delivering Zero Carbon Ready homes.

The proposed Multi-functional community space will target the upcoming FBS 2025, which also is anticipated to require a 75% carbon reduction beyond Part L 2023. The recommended Option 1 is that this would require Solar PV panel coverage equivalent of 40% of the building's foundation area for side-lit spaces and 75% for top-lit spaces. The design of the multi-functional space is not yet

confirmed, however the scope and scale of a pv array on the roof will be reviewed as a part of detailed design.

To exceed the requirements of Part L 2021, in line with the FHS 2025, proposed new homes and buildings will be designed in accordance with the energy hierarchy, as shown in **Figure 3**, which aims to reduce energy demand through passive design measures and a fabric first approach before utilising low carbon energy and the production of on-site renewable energy.

Figure 3: The Energy Hierarchy



The following sections set out the measures included to deliver an energy efficient, low carbon development. The sections relate to both the residential and non-residential elements of the scheme unless otherwise stated.

Be Lean – Reducing Energy Use

Central to the delivery of low carbon and energy efficient buildings is the 'Fabric First' principle which recognises the most effective way of minimising carbon emissions is to reduce the demand for heat and power through a well-insulated, energy efficient building fabric and services.

Reducing the primary energy demand of a building through the use of an efficient fabric and services is widely regarded as best practice and is therefore

the first and most important step to reducing carbon emissions.

This 'fabric first' approach has a number of distinct benefits including:

- Carbon savings delivered are 'locked-in' for the lifetime of the building (60 years or more).
- Virtually no maintenance and/or replacement costs to maintain carbon reductions through improved fabric.
- No reliance on an occupier's behaviour to deliver carbon reductions.

Fabric and Energy Efficiency Measures – The design of the new homes and multi-functional space will aim to reduce thermal energy demand by targeting improved insulation levels and air leakage and fabric u-values where possible exceeding the Building Regulations requirements.

The following measures to reduce energy use and carbon emissions will be considered during the detailed design of individual buildings:

- Design to promote passive solar gains, maximise natural daylight, sunlight and ventilation through orientation of streets and buildings;
- Design which aims to optimise natural daylight;
- Buildings which target element u-values and air tightness in accordance with current Building Regulations requirements;
- Incorporating high efficiency lighting targeting 100% of all light fittings as low energy lighting;
- Use of high efficiency heating systems appropriate to the building use to reduce energy consumption; and
- Where appropriate, specification of high energy efficient equipment will be provided that use less energy and water.

Through these measures it is anticipated the development will reduce energy demand and carbon emissions beyond the requirements of the current Building Regulations and as necessary in line with the 2025 FHS and FBS.

The final design and specification of new buildings will be determined during the detailed design of the development.

Be Clean – Efficient Energy

The next stage of the Energy Hierarchy is the efficient supply of heat and energy. This means connecting into an existing District Heating Network (referred to as "DHN" hereafter) where possible or providing an on-site communal heat network or individual systems.

District Heating Networks comprise a centralised heat generator, typically a gas fired Combined Heat and Power (CHP) engine. CHP systems generate electricity and waste heat which can be fed into a network of insulated pipes which deliver low carbon heat to buildings to provide heating and hot water via individual heat transfer units. There are no known heat networks in the vicinity of the proposed development.

The continued decarbonisation of the national electricity network and changes to the Building Regulations mean that the carbon emission benefits of traditional CHP systems will diminish during their life cycle.

CHP and DHN are therefore unlikely to be incorporated, as carbon emissions associated with electricity are expected to continue to reduce as the grid decarbonises, leading to greater savings in carbon emissions over the lifetime of the development.

The application of CHP and DHN is more appropriate for non-domestic buildings with high heat demands. Small scale, thermally efficient new homes do not require a significant heating demand, which is better provided via heat pump systems. Due to the small size and thermal efficiency of the proposed multifunctional community space the application of CHP/DHN is also not appropriate.

In this context the provision of a heat network is not proposed at this site.

Be Green – Low Carbon Renewable Energy

The final stage of the Energy Hierarchy is the generation of on-site low carbon and/or renewable energy to provide a further reduction in carbon emissions.

An initial review of potential low carbon renewable energy technologies which may be suitable for inclusion in the design of the homes and multifunctional space has been completed to reduce carbon emissions further. A summary of the technologies reviewed is provided below.

Solar Photovoltaics (PV) - Solar photovoltaic (PV) systems generate zero carbon electricity from sunlight and are well suited to dwellings with unobstructed south-east to south-west facing roof space. Excess power is exported to the grid or can be harnessed using battery storage. Maintenance requirements are typically minimal. The detailed design of the development will aim to ensure homes and the multi-functional community building are orientated where possible to maximise energy generation if specified.

Solar Thermal - Solar thermal systems generate zero carbon hot water from sunlight in a similar manner to Solar PV. They require insulated tanks to store the hot water and have greater maintenance demands than solar PV given the need to ensure anti-freeze in the pipework is topped up every few years. They can be a highly cost-effective technology particularly where mains gas supplies are not available, however in energy efficient new homes and buildings their benefit can be limited.

Heat Pumps - Heat pumps provide low carbon heat sourced either from the ground (Ground Source Heat Pumps) or air (Air Source Heat Pumps). This type of system is suited to thermally efficient buildings. They require main electricity to operate but typically generate at around three units of heat for every unit of electricity that is consumed. Because the heat generated is at a lower temperature than that produced by a gas boiler, heat pumps typically require underfloor heating or over-sized radiators to ensure the heat is distributed efficiently. Heat pumps do however

require ongoing and fairly frequent maintenance. The government anticipates that the decarbonisation of the electricity network will shift design to using electric heating systems, including heat pumps.

Biomass - Biomass provides useable heat from a range of solid fuels including wood and straw. The installation of a biomass boiler, flue and associated fuel store require significant space and is not considered appropriate for the development.

At this stage potentially suitable technologies for consideration during the detailed design of individual homes and the multi-functional community space in conjunction with future changes to the Building Regulations include Solar PV and Heat Pumps. These are noted within the FHS and FBS consultations as the most likely technologies to be used to meet the Building Regulations carbon targets.

3.6.1.4 Summary

In summary, the proposed homes and multi-functional community space will be designed to meet the requirements of the 2025 FHS/FBS through a range of fabric and energy efficiency measures, as well as low carbon renewable energy technology. This will be achieved through;

- Enhanced building u-values and air tightness;
- Use of a range of energy efficiency measures including low energy lighting;
- Use of low carbon heating, such as ASHP to provide low carbon heating.

This strategy will deliver all-electric homes with residents able to purchase certified renewable electricity and live net zero.

Table 2 shows the estimated regulated carbon emissions from the proposed residential component of the development. This is based on indicative SAP information for a limited number of the proposed building types, individual building types specification and performance will vary.

Table 2: Estimated regulated carbon emissions*

	Carbon emissions (tonnes CO ₂ /yr)
Part L 2013	268
Proposed Buildings (Expected FHS performance)	67
Emissions reduction	201
% reduction	75%

** Based on indicative carbon calculations at Outline stage.
More detailed energy modelling will be completed in the case that the application progresses to reserved matters stage.*

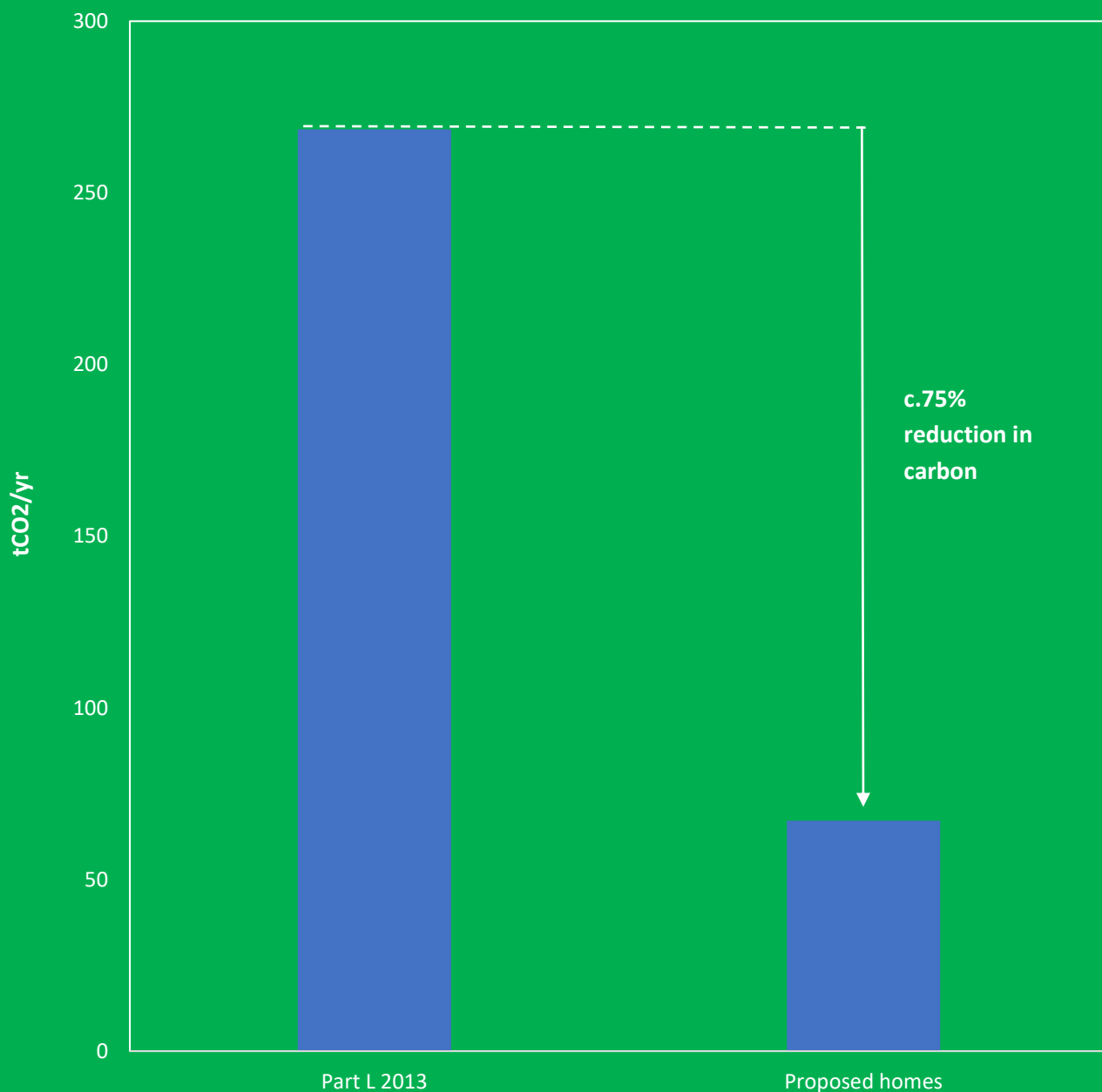
Figure 4 shows the estimated regulated emissions compared to homes built to Part L 2013, and the proposed 2025 FHS standard to deliver **Zero Carbon Ready** homes.

The final specification of homes, including details of fabric specification, energy efficiency measures and low carbon renewable energy installed will be subject to the detailed design of individual homes. The proposed multifunctional community space will achieve the FBS 2025, the final specification of the building will be subject to the detailed design development.

What are the carbon emissions of Land south of Mortimers Lane?

The graph below shows the estimated carbon emissions of the proposed new homes at Land south of Mortimers Lane demonstrating how homes will exceed the requirements of Part L 2013.

Figure 4: Estimated carbon emissions of the proposed development compared to Part L 2013 requirements



3.6.2 Climate Change Adaptation

The UKCP18 projections demonstrate that over time the UK will experience increased summer and winter temperatures with significantly increased maximum temperatures, reduced summer rainfall, increased winter rainfall and an increase in extreme weather events.

The UK Climate Change Risk Assessment updated in 2017 identifies key risks associated with the effects of climate change and in relation to the built environment and the proposed development these include reduce summer water availability, increased winter rainfall and increased summer temperatures.

This section identifies key measures which will be incorporated into the design of new buildings and the proposed development to adapt to climate change.

Water Efficiency

Potable water is an increasingly important natural resource and with the majority of the UK classed as being in an area of moderate or severe water stress the conservation of water is becoming a more significant sustainability metric. Southern Water, the supplier to the Eastleigh area, is categorised as being in 'serious water stress'.

The new development will aim to reduce water consumption through a range of water efficiency measures such as:

- Dual flush WCs;
- Water meters;
- Low flow fittings; and
- Where appropriate, water efficient equipment.

Through the use of these measures new homes will target a water consumption rate of 110l/p/d, beyond the baseline requirement of 125l/p/d and significantly below the UK average of 150l/p/d.

The SPD guidance under **ESD 3 External Water Consumption** requests that external water use is provided via rainwater. The detailed landscaping design has not yet been finalised, however it is likely the planting will not require additional watering.

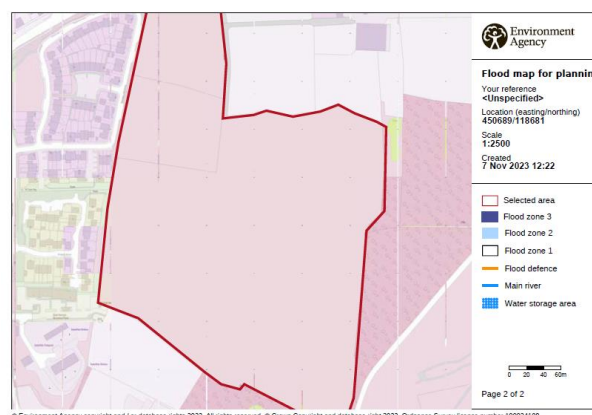
The use of water butts for dwellings will be investigated as part of detailed design development.

Flood Risk and Drainage

A Flood Risk Assessment (FRA) has been prepared by Glanville, concluding that the proposed development is not at risk of flooding, can be developed safely without increasing flood risk elsewhere, and that the development proposals comply with relevant planning policy concerning flood risk and drainage.

The entire site is located within Flood Zone 1, beyond the limits of the 1 in 1,000 fluvial flood event (<0.1%), according to the Environment Agency's (EA) Flood Map (**Figure 4**). The FRA has also indicated that the flood risk from surface water, reservoir, sewer and groundwater are all negligible to very low.

Figure 4: Flood Levels Map (Source: EA)



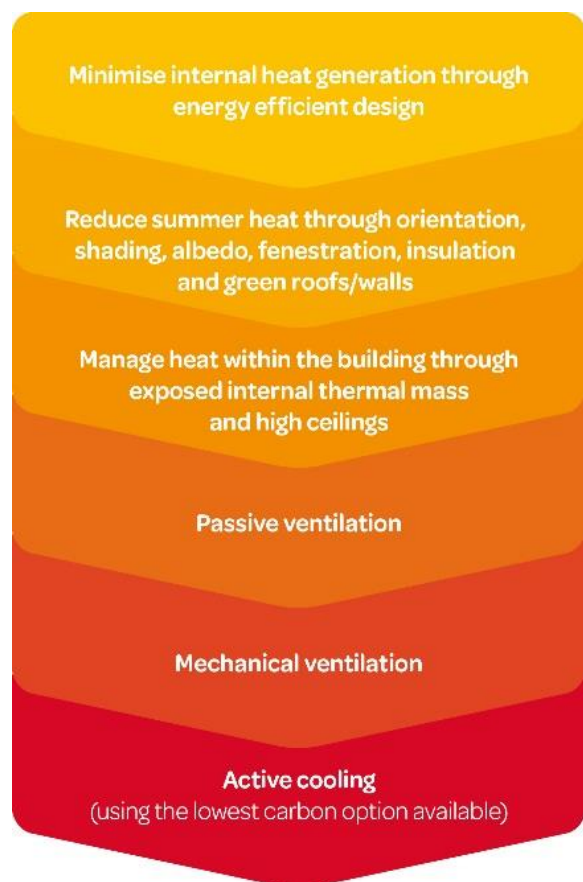
In line with Policy DM6 and SDP guidance ESD 4, the proposed strategy strives to utilise sustainable drainage techniques in accordance with guidance described in CIRIA document C753 'The SuDS Manual' (2015) to accommodate run-off from all rainfall events up to and including the 1 in 100-year event, with a 45% allowance for climate change in accordance with the latest guidance for the Hampshire Avon Management Catchment.

Due to the site's impervious geology and soils, the infiltration drainage is not deemed practical at the site. As a result, an outfall to the existing network of

drainage ditches and streams surrounding the site is the preferred option in line with the drainage hierarchy.

The site layout, developed in conjunction with the ecologist and landscape architect, incorporates a green corridor with a wide swale conveying flows towards the lowest part of the site. An attenuation basin with a swale/low flow channel is proposed into the low area at the northeast corner, along with a large pond in the southeast corner of the site.

Figure 5: Cooling Hierarchy



Further information on the sites flood risk and the proposed surface water management system can be viewed in the accompanying FRA.

Overheating

With increasing summer temperatures there is an increasing risk of overheating in buildings which could adversely affect building occupants and users.

In line with **ESD 5 Passive Solar Heat Gain** The development will be designed in accordance with the cooling hierarchy, as shown in **Figure 5**, which

aims to reduce any potential overheating in buildings through minimising heat generation first, followed by the consideration of passive cooling measures, and finally the use of active cooling using the lowest carbon option.

Incorporating the cooling hierarchy into the design process means buildings will be better equipped to manage their cooling needs and to adapt to and mitigate climate change, while also minimising the carbon emissions associated with reducing overheating risk.

An Overheating Assessment in line with the requirements of Part O of the Building Regulations will be undertaken as part of the ongoing detailed design of individual homes.

3.7 Conserving and Enhancing the Natural Environment

The proposed development will incorporate measures to support and enhance the environment through consideration of the existing site ecology, including measures to mitigate any impacts, and enhance site biodiversity, as well as incorporate measures to reduce pollution from the site.

3.7.1 Ecology

An Ecological Appraisal has been prepared by the Environmental Dimension Partnership Ltd to establish the ecological status of the site and the impact of the proposed development at Land south of Mortimers Lane.

Current Site Conditions

The Site measures 11.06 Ha, bordered to the north by Mortimers Lane, with existing development to the immediate west and East Horton Golf Club to the east. A small parcel of woodland sits on the southern boundary of the Site, beyond which sits agricultural land.

The Site comprises improved grassland fields which are bounded by a hedgerow, treelines and woodland edge habitat.

The appraisal was informed by Phase 1 and 2 Habitat Surveys. The site is not within any

international or national statutory designated area. Only one non-statutory designated site is adjacent to southern boundary. The habitats on-site are generally of less than local or negligible intrinsic importance, except for the hedgerow, which is considered to be of local importance. The site has the potential to support bats, badger, hazel dormouse, breeding and nesting birds, etc.

Mitigation and Enhancement Measures

To protect the site habitats and species, and wider area, a range of mitigation and enhancement measures have been proposed and recommended.

Mitigation Measures; The mitigation measures can be summarised as follows:

- Retention of habitats with appropriate development buffers;
- Construction Environmental Management Plan (CEMP) to set out how construction will minimise impact on site habitats and species considering factors such as working hours, minimising noise and vibration, surface water management, and sensitive lighting.
- Production of an Arboricultural Method Statement (AMS) and Ecological Construction Method Statement (ECMS). Measures as part of the statement will include:
 - Pre-commencement checks/surveys;
 - Avoidance of trapping animals during excavations;
 - Timings to avoid sensitive periods such as bird breeding seasons;
 - Phased vegetation clearance;
 - Maintaining dispersal routes;
 - The works will be supervised by an Ecological Clerk of Works (ECOW).
- Landscape and Ecological Management Plan (LEMP) which will set out the immediate and long-term commitments to manage the planting, protection and enhancement of biodiversity in and around the development site.

Enhancement Measures; The enhancement measures can be summarised as follows:

- Enhancement and creation of habitat features including bat boxes/bricks, bird boxes and reptile hibernacula;
- Maintain or enhance habitat connectivity including forming green corridor along the boundary;
- Lighting strategy to avoid disturbance of nocturnal species.
- Creation of areas of neutral wildflower rich grassland
- Sustainable urban drainage features designed to maximise biodiversity benefits, through sensitive design and planting with diverse mix of native aquatic and semi-aquatic flora;
- Street trees to be planted throughout the road network and within the Public Open Space.

It is noted that **SPD Guidance ESD 8 Trees** requests that street trees are planted 1 tree per 30 linear metres of street. Details regarding the number, locations and/or specification of street trees is at the outline planning stage.

Biodiversity net gain calculations will be undertaken at detailed design. A minimum of 10% net gain will be targeted directly on site, in line with the ecological hierarchy. Initial net gain calculations indicate that an 11.36% in habitat units, 67.79% in hedgerow units and 15% in watercourse units can be achieved.

3.7.2 Pollution

The proposed development will aim to minimise any negative impacts on the natural environment considering the impacts of water use, materials, and air quality.

Water – Throughout construction water quality will be maintained by the following measures:

- Reduce erosion and run-off by minimising land disturbance and leaving vegetation cover where possible;

- Cover skips and trucks loaded with construction materials and continually damp down with low levels of water;
- Use non-toxic paints, solvents and other hazardous materials wherever possible; and
- Segregate, tightly cover and monitor toxic substances to prevent spills and possible site contamination.

The construction works will be carried out in such a manner as to avoid adverse effects on the brook and downstream habitats in accordance with Environment Agency Pollution Prevention Guidance (PPG) and as detailed in the CEMP.

To improve water quality during the occupation of homes the surface water drainage strategy includes consideration to measures to minimise pollution run-off.

Air Quality – An air quality assessment has been undertaken by Create Consulting Engineers Ltd, concluding that construction phase of the development poses a medium risk of dust impacts from earthworks, construction, and trackout activities, and a low risk from demolition activities.

However, mitigation measures will be implemented to minimize dust emissions and their potential impact on local air quality, including dust management plans, site management practices, and specific actions to control dust from vehicle movements and construction activities. The aforementioned measures to encourage sustainable travel through the travel plan, e.g. EV charging, encouraging cycling, would help to limit any increase in air pollution resulting from the occupation of the development.

Sustainable Materials – Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming will not be used. Natural insulation materials such as mineral wool, rock wool or cork board will be considered as they are amongst the lowest Global Warming Potential (GWP) rating.

To further enhance the development a number of additional measures will be considered during the detailed design of new homes to minimise pollution, including:

- The use of key internal finishes and fittings which comply with best practice emissions levels of Volatile Organic Compounds (VOCs) and other substances; and
- Specification of low Global Warming Potential (GWP) and zero Ozone Depleting Potential (ODP) insulation materials.

Additionally, the development will aim to make use of local and sustainability sourced materials, such as use of FSC or equivalent timber.

3.8 Waste Management

Construction Waste Management

Prior to the construction phase a Construction Environmental Management Plan (CEMP) will be developed to ensure the use of measures to minimise waste during the construction phases of the development, including the use of a scheme for recycling/disposing of waste arising from demolition and construction works.

The reduction, reuse and recycling of construction waste is to be prioritised through measures such as avoidance of over-ordering, supervision of deliveries, use of secure materials storage facilities and reuse of materials onsite where feasible.

In addition, the development will be registered with the Considerate Constructors Scheme and achieve certification against the Code of Considerate Practice.

Operational Waste Management

In accordance with the principles of the waste hierarchy the development will make provision for the storage of non-recyclable waste and recyclable waste including dedicated storage for waste in new homes to encourage residents to recycle waste materials.

Full consideration will be given to the Council's waste management infrastructure and services to

ensure that the occupiers have the necessary infrastructure to participate in any kerbside recycling services.

4. Conclusion

This Sustainability Statement has been prepared to demonstrate how the proposed development at Land south of Mortimers Lane responds positively to national and local sustainable policy requirements.

The key sustainability measures incorporated at this stage and further measures to be considered during the detailed design of the proposed development have been set out within previous chapters and are summarised below.

Social and Economic Benefits

Social and Economic Benefits – The development aims to provide a range of social and economic benefits to both new and existing residents, through:

- Provision of up to 245 new homes and a multi-functional space providing opportunities for local people during both construction and operation of the development;
- A development in a sustainable location with a wide range of services and amenities, including health services and recreational opportunities within walking distance of the site;
- A development designed with the health and wellbeing of future occupants integral to the design, including access to extensive green open space and recreational opportunities within the site;
- Homes designed to create healthy living environments which are flexible for the future;
- Close access to cycling and walking routes.

Environmental Protection and Enhancement – Through a range of design measures the development aims to protect and enhance the local environment, including:

- Buildings which will be designed to make use of sustainable materials to reduce environmental impacts of construction;
- Development designed to prioritise sustainable and active modes of travel including walking and cycling through creation of cycle routes and EV charging points;
- Provision of measures to protect on-site ecology and enhancement measures to achieve a net gain in biodiversity which also helps reduce the impact of climate change on site habitats. These include enhanced native planting and creation of a pond;
- Provision of measures through construction and operation of the site to reduce pollution, minimise waste and encourage recycling.

Mitigating and Adapting to Climate Change – The development will incorporate a range of measures to reduce carbon emissions, mitigating the effects of climate change, and adaptation measures to ensure the long-term resilience of the development to the effects of climate change. Measures include:

- Homes and multifunctional space designed to reduce carbon emissions in accordance with the FHS and FHS, through the use of energy hierarchy, using a fabric first approach to design to reduce energy demand, helping mitigate the effects of climate change;
- Specification of water efficient fittings to reduce water consumption to 110 litres per person per day in line with the government's higher water efficiency standard;
- Proposed development in Flood Zone 1 and provision of a surface water drainage system designed to accommodate climate change;
- Homes designed to take into account increasing annual temperatures set out in the

UKCP18 climate projections to minimise the risk of overheating.

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