

# Sustainability Statement

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Land South of Banbury Rise  
Bloor Homes

July 2022

## Executive Summary

Savills Earth have been appointed by Bloor Homes to prepare a Sustainability Statement to support the outline planning application for the proposed development at the Land South of Banbury Rise. This Statement details the sustainable design features of the development and demonstrates how they relate to applicable planning policy guidance as listed below:

- National Planning Policy Framework (NPPF) (2021).
- Adopted Cherwell Local Plan 2011-2031 (July 2015).

The proposed development aims to deliver up to 250 homes at the Land South of Banbury Rise in Banbury in Oxfordshire. The site represents a logical and contained extension to the existing urban area and provides new housing which is much needed in the context of a shortage of housing supply. The development consists of up to 250 homes with up to 30% affordable housing, public open space, landscaping and associated supporting infrastructure. It aims to deliver high quality, sustainable buildings that positively contributes to the development of the community.

This document summarises key design aspects that demonstrate the proposed development's commitment and strategy to meet and exceed the sustainability and energy efficiency standards set out in relevant local and national planning policies.

Sustainability is a core consideration of the application and has been incorporated from the project outset. Materials have been chosen for their high-quality, durability, recyclability and low manufacturing environmental impact. The use of passive measures, energy recovery systems and careful building massing and orientation has been developed to reduce energy use and provide a high-quality internal environment for future residents. On-site electricity generation through PVs (photovoltaic panels) will reduce the reliance on the grid and generate zero carbon electricity. Sustainable drainage systems and reduction in water consumption through water efficient fixtures will help reduce reliance on natural resources and will increase the resilience of the development.

Part L of the Building Regulations has been recently updated to the Part L 2021 version, which requires a CO<sub>2</sub> emissions reduction of 31% beyond the previous Part L 2013 version.

The proposed development has been designed to be compliant with the recently updated 2021 iteration of Part L and achieves a 34% reduction in CO<sub>2</sub> emissions over the previous 2013 iteration of Part L. This represents a 33.5% energy demand reduction. The energy and carbon calculations have been based on SAP2012 assessments, using the updated CO<sub>2</sub> conversion factors from the approved DEFRA Fuel Factors 2021 DECC conversion.

In summary, the proposed development:

- Will provide much-needed, well-designed, high-quality housing which promotes high levels of sustainability and fits in well with its surroundings.
- Will minimise energy demand through a fabric first approach, including the use of low U-values, low air permeability and low thermal bridging to reduce heat loss.
- Will maximise energy efficiency through the extensive use of heat recovery systems such as Waste Water Heat Recovery and Flue Gas Heat Recovery as well as low energy lighting and advanced heating controls.
- Will maximise passive measures such as solar lighting and natural ventilation and maximise opportunities for cooling and shading.
- Will incorporate the use of recycled and energy efficient materials.
- Will aim to utilise approximately 300kWp rooftop photovoltaic panels to generate renewable electricity onsite.
- Will have a minimal impact on the risk of surface water flooding onsite.

- Will minimise water consumption to less than 110 litres/person/day
- Will promote sustainable transport means.
- Will incorporate measures to improve site biodiversity.

Overall, the proposals constitute sustainable development in accordance with national and local policy requirements and will provide a development that seeks to promote these principles in operation.

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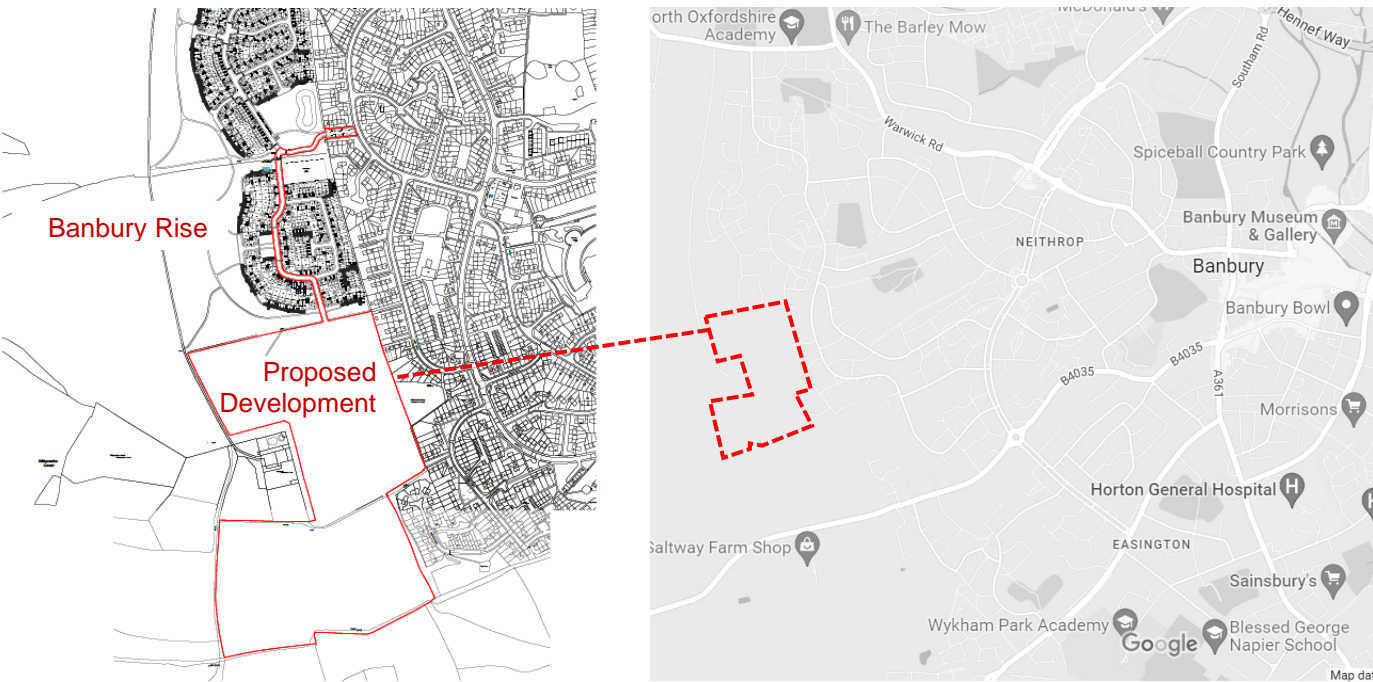
# 1. Introduction

Savills Earth has been appointed by Bloor Homes to prepare a Sustainability Statement to support the outline planning application for the development of the Land South of Banbury Rise, Banbury in the district of Cherwell in Oxfordshire.

## 1.1 Site location and proposed development

The proposed development consists of up to 250 new dwellings and is located in Banbury, Oxfordshire. The development is located to the south of an existing residential development, Banbury Rise, also by Bloor Homes. The proposed new development consists of a mix of 2, 3 and 4 bed homes, public open space, landscaping and associated supporting infrastructure. Up to 30% of the dwellings will be affordable housing.

The development benefits from close proximity to the Banbury historic centre as well as access to green space and the Oxfordshire countryside. The dwellings have been designed to include sustainability and energy efficiency principles whilst ensuring high quality of design and materials.



**Figure 1.1 – Location plan of the proposed development site (left), Development location in relation to Banbury town (right)**

In line with Cherwell District Council's requirements, the proposed development will aim to deliver the following benefits:

- Minimise energy demand and energy loss.
- Maximise daylight and natural ventilation.
- Maximise resource efficiency.
- Incorporate the use of recycled and energy efficient materials.
- Encourage the use of locally sourced building materials.
- Reduce waste and pollution and make adequate provision for the recycling of waste.
- Make use of sustainable drainage methods

## 1.2 Report objectives

The objectives of this report are to:

- Demonstrate how the proposed development will meet the sustainability standards set by the Cherwell District Council.
- Summarise the Energy Strategy Statement carried out for the scheme by Briary Energy, detailing the commitments towards energy and carbon reduction made by the client and the design team.
- Identify other environmental, economic and social sustainability issues that have been incorporated into the project.

## 2. Planning Context

### 2.1 National Planning Policy Framework (2021)

The National Planning Policy Framework 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. At the heart of the NPPF is a presumption in favour of sustainable development. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives).

**An economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types 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** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being.

**An environmental objective** – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating adapting to climate change, including moving to a low carbon economy.

This sustainability statement has been developed in line with the NPPF and alongside the suite of documents submitted as part of this application fulfils the requirements.

### 2.2 The Cherwell Local Plan 2011- 2031 (2015, Under Review)

According to the Cherwell Local Plan, Banbury has been identified as one of the most sustainable locations for growth in the District. The proposed development constitutes a 'major residential development' (over 10 dwellings) and is therefore subject to the policies of Cherwell District's Local Plan 2011-2031. The Local Plan is currently under review to make sure policies are kept up to date and reflect the future needs of Cherwell up to 2040. The new plan will be called Cherwell Local Plan 2040. The key adopted policies from the current Cherwell Local Plan 2011-2031 (2015) in regard to energy and sustainability that drive the design of the proposed development are as follows.

#### Policies for Ensuring Sustainable Development

##### Policies ESD 1-ESD 7: Climate Change, Energy, Sustainable Construction and Flooding

Development proposals will be supported where their design allows for:

- Mitigating and Adapting to Climate Change (ESD1). Demonstrating measures taken to mitigate the impact of development within the District on climate change and to make the proposed development more resilient to climate change.
- Energy Hierarchy and Allowable Solutions (ESD2). An Energy Statement is required to demonstrate how the energy hierarchy has been applied and how carbon emission reductions have been achieved through a range of 'allowable solutions'.
- Sustainable Construction (ESD3). Incorporation of sustainable design and construction technology, including measures for energy efficiency, reduced water consumption, passive solar lighting and natural ventilation, responsible sourcing of materials, sustainable drainage methods and reducing the impact on the external environment.

- Decentralised Energy Systems (ESD4): Feasibility assessment for District Heating (DH)/ Combined Heat and Power (CHP) (required for all residential developments over 100 dwellings).
- Renewable Energy (ESD5). Feasibility assessment for renewable and low carbon energy provision (required for all residential developments over 100 dwellings).
- Sustainable Flood Risk Management (ESD6). Site specific flood risk assessments for development proposals located in flood zones 2 and 3, or zone 1 if the development is of 1 hectare or more.
- Sustainable Drainage System (SuDS) (ESD7): Developments are required to use sustainable drainage systems for the management of surface water run-off.

##### Policies ESD 8 – ESD 13: Water resources, Ecology and Biodiversity, Landscape

- Water Resources (ESD8): Maintaining water quality, ensuring adequate water resources and promoting sustainability in water use.
- Protection and Enhancement of Biodiversity and the Natural Environment (ESD10).
- Conservation Target Areas (ESD11).
- Local Landscape Protection and Enhancement (ESD13).

#### Other relevant policies

The Local Plan also includes:

- Section C3: Banbury which sets out the vision for the sustainable development of Banbury.
- Policy ESD 17: Green Infrastructure: Protecting and enhancing existing forming part of the green infrastructure network. Improving sustainable connectivity between sites, adapting to climate change, SuDS, biodiversity and the natural environment. Ensuring that green infrastructure network considerations are integral to the planning of new development.
- Policy SLE4: Improved Infrastructure and Connections: Transport improvement and implementation of key connections to support modal shift and support more sustainable locations for employment and housing growth.
- Policy BSC7: Securing Health and Wellbeing: Providing safe and accessible environments taking into account the affect that planning decisions can have on noise and air quality, travel, access to services, climate change and social networks.
- Policy BSC10: Open Space, Outdoor Sport and Recreation Provision.
- Oxfordshire Local Transport Strategy 2015-2031 (LTP 4).
- Adopted Banbury Vision and Masterplan SPD (2016).

### 2.3 Building Regulations Approved Document Part L

Part L of the Building Regulations is the mechanism by which the Government is driving reductions in the regulated CO<sub>2</sub> emissions from new buildings.

The current version is Part L1 2021 which came into effect on 15 June 2022 in England. It aims to provide a framework for more sustainable development by introducing more stringent performance targets. A typical home built to the Part L 2021 version will have 31% less CO<sub>2</sub> emissions than one built to the previous version (Part L 2013).



The current document has key criteria which must be satisfied as follows:

- Energy performance of dwellings calculations: achieve the Target Emission Rate (TER), the Target Fabric Energy Efficiency Rate (TFEER) and the newly introduced Target Primary Energy Rate (TPER).
- Consideration of high-efficiency alternative systems: feasibility analysis of installing high-efficiency alternative systems such as a decentralised energy supply system based on energy from renewable sources, cogeneration, district heating/cooling and heat pumps.
- Limiting heat gains and losses: limiting standards on building fabric such as u-values.
- Fixed building services energy efficiency and controls and on-site generation of electricity: system specific minimum efficiencies and design guidance, including BMS and on-site electricity generation and storage.
- Pressure testing: minimum air permeability standard and demonstrating compliance.
- Commissioning: system specific guidance for commissioning.
- Providing information: operating and maintenance instructions for the new dwellings.

### 3. Energy

Bloor Homes has instructed Briary Energy to prepare an Energy Strategy Statement, which examines the feasibility of suitable Low and Zero Carbon (LZC) sources, high-efficiency alternative systems, and low carbon energy efficiency measures.

The Land South of Banbury Rise development will be developed with the aim of reducing annual energy consumption, whilst providing energy in the most environmentally friendly way to reduce the annual CO<sub>2</sub> footprint, in line with Cherwell District Council Local Plan 2011-2031, Policy ESD 3 - Sustainable Construction.

The 2013 iteration of Part L of the Building Regulations were superseded by the 2021 iteration in June 2022. This requires a 31% reduction in CO<sub>2</sub> emissions over the 2013 standard. This site will therefore be under the jurisdiction of the new building regulations and the Briary Energy report outlines the strategy which will achieve the new building regulations target and in turn satisfy relevant planning policy.

The strategy calculates the total energy demand and associated CO<sub>2</sub> emissions arising from the development and demonstrates that a 34% CO<sub>2</sub> emissions reduction can be achieved through a variety of measures, including a 300kWp Solar PV, Flue Gas Heat Recovery Systems (FGHRS), Waste Water Heat Recovery and improved fabric efficiency measures.

#### 3.1 The Energy Hierarchy

This strategy has been developed using established energy hierarchy methodology. It has three stages of priority, seeking to reduce energy use through the cleanest possible solutions.

- Be Lean - Reducing energy needs through improved design and construction.
- Be Clean - Supply energy efficiently through the use of decentralised energy where feasible.
- Be Green - Further reduce CO<sub>2</sub> emissions through the use of on-site renewable sources, where practical.



Figure 3.1 – Energy Hierarchy

As this hierarchy demonstrates, designing out energy use in the first instance is weighted more favourably than the generation of low-carbon or renewable energy to offset unnecessary demand. Applied to the development of new housing, this approach is referred to as ‘fabric first’ and concentrates efforts on improving U-values, reducing thermal bridging, improving airtightness and installing energy efficient ventilation and heating services.

#### 3.2 Building Fabric and Systems

A baseline total energy demand has been established for the development using approved SAP 2012 software. Reductions in demand due to energy conservation measures are considered and form the basis of the energy strategy which follows. Savings are measured in terms of a reduction in CO<sub>2</sub> emissions and energy (kWh), which are calculated from their association with a particular fuel source. CO<sub>2</sub> conversion factors have been taken from the approved DEFRA Fuel Factors 2021 DECC conversion.

The figures presented below are indicative and reflect an estimate of energy and carbon reductions calculated at this stage. As the design develops and more information becomes available, the exact % of reductions will be confirmed during Reserved Matters Applications.

Predicted Carbon Emissions: Part L1A (2021) TER, Before Fabric Improvements					
	Space Heating Demand	Hot Water Demand	Energy from Pumps & Fans	Energy from Lighting	Totals
Part L1A Plots (kWh/annum)	994,799	597,898	18,750	100,789	1,712,235
CO <sub>2</sub> Associated with total Energy Demand (kg/annum)	182,207	109,511	3,981	21,401	317,100

Table 3.1 – Predicted energy demand and carbon emissions before fabric improvements

Predicted Carbon Emissions: Part L1A (2021) DER, After Improved Fabric, Controls and Heating System					
	Space Heating Demand	Hot Water Demand	Energy from Pumps & Fans	Energy from Lighting	Totals
Part L1A Plots (kWh/annum)	902,155	451,577	32,957	100,789	1,487,477
CO <sub>2</sub> Associated with total Energy Demand (kg/annum)	165,239	82,711	6,998	21,401	276,348

Table 3.2 – Predicted energy demand and carbon emissions after fabric improvements, controls and heating system

The total energy demand for the proposed development has been calculated to be 1,487,477 kWh per annum. This represents an initial saving of 13% over the figure after fabric and other improvements.

3.3 Renewable Energy Technology

The below table summarises the proposed LZC technologies that will be applied to the site, following the assessment of viability of each technology. Note that this is an indicative list and will be developed further as the design develops and confirmed during Reserved Matters Applications.

Energy strategies considered	Number of dwellings applied to	Energy Saved (%)	Carbon Saved (%)	Proposed
Solar hot water	0	0	0	No
Solar Photovoltaic	200	13.3%	15.3%	Yes
Wind Turbines	0	0	0	No
Air Source Heat Pumps	0	0	0	No
Ground Source Heat Pumps	0	0	0	No
Flue Gas Heat Recovery	85	0.6%	0.6%	Yes
Waste Water Heat Recovery	250	7.1%	6.1%	Yes

Table 3.3 – Energy strategies considered as part of Briary Energy’s Assessment

3.4 Energy and Carbon Reduction

Applying the energy hierarchy approach through a combination of the fabric specification proposed, detailing to avoid thermal bridging, reducing air leakage and employing passive and active design measures, the dwellings will secure a saving in CO<sub>2</sub> emissions of 40,752 kgCO<sub>2</sub>/year, equating to an energy demand reduction of 224,758 kWh/year.

The proposed strategy will provide a 34.21% carbon reduction over a development built to comply with the CO<sub>2</sub> targets of the 2013 Part L1A, which equates to a compliant development under the current Part L1 2021 according to the Energy Statement. This also represents a 33.53% energy demand reduction.

The Energy Strategy Statement prepared by Briary Energy contains further details of the proposed fabric and systems strategy to be adopted.



## 4. Sustainable Development & Climate Change

Action to address climate change falls into two categories: mitigation and adaptation. Mitigation measures are designed to reduce greenhouse gas emissions to slow down or stop climate change, whilst adaptation measures are designed to adjust society and buildings to cope with climate change. The proposed development incorporates the following climate change mitigation and adaptation features in line with Policy ESD1 Mitigating and Adapting to Climate Change of the Adopted Cherwell Local Plan (July 2015).

### 4.1 Climate Change Mitigation

The proposed development will accord with the latest Building Regulations requirements to provide a high-quality sustainable design. The following sustainable measures will be considered:

- Improved energy efficiency through careful building siting, design and orientation.
- PV (Photovoltaic) panels.
- Sustainable drainage measures.
- Fabric efficiency in the design of buildings.
- Use of building materials capable of being recycled.
- Construction waste reduction and recycling.
- Reduction in water usage.

### 4.2 Climate Change Adaptation

#### Adapting to hotter, drier summers

Alongside energy conservation and carbon emission savings, the energy strategy of the scheme will endeavour to include measures to adapt to the effects of climate change. The designs will where possible allow for passive solar gain and thermal comfort with dwellings constructed utilising increased standards of building fabric insulation and other materials to reduce energy and resource requirements, where able, materials will be obtained from renewable and sustainable sources.

Passive solar gain can enhance the energy and environmental performance of dwellings. Orientating streets in an east-west direction can increase solar access to dwellings and gardens, whilst avoiding overshadowing from adjacent dwellings. Dwellings/areas of the development that potentially could provide, by way of example, passive solar gain or the future installation of solar panels, i.e., are orientated within 30 degrees of south. The final location and numbers of dwellings benefiting from solar gain will be set out as the design develops.

Trees and vegetation will provide shaded areas improving occupant comfort which can also help to manage ground moisture levels to help prevent damage occurring to the building via soil shrinkage.

As the design develops, alongside well-designed public spaces the proposed water management and planting strategies will offer the opportunity to enhance and optimise the development proposals, providing resilience to climate change and supporting biodiversity.

### 4.3 Materials and Waste Recycling

Materials selected for construction, including hard and soft landscaping elements, should be carefully chosen to ensure that they are high-quality, durable and that 'whole life costs' are manageable. Sustainable choices will reduce initial manufacturing environmental impacts, long-term maintenance costs and waste from construction, whilst maximising resilience and buildings lifespans.

Refer to the Design and Access Statement (DAS) prepared by Pegasus Group for further details.

## 5. Flood Risk, Drainage & Water

In line with Policy ESD6 Sustainable Flood Risk Management, ESD7 Sustainable Drainage Systems (SuDS) and ESD8 Water Resources, maintaining water quality, ensuring adequate water resources and promoting sustainability in water use consideration has been made with regards to the conservation of water resources through water efficiency measures, in addition to the risk posed by flooding. A Flood Risk Assessment and a Sustainable Drainage Statement have been prepared by BWB on behalf of Bloor Homes outlining risks and mitigation measures. A summary of these reports is outlined below:

### 5.1 Flood Risk Assessment

The Flood Risk Assessment (FRA) has been prepared in accordance with the requirements set out in the NPPF and the associated Planning Practice Guidance. The report demonstrates that the proposed development is not at significant risk of flooding, subject to the recommended flood mitigation strategies being implemented.

The site is shown to be located within Flood Zone 1 which is land defined as having a low probability of flooding from rivers or the sea. The site is predominately at a very low risk of pluvial flooding. Flood risk posed to the site by canals, reservoirs, sewers and groundwater is considered to be low.

The proposed development will increase the area of impermeable surfaces leading to potential increase in surface water runoff. Further information on the drainage approach has been provided within the accompanying Sustainable Drainage Statement.



Figure 5.1 – Layout plan showing preliminary drainage locations and indicative development parcels

Flood risk mitigation measures proposed for this development are:

- Development levels: Where possible, development levels to be raised 150mm above immediately surrounding ground levels to mitigate the residual risk of flooding from groundwater, surface water and sewer flooding. Also, ground levels should be profiled to encourage pluvial runoff and overland flows away from the built development and towards the nearest drainage point.
- Safe Access and Egress: As it is located in Flood Zone 1, and at low risk from other sources of flooding, safe access and egress is available via Edinburgh Way.
- Surface Water Drainage: To mitigate the development's impact on the current runoff regime it is proposed to incorporate surface water attenuation and storage as part of the development proposals. The development will continue to infiltrate surface water storage in the form of infiltration basins with capacity for the 1 in 100-year storm with a 40% allowance for climate change. The development should be designed with exceedance in mind and the road network used to convey excess overland flows towards the attenuation points.
- Foul Water Drainage: It is proposed to drain used water from the development separately to surface water.

In compliance with the requirements of NPPF, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider catchment area as a result of suitable management of surface water runoff discharging from the site.

Refer to the Flood Risk Assessment report prepared by BWB for further details.

### 5.2 Sustainable Drainage

After considering the site constraints and development aspirations, it is suggested that the site is split up into three sub-catchments which will each be drained by an infiltration basin. The necessary surface water storage is located at the lowest elevation of the site, between the proposed development and the outfall location. A site investigation has shown that there are areas of the site where an infiltration solution is considered to be feasible. It is therefore proposed to manage surface water runoff with the use of soakaways.

#### Attenuated Storage

Sufficient attenuated storage is required to be provided in order to balance the excess volume in a safe manner within the site, in line with the measured site-specific infiltration rates. Sufficient storage for events up to the 1 in 100-year storm with a 40% allowance for climate change should be provided, and a 10% allowance should be applied to the current proposed development area to allow for urban creep over the lifetime of the development, in accordance with the local SuDS guidance.

Due to the levels within the northern most corner of the site, based on the current masterplan, it will be necessary to deliver land raising to ensure this area can be drained by gravity appropriately, whilst also providing an adequate level of cover to the pipe network.

#### Sustainable Drainage Systems

It is recommended that opportunities to provide multiple stages of treatment within the development are maximised. The arrangement of SuDS within a management train, where at least two stages of treatment are provided is recommended. The use of SuDS features such as permeable pavements, tree pits and swales should be explored as the proposed layout progresses. These will provide a level of treatment to flows at source. Further stages of treatment will be provided within the infiltration basins themselves which can be enhanced with additional features such as sediment forebays. Further means of providing additional amenity benefits should be explored, such as planting with local flower species.

**Residual Risk and Designing for Exceedance**

The proposed freeboard will provide an element of additional storage above the 1 in 100+40% modelled volume. In the event that the capacity of the attenuated storage is exceeded, ground levels should be profiled to direct overland flows towards lower vulnerability areas of the development. It is recommended that the final layout uses the proposed road infrastructure to provide drainage exceedance (overland flood flow) routes through the development and towards the infiltration basins for events in excess of the capacity of the drainage system.

Refer to the Sustainable Drainage Statement prepared by BWB for further details on the proposed measures.

**5.3 Water efficiency**

In line with Policy ESD3 Sustainable Construction of the Adopted Cherwell Local Plan 2011-2031, the new dwellings will achieve water use below 110 litres/person/day. As the design develops, this will be achieved through the specification of water efficient components.

**5.4 Non-potable water use**

As the design develops, alongside well-designed public spaces the proposed water management and planting strategies will offer the opportunity to enhance and optimise the development proposals, providing resilience to climate change and supporting biodiversity.

## 6. Pollution

The development will minimise its impact on noise, air and light pollution in line with Policy BSC7: Securing Health and Wellbeing of the Adopted Cherwell Local Plan 2011- 2031 (2015).

### 6.1 Air Quality Assessment

Consideration was given to the suitability of the site for the proposed residential use through a review of local air quality monitoring, management and emission sources. Local representative monitoring data in the vicinity of the site was below the relevant air quality objectives and the site is located away from AQMAs (Air Quality Management Areas) and major emission sources. It was therefore considered that the proposed development was suitable for the proposed residential use with regard to the current relevant air quality objectives.

A qualitative construction phase assessment was undertaken and measures were recommended for inclusion in a Dust Management Plan (DMP) to minimise emissions during construction activities. The mitigation measures relate to preparing and maintaining the site, monitoring, site management, operations, communication and sustainable travel. With the implementation of these mitigation measures the impact of construction phase dust emissions is considered to be 'not significant' in accordance with IAQM guidance.

A detailed road traffic emissions assessment was undertaken to consider the impact of development-generated road traffic on local air quality at identified existing receptor locations. Road traffic emissions were modelled using the dispersion model ADMS-Roads and concentrations of NO<sub>2</sub>, PM10 and PM2.5 were predicted at identified sensitive receptor locations. The modelling assessment was undertaken in accordance with Defra Local Air Quality Management Technical Guidance. The development was not predicted to result in any new exceedances of the relevant air quality objectives and the impact of the development on local air quality was predicted to be 'negligible' in accordance with IAQM and EPUK guidance.

Refer to the Air Quality Assessment report prepared by BWB for further details.

### 6.2 Noise Constraints Review

Based on a review of the surrounding noise sources, it is considered that the site is suitable for residential development from a noise perspective and there are no sources of noise that warrant further assessment. It is considered that future noise levels in habitable rooms and outdoor amenity areas should comfortably meet BS8233 criteria without the need for mitigation.

The potential noise constraints identified are listed below:

- The noise and vibration levels generated during the construction phase may cause an impact at nearby sensitive receptors. However, this is likely to be a short-term, temporary impact, and can be controlled through a suitably worded Construction Environmental Management Plan (CEMP).
- Road traffic noise on B4035 Broughton Road. This road is not included in the latest DEFRA Strategic Noise Mapping round (2017). Given this, and the significant setback distance between this noise source and the southern site boundary, road traffic noise should not pose a design challenge and no further assessment of this source is considered warranted.
- Wild Paws Secure Dog Field: There are no animal accommodation elements, and the field can only be booked for 20- or 50-minute sessions, so it is highly unlikely a vocal dog will be using the field for a prolonged period of time. Given these considerations, it is unlikely that the use of the field will pose a constraint to residential development.
- Development generated road traffic noise on the local area. Given the scale of potential residential development, and the proximity of the site to main roads, it is considered unlikely that there will be a significant percentage increase

in road traffic noise over an 18-hour daytime period (06:00 – 00:00) to generate a perceptible increase in noise on the surrounding roads.

Refer to the Noise Constraints Review report prepared by BWB for further details.

### 6.3 Minimising Light Pollution

External lighting will be controlled through a combination of movement sensors, time switches and daylight sensors to prevent operation during daylight hours. It will be concentrated in the appropriate areas, and upward lighting will be minimised, reducing unnecessary light pollution.

Refer to the Design and Access Statement (DAS) and the Lighting Scheme Principles document prepared by Pegasus Group for further details.



## 7. Landscape & Biodiversity

Ecology Solutions has undertaken an Ecological Appraisal of the site, to assess the current ecological value and make recommendations for the protection and enhancement of the site and on-site measures during construction, aimed at protecting features of ecological value in line with Policy ESD10 Protection and Enhancement of Biodiversity and the Natural Environment and ESD13 Local Landscape Protection and Enhancement.

FPCR Environment and Design Ltd have also prepared a landscape and visual appraisal (LVA) supporting the development's planning application.

### 7.1 Ecologist's Site Survey

A Survey was initially carried out in January 2022 in order to ascertain the general ecological value of the site and to identify the main habitats and associated plant species; the Survey consisted of a Desk Study, a Habitat Survey and a Faunal Survey. In addition, a bat activity survey was undertaken within the site in June 2022.

**Desk Study:** Background information on the site and surrounding area were obtained from Thames Valley Environmental Records Centre and the online Multi-Agency Geographic Information for the Countryside (MAGIC) database.

**Habitat Survey:** The site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified. The following main habitat/vegetation types were identified within the site:

- Arable and grassland margins.
- Hedgerows.
- Tree lines and tree belts.

**Faunal Survey:** Faunal activity, such as birds or mammals observed visually or by call during the course of the surveys, was recorded. Specific surveys have been undertaken with regard to badgers, bats, and reptiles. The following were noted:

- Badgers: A badger sett has been recorded on site.
- Birds: A number of common birds were recorded.
- Reptiles: No records of reptiles within the site.
- Invertebrates: No records of invertebrates within the site.
- Other species: There is no evidence from site surveys or desk studies to suggest that any other protected or notable species would be present within the site or affected by the proposed development.

**Bat Activity Survey:** Bat activity recorded during the survey was low, with the majority of registrations recorded from Common Pipistrelle and very low activity recorded from Soprano Pipistrelle, Noctule and Myotis

### 7.2 Ecologist's Recommendations

There are not considered to be any significant adverse effects on any statutory and non-statutory sites of nature conservation interest from the development proposals.

There are no statutory designated sites of nature conservation value within or immediately adjacent to the site. Additionally, there are no non-statutory designated sites of nature conservation value within or immediately adjacent to the site. As such, it is not considered that there would be any adverse impacts to these sites as a result of residential development at the site.

The majority of habitats within the site are considered to be of low ecological importance comprising arable land. The hedgerows and trees, however, are of some relatively greater ecological value in the context of the site.

The majority of the hedgerows within the site will be retained, with only small losses to hedgerows to facilitate the proposals. New areas of landscape planting within the development proposals will provide continued foraging and navigational opportunities for bats. It is recommended that any new planting consists of native species or species of known value to wildlife. The recommended erection of new bat boxes within the site will provide new roosting opportunities for bats.

A sensitive lighting regime, if necessary, post-development could ensure dark corridors are retained for bats, particularly along retained trees and hedgerows. The retention of the majority of hedgerows as well as the provision of new trees and landscape planting, will maintain opportunities for birds, while the erection of bird boxes within the site will also provide new nesting opportunities. Safeguards for nesting birds during vegetation clearance are recommended.

In conclusion, with the implementation of the safeguards and recommendations set out within this report, it is considered that the proposals accord with planning policy with regard to nature conservation at all administrative levels. It should also be noted that the development is committed to providing a Biodiversity Net Gain of at least 10%.

Refer to the Ecological Appraisal prepared by Ecology Solutions for further details.

### 7.3 Landscape and Visual Impact

A LVA has been undertaken by FPCR Environment and Design Ltd. The visual appraisal has been informed by site-based assessment and identifies the key visual receptors for the proposals. These include residents at the adjacent settlement edge and of Withycombe Farm, users of the surrounding public rights of way (PRoW), and residents and users of Crouch Hill to the south. Distant receptors with views towards the site include visitors to Broughton Park and from the direction of North Newington – residents and PRoW users. No views of the site were identified from the direction of the Drayton and Wroxton Conservation Areas to the northwest.





## 8. Transport

PJA has been appointed to prepare a Transport Assessment (TA) and a Travel Plan (TP) to accompany a planning application for the proposed development. The TA identifies the travel patterns for the development and examines the likely transport implications of this on the surrounding area in accordance with 'Travel Plan, Transport Assessments and Statements in decision making' (PPG, 2014). The accompanying TP will form the basis of a detailed TP, and its primary purpose is to identify opportunities for effective promotion and delivery of sustainable transport initiatives, reducing the number of single occupancy car trips to the site, in line with the Oxfordshire Local Transport Strategy 2015-2031 (LTP 4) and the Cherwell Local Plan.

### 8.1 Transport Assessment

#### 8.1.1 Existing conditions

A review of background conditions has found that:

- The site is accessible via a range of walking and cycling infrastructure.
- The site is accessible by various public transport nodes.
- A range of amenities are located within a short walking distance of the site.
- An analysis of collision data indicates that there are no existing highway safety concerns on the local highway network that would be exacerbated by the proposed development.

In more detail, the proposed development is located to the west of Banbury, and is bounded by residential dwellings to the east, the consented Banbury Rise residential development to the north (subject to a phased build out), open fields to the south and a farm track to the west which leads to Withycombe Farm. Various carriageway roads surround the site; Bretch Hill, Edinburgh Way, Stratford Road and Dover Avenue, with footway provision and street lighting.

Based on the findings of the Transport Assessment, the proposed development can be defined as being situated within a walkable neighbourhood with several key amenities (leisure clubs, educational facilities and food retail) are within what is considered an acceptable walking distance. The routes to nearby amenities are suitable for pedestrians, as within the existing highway network there is a network of footways with streetlighting and suitable crossing facilities where applicable. The National Cycle Route 5 (NCR) is located to the south-west of the proposed site. Access can be achieved via the public rights of way to the west of the site and Broughton Road. In addition, Banbury's Local Cycling and Walking Infrastructure Plan (LCWIP) is currently under development – this will provide further enhancements to the local area.

Several bus stops are located along Bretch Hill, and they benefit from a high-frequency service. The Chartered Institution of Highways & Transportation recommends that new developments are within 400m of bus stops. Therefore, these proposals support best current practice and guidance regarding bus stop accessibility.

The nearest railway station is Banbury railway station, which is approximately 3.4km away from the proposed development. The station benefits from a one train per hour service for Snow Hill and three trains per hour for journeys to London Marylebone. The station has 978 car parking spaces (14 accessible spaces) and 63 cycle parking spaces and it is an 11-minute journey by bicycle. Additionally, the railway station is directly accessible via the B5 bus route which is accessible from any bus stop along Bretch Hill.

Overall, the site is sustainably located and designed to accommodate both vehicular and non-vehicular movements. It has also been demonstrated that the proposed development would not have an unacceptable impact on highway safety or highway capacity which cannot be appropriately mitigated.

#### 8.1.2 Development proposals

It is proposed to develop the site for up to 250 dwellings. Since the application is outline in nature, the precise details of the site layout and parking arrangements are not yet defined; however, a set of principles following local and national guidance have been defined.

In terms of access, it is proposed vehicle access will be achieved through the consented Banbury Rise development which has two vehicular access points. Emergency access is proposed to be taken via Balmoral Avenue. This emergency access along with a further access point via Dover Avenue will provide additional access points for pedestrians and cyclists into the existing neighbourhood, providing convenient access to local facilities.

The network of Public Rights of Way (PRoW) surrounding the site are proposed to be enhanced (where it is within the ownership of the applicant) and connected to. The TRICS (system of trip generation analysis) database has been used to forecast the trip generation of the proposed development. In addition, as the design develops the requirement for any offsite improvements to mitigate any impacts which are identified to be unacceptable in NPPF terms will be considered. In early discussions with Oxfordshire County Council (OCC), it has been discussed that it is likely that any impacts identified would be mitigated through a contribution towards local schemes identified to improve conditions for and encourage increased uptake of active travel modes.

In detail, the proposals include:

- **Pedestrian and Cycle Access:** Pedestrian and cycle access will be ensured via the vehicular access points with further connections provided to Dover Avenue and Balmoral Avenue (via the proposed emergency access). Providing further pedestrian and cycle access through the eastern boundary ensures a more direct route to schools, bus stops and local convenience stores, which allows the development to seamlessly integrate into the adjacent neighbourhood. The site is also bound by various PRoWs. As part of the indicative site layout, it is proposed to provide a circular walking route within the site which would tie into and improve the existing public footpath running along the northern boundary of the site and which continues towards Withycombe Farm. This circular route is also proposed to connect to the adjacent PRoW running along the southern boundary of the site. This is proposed, in the future, to be upgraded to provide a new cycling link connecting Bretch Hill to North Newington, as identified by OCC in their emerging Banbury Local Cycling and Walking Infrastructure Plan.
- **On-site Design Principles:** The street design principles will be integrated into the proposed residential development to deliver inclusivity and provide economic and social well-being. The internal layout will provide a hierarchy of streets in line with the Street Design Guide and Manual for Streets. The detailed design principles are included in the Transport Assessment in more detail. Overall, the internal layout will support active travel modes and ensure that permeability into the existing neighbourhood and surrounding PRoW network is enhanced.
- **EV, Cycle and Vehicle Parking:** The layout and quantum of EV, Cycle and Vehicle parking will be determined in line with the Street Design Guide, the Oxfordshire Cycling Design Standards, the Oxfordshire Parking Standards for New Residential Developments. Houses will be provided with private cycle parking and apartments with communal cycle storage. As per The Street Design Guide recommendations, all houses with on-plot parking should have a dedicated EV charging point and 25% of unallocated parking spaces should be equipped with an EV charging point. 1 allocated car space will be provided for every 1-bed and 2-bed dwelling and 2 car spaces for every 3-bed and 4-bed dwelling.
- **Vehicle Access:** The general vehicle access will be achieved through the consented Banbury Rise development to the north of the site. The Banbury Rise development has two access points; one formed with Bretch Hill (via George Parish Road) and the second formed with Edinburgh Way (via Bailey Road). From Bailey Road, there is a looped arrangement with a 5.5m wide carriageway and accompanying footway provision. This looped arrangement serves 136 dwellings and is located directly adjacent to the northern boundary of the application site. Considering the looped arrangement providing access to 136 dwellings at the southern extent of the Banbury Rise development and taking access via this to the proposed development of up to 250 dwellings would mean this closed arrangement would provide access to up to 386 dwellings. This is compliant with the Street Design Guide but would also require an emergency access point. Existing dwellings 28 to 42 Balmoral Avenue are served from a small access road,

which is within the adopted highway and directly abuts the sites eastern boundary. It is proposed that this access is continued into the site to provide a minimum 3.7m wide emergency access which would also serve as a pedestrian and cycle connection. The principle of taking an emergency access via Balmoral Avenue has been agreed with OCC.

- **Public Transport:** As the existing public transport amenities provided are sufficient, no further actions are required.

#### 8.2 Travel Plan

The Travel Plan suggests a range of initiatives which will be implemented in order to encourage residents to travel by more sustainable modes. These initiatives will be periodically reviewed to ensure that they are applicable to the evolving needs of residents. The initiatives contained within this document will be supported by the development for a five-year period from initial occupation of the development.

In order to meet the aims and objectives for sustainable travel set out in the Travel Plan, a number of measures are identified. The measures are split into the following categories:

- **Measures to Promote and Encourage Walking and Cycling:** Increased awareness of the health benefits of walking and cycling through promotional material and taking part in national events. Key information relating to walking routes and promotion of wayfinding to residents through marketing strategy. Information on relevant cycle training for residents. Cycle parking provision. Personalised travel planning offered to all residents.
- **Measures to Promote and Encourage Public Transport Use:** Provision of timetables and information about local public transport stops and services through the Travel Information Pack and through marketing emails. Promotion of journey planning websites. Liaising with service providers to identify incentives and discounts on tickets.
- **Measures to Promote and Encourage Car Sharing:** Information on Public Car Share Schemes and promotion of LiftShare week. Information on benefits of car sharing through marketing emails.
- **Measures to Reduce the Need to Travel:** appropriate infrastructure will be provided to facilitate home-working and shopping by ensuring each household has the ability to connect to broadband services.

The vast majority of measures are aimed at promoting and encouraging the use of existing and proposed travel facilities in the area (walking, cycling and public transport), but also car sharing where appropriate. In order to ensure that the Travel Plan is effectively implemented, the measures outlined above have been arranged into Action Plan. The Action Plan clearly identifies the timescales and responsible party for each measure and can be found in detail in the original Travel Plan report.

Refer to the Transport Assessment and Travel Plan documents prepared by PJA for further details.



## 9. Summary

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This Sustainability Statement provides an overview as to how the proposed hotel development contributes to sustainable development in the context of the strategic, design and construction considerations.

Consideration has been given to the Cherwell's Local Plan in the formulation of this statement. Sections 3 to 8 of this statement demonstrate that the siting and design of the proposals support relevant policy relating to sustainable development. This shows that the proposed development:

- Will provide much-needed, well-designed, high-quality housing which promotes high levels of sustainability and fits in well with its surroundings.
- Will minimise energy demand through a fabric first approach, including the use of low U-values, low air permeability and low thermal bridging to reduce heat loss.
- Will maximise energy efficiency through the extensive use of heat recovery systems such as Waste Water Heat Recovery and Flue Gas Heat Recovery as well as low energy lighting and advanced heating controls.
- Will maximise passive measures such as solar lighting and natural ventilation and maximise opportunities for cooling and shading.
- Will incorporate the use of recycled and energy efficient materials.
- Will aim to utilise approximately 300kWp rooftop photovoltaic panels to generate renewable electricity onsite.
- Will have a minimal impact on the risk of surface water flooding onsite.
- Will minimise water consumption to less than 110 litres/person/day
- Will promote sustainable transport means.
- Will incorporate measures to improve site biodiversity.

Overall, the proposals constitute sustainable development in accordance with national and local policy requirements and will provide a development that seeks to promote these principles in operation.





