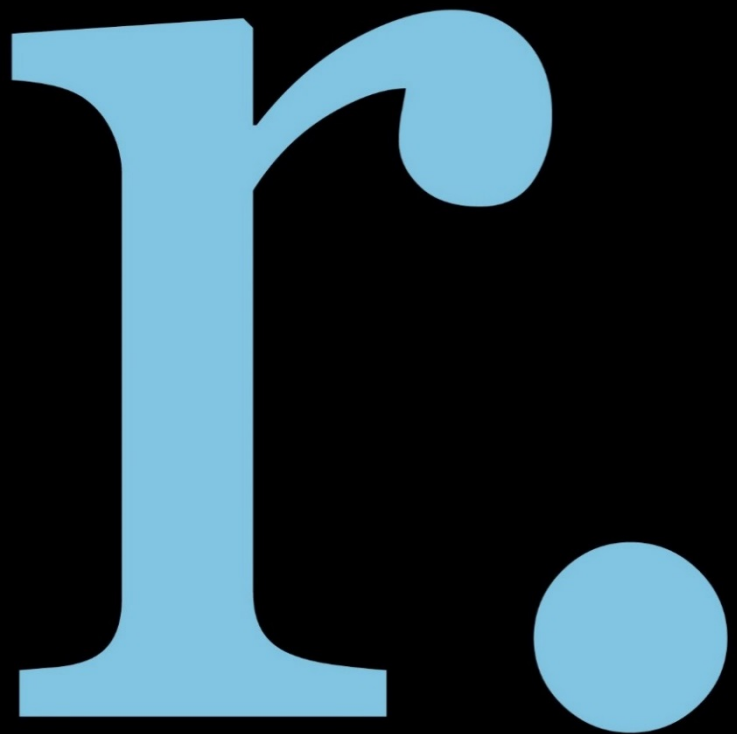


reside.

Land south of Funtley Road, Funtley

Sustainability Statement



Land South of Funtley Road, Fareham Sustainability Statement

October 2020



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Reside Developments Ltd

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The proposed development at Land South of Funtley Road will deliver high quality, sustainable new homes which promote economic, social and environmental benefits.

1. Introduction

This Sustainability Statement has been prepared to support the outline planning application for the development of up to 125 sustainable new homes at Land South of Funtley Road in Fareham.

1.1 Site and Surroundings

Funtley is a village in the north of the borough of Fareham, Hampshire. The village originally grew from the development of a clay quarry, known as Fareham Red. The proposed development site is located to the west of the Funtley village, adjacent to the railway line and accessed from Funtley Road. It is located to the north of the M27 (between junctions 9 and 10).

The site lies wholly within the jurisdiction of Fareham Borough Council and is located within the designation of Area Outside of Defined Urban Settlement Boundary.

The site is considered a sustainable location given it benefits from having a good range of facilities and services within easy walking and cycling distance. There is a bus stop on Thames Road to the south of the site. This is accessed over the new footbridge across the M27 provides residents with a regular bus service (route 20). Fareham rail station is 3.7 km (2.3 miles) from the site.

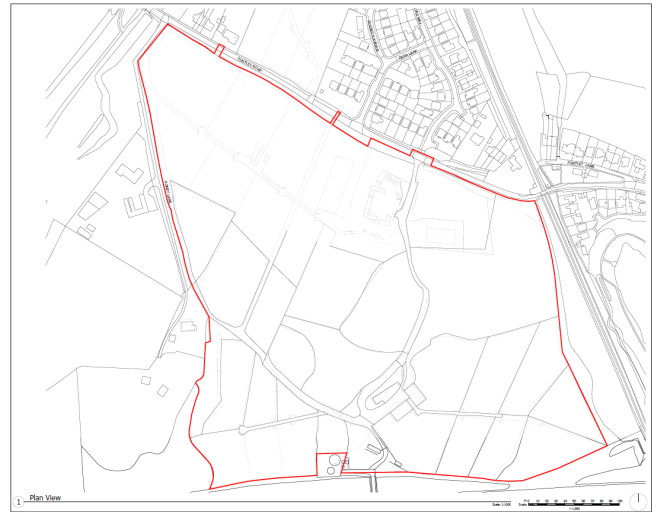


Figure 1: Site Outline

1.2 Proposed Development

Figure 2 overleaf shows the outline housing layout for the proposed development site for up to 125 new homes including areas of public open space, landscaping and access.

The planning application description comprises:

“Outline application to provide up to 125 one, two, three and four-bedroom dwellings including 6 Self/Custom build plots, Community Building or Local Shop (Use Class E & F.2) with associated infrastructure, new community park, landscaping and access.”

Additional details are provided within the Design and Access Statement and Planning Statement that accompany the application.

1.3 Report Layout

The following chapters set out the local and national sustainability objectives, followed by a review of the sustainable design measures incorporated into the design of the development, in line with the objectives of sustainable development.

Please note the terms “carbon”, “carbon dioxide (CO₂)” and “greenhouse gases (GHGs)” are used interchangeably in this report depending on the terminology of the referenced document etc.



Figure 2: Parameters Plan (Source: Rumney Design)

2. Policy Context

This chapter provides an overview of the relevant planning policy and guidance regarding sustainable development for new domestic developments from a national and local authority perspective.

2.1 National Policy

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

National Planning Policy Framework

Updated in February 2019 the 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'.

It states clearly that in order to deliver sustainable development, the planning system must perform three distinct objectives, aligned to the three 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, by providing the supply of housing required to meet the needs of present and future generations; 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; and

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 preparation of local 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.

Planning Practice Guidance

The Planning Practice Guidance (PPG) provides further advice on various planning issues associated with development, including those linked to sustainability and renewable energy and underpins the policies within the NPPF.

The PPG Guidance is an important 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.

The PPG confirms Local Authorities have the option to set technical requirements exceeding the minimum requirements of the Building Regulations in respect of access, water and space where sufficient evidence is produced to justify the target.

The Guidance also states that Local Authorities can set carbon reduction targets equivalent to a 19%

reduction beyond the 2013 Building Regulations and renewable energy policies for non-domestic buildings.

The PPG states that the distribution and design of new development, and the potential for servicing sites through sustainable transport solutions, are particularly important considerations.

National Design Guide

The National Design Guide published in October 2019 forms part of the PPG and supports the objective for good design as set out in the NPPF. The Guide introduces ten characteristics of well-designed places which work together to create development character and community, while positively addressing environmental issues affecting climate.

UK Sustainable Development Strategy

In 2005, the Government published an updated Strategy for implementing sustainable development across the UK.

This Strategy acts as an overarching document from which a range of specific policies and legislation was derived. Although published in 2005, the strategy has taken a recently renewed focus in light of the government's definition of Sustainable Development in the NPPF.

One of the key aims of this Strategy is to recognise the threats of climate change and ensure that the UK develops a strategy to mitigate and adapt to this phenomenon.

The document established five key principles that will underpin the national sustainable development strategy:

- Living within Environmental Limits;
- Ensuring a Strong, Healthy and Just Society;
- Achieving a Sustainable Economy;
- Promoting Good Governance; and
- Using sound science responsibly.

The strategy will be implemented at a national level through the development of more specific strategies at a government department or sector level.

With regards to planning and the built environment, this document sets the basis for the development of plans and Policies that promotes

development that mitigates and adapts to climate change.

Climate Change Act

The Climate Change Act (2008) sets a legally binding target for reducing UK CO₂ emissions by least 80% on 1990 levels by 2050.

The Climate Change Act 2008 (2050 Target Amendment) Order 2019 set a new target for UK emissions to be reduced by 100% by 2050, one of the world's first major economies to do so.

Building Regulations

Whilst not planning policy, in April 2014 the Part L regulations changed and it is now a requirement of the current 2013 regulations for new homes to deliver a 6% reduction in carbon emissions compared to equivalent 2010 Part L standards. This change aimed to strike a balance between the commitments to reducing carbon emissions and improving energy efficiency and ensuring that the overall effect of regulation upon consumers and businesses does not stifle growth.

The October 2019 Future Homes Standard consultation (see below) includes a proposal for Part L standards to be enhanced in 2020 and deliver either a 20% CO₂ improvement on Part L 2013 through high energy efficiency measures alone (e.g. triple glazing), or a 31% CO₂ improvement through a combination of low carbon heating, on-site low / zero carbon energy technology with lower levels of energy efficiency (e.g. double glazing) which is the Government's preferred option.

It is anticipated that these proposed 2020 Part L standards will also apply to new non-residential development.

2.2 The Local Development Plan

Core Strategy (2011) (Local Plan Part 1 (LPP1))

The Core Strategy is a key part of the Fareham Local Development Framework (LDF) and will help to deliver the spatial elements of Fareham's Sustainable Community Strategy. Being spatial, the LDF must reflect other strategies and policies of the area and addressing where necessary other issues such as healthcare priorities, education and economic development. The LDF is not a single plan but a suite of documents which will be reviewed regularly to ensure they remain current (see Development Sites and Policies below).

The pertinent policies include:

CS15 Sustainable Development and Climate Change

This policy states that the Council will promote and secure sustainable development by directing development to locations with sustainable transport options, access to local services, where there is a minimum negative impact on the environment or opportunities for environmental enhancement.

CS16 Natural Resources and Renewable Energy

This policy promotes the safeguarding of natural resources by:

- Demonstrating the latest best practice for energy efficiency, passive solar design and water conservation in the construction and use of the buildings;
- Taking measures to reduce carbon emissions, pollution and waste during the construction and operation of new developments through orientation, layout, design and material selection; and
- Reducing, reusing and recycling waste on-site.

CS17 High Quality Design

This policy requires compliance with the BREEAM and/or Code for Sustainable Homes level operating at the time of any application. The Code for Sustainable Homes was withdrawn in 2015 and been replaced by national technical standards. This policy also seeks that new homes achieve the Lifetime Home standard.

Development Sites and Policies (June 2015), (Local Plan Part 2 (LPP2))

Policy DSP2 Environmental Impact and Policy DSP3 Impact on Living Conditions

These policies seek to ensure no unacceptable impact on the environment and amenity. In instances where it can be demonstrated that the Council does not have a five year supply of land, policy DSP40 requires proposals to be sensitively designed to reflect the character of the neighbouring settlement and minimise any adverse impact on the countryside.

Emerging Policy – Local Plan 2036

Fareham BC is currently reviewing its Local Plan. This will replace the design policies of LPP1 and LPP2 in due course. The relevant sustainability policies of the Draft Local Plan (DLP) are summarised below.

Policy NE2: Biodiversity and Nature Conservation

The policy confirms that development proposals should ensure that protected and priority species and their associated habitats, breeding areas and foraging areas are protected and that proposals should not prejudice or result in the fragmentation of the ecological network.

Policy D1: High Quality Design

The policy confirms that development proposals will be expected to provide appropriate cycle parking, cycle storage and Sustainable Drainage Systems (SuDS) on major sites.

Policy D5: Energy and Water Efficiency

Proposals should have regard to sustainable development and comply with Policies D5: Energy and Water Efficiency and INF4: Renewable and Low Carbon Energy. The Council will support development proposals which through design and layout promote the efficient use of energy, make effective use of sustainably sourced materials and minimise waste and CO₂ emissions. To minimise impact on the water environment, all new dwellings that are located where there are water supply issues shall achieve the Optional Technical Housing Standard for Water efficiency of no more than 110 litres per day as described by the Building

Regulations (Part G). New non-residential development of 1000 sq.m gross floor area or more must meet the BREEAM 'Excellent' standards for water consumption.

Policy D6: Water Resources

Development proposals must provide for the satisfactory supply and disposal of surface and waste water.

POLICY INF2: Sustainable Transport

New development should offer maximum flexibility in the choice of travel modes and should reduce the need to travel by motor vehicle through the promotion of sustainable and active travel modes.

Policy IN4: Renewable and Low Carbon Energy

Renewable and low carbon energy proposals will need to ensure no severe adverse impacts on the local character, ecology, heritage or surroundings.

2.3 Policy Summary

Both local and national policy aims to ensure the delivery of sustainable development and well-designed homes which mitigate and adapt to the potential impacts of climate change.

Recent policy changes have confirmed the UK's commitment to a legally binding target of net zero emissions by 2050 and reiterates the importance of low carbon new buildings in ensuring this target is met.

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 homes are well designed and reduce emissions in line with the UK's national carbon targets.

Both the existing and emerging sustainability policy for Fareham confirms the importance of delivering sustainable new developments across the borough. The emerging Local Plan aims to ensure that sustainable design measures are included within all development, with a focus on energy, water and resource efficiency.

The following chapters of this report set out the design measures included at Land South of Funtley Road as well as those to be considered at the detailed design stage to ensure the delivery of a

sustainable development providing economic, social and environmental benefits and address the requirements of local policy.

3. Sustainability Strategy at Land South of Funtley Road

This chapter summarises the sustainability strategy setting out the economic, social and environmental benefits of the proposed development.

3.1 Introduction

This chapter presents the sustainability strategy for the proposed development, demonstrating how it responds to relevant national and local planning policy.

In this context the sustainable design measures incorporated into the development masterplan at the outline application stage are set out under the following headings which reflect the sustainability themes of the NPPF.

3.2 Building a Strong and Competitive Economy

3.3 Promoting Sustainable Transport

3.4 Delivering a High Quality 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

3.2 Building a Strong and Competitive Economy

The proposed development will contribute to positive economic growth for the district through

construction and occupation, providing sustainable new homes, supporting the aims of the NPPF.

Construction

The economic benefits of construction are well known with considerable direct and indirect positive impacts resulting from new housing construction.

A study by the Confederation of British Industries (CBI) demonstrates that construction projects have a significant benefit on the local and wider economy.¹ The report concludes that for every £1 of construction expenditure £2.84 is injected into the economy.

The construction of new homes will therefore provide opportunities for local employment as well as increased revenue locally for materials, services and goods. According to the Economic Benefits Assessment, the project will have a construction value of £22 million and result in 124 construction jobs.

In addition, there will be significant local authority revenue benefits as a result of the development provision.

Occupation

Further positive economic impacts of the proposed development resulting from the occupation of new homes and related increase in local population are noted as follows;

- The construction of up to 125 new homes will increase the population resulting in local benefits through the demand for goods and services;

¹ <https://www.lek.com/press/construction-investment-provides-significant-benefit-uk-economy-reveals-new-report>

- The increase in local population will also help to support local facilities, groups and the vitality of Fareham and surrounds;
- The development of new homes will also provide an increase in Council Tax revenue helping to support local Council services.
- According to the Economic Benefits Assessment, the operational benefits include 10 direct jobs and 3 indirect or supply chain jobs.

3.3 Promoting Sustainable Transport

A Transport Statement (TS) and standalone Travel Plan for the development has been completed by Motion. The TS reviewed and assessed both existing site conditions and the proposed development as part of the Outline Planning Application.

Walking and Cycling

The proposed development site is located within an accessible location, providing a realistic choice of travel modes.

There is currently no pedestrian footway on either side of the road adjacent to the site. Funtley Road however benefits from a footway on the northern side of the carriageway, which then switches to the southern side at the eastern extent of the site. This provides opportunities to easily link the site with the adjacent footway network.

Improvements are proposed as part of this application to increase pedestrian permeability with the surrounding road network. This includes linking the proposed site access with the existing network to the east, as well as introducing crossing points for connections to the northern side of the carriageway.

The new foot and cycle bridge over the M27 will enable both pedestrians and cyclists to access facilities, including the local primary school and local shops, to the south without needing to detour east or west to pass over the M27. It will also provide an improvement for existing residents living in Funtley.

A series of public footpaths, bridleways and long-distance trails are present across the surrounding area. Within the immediate setting, public footpaths 85, 513a, 513b, 513c and 513d pass to the north east of the site, providing connections between Lakeside, Funtley Road and Totsome Cottage to the north.

The long distance walk of Allan King Way is located to the south-east of the site, approximately 3.6 km away. This route provides a connection between the eastern fringe of Fareham and the wider landscape, via Paradise Lane to the north-east and Downend Road to the southeast.

Public Transport

There is a bus stop on Thames Road approximately 600m to the south of the site. Residents can use the new foot and cycle bridge to access this regular bus service which connects with Fareham and Wickham (route 20). Various employment facilities can be reached within a five minute bus journey, alongside several schools. Fareham rail station is 3.7 km (2.3 miles) from the site and can also be accessed via bus services located adjacent to the site. It provides train connections to London Waterloo to the north, Portchester and Cosham to the east.

Local Amenities and Services

Funtley provides a number of core services and facilities including a primary school, nurseries, employment facilities, post offices and a shopping centre. The Highlands Dental and Doctor Practice is located approximately 1,700m from the site, equating to a 18 minute walking time or 6 minute cycle time. Orchard Lea infant and Junior School is located approximately 900m away (4 minute walk or 2 minute cycle).

Overall, the proposed development will be very well-connected to its surroundings, linking to existing walking routes and footpaths where present. This can be seen in the following figure with further detail provided in the D&AS.

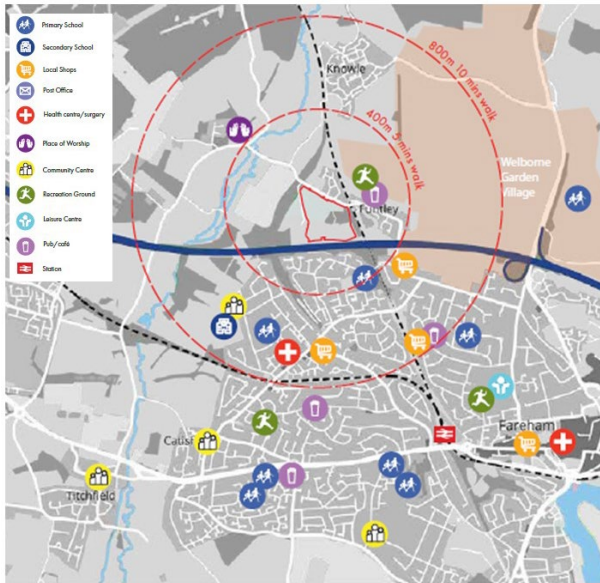


Figure 3: Local community facilities (Source: Section 2, D&AS, Rummey Design)

Cycle parking will be provided throughout the development, either within the curtilage of garages or within a dedicated cycle storage area where garages are not provided. In addition, vouchers worth £150 will be given to each household to be put towards cycle equipment. These provisions will encourage future residents to cycle to Fareham rather than rely on private car travel.

Further measures to encourage sustainable modes of transport and ensure that residents are not reliant on private car travel are set out within the Travel Plan which has been produced to accompany the application. The Travel Plan includes initiatives to:

Promote walking:

- a crossing point will be provided on Funtley Road centrally to connect with residential dwellings on the northern side of Funtley Road;
- a new public right of way across an existing bridge over the M27; and
- Literature and maps will highlight local footpaths.

Promote Cycling:

- provision of cycle parking facilities; and

- Provision of Welcome Pack to include cycle maps and information as well as vouchers to value of £150 per household.

Public Transport:

- promotion of the public transport services will inform residents as to the benefits of travelling by bus and train; and
- A voucher for free travel by bus, valid for one year after occupation, will be included within the travel pack.

Car-sharing:

- provide promotional leaflets to residents advertising local car sharing initiatives such as Liftshare.

A Travel Plan Co-ordinator (TPC) will be appointed prior to occupation of the site. This will allow the TPC to gather and prepare necessary information for residents, and to ensure that measures can be implemented from the first occupation of the site. In addition to the above measures set out within the Travel Plan, the development will also promote the use of Electric Vehicles:

Electric Vehicles

- Provision of electric vehicle charging points for approximately 10% of homes.

3.4 Delivering a High Quality, Good Design

The design vision of the development, as set out within the Design and Access Statement, is to develop a site that can 'genuinely connect to, and integrate with, Funtley, such that its development would be complementary to the existing community and facilities that it would adjoin – thereby forming an integral part of the settlement'.

Achieving a high quality development is a key objective and this will be brought about through a design that is a sustainable addition to the existing community, supporting existing facilities and

services as well as integration and enhancement of the site's environmental capital.

The proposal will incorporate opportunities for social interaction and integration with the existing village through the creation of new areas of open space, opening up the site to the surrounding neighbourhoods and increasing the biodiversity of the site.

The dwellings will provide a mix of housing with broad dwelling types appropriate to the location and market demand, including 40% provision of affordable housing. The affordable homes will be of the same high quality design as the market housing to ensure that the scheme is tenure blind.

Although a landscape buffer around the entire site, the development will reinforce the identity of the village, whilst ensuring that new homes are distinctive and identifiable with the local character.

3.5 Promoting Healthy Communities

Creating a high quality development that promotes health and wellbeing for residents and the local community is a key aim of the scheme. The illustrative masterplan design has been developed incorporating a number of features to enhance the health and wellbeing of the residents and the design of homes will include measures to facilitate healthy living, including:

- In addition to the new village greens and community woodland a LEAP is also proposed;
- Play provision will be provided in accordance with Fareham BC's current play standards at the time of development;
- The creation a new footpath/cycle link directly to the south of the site across an existing bridge (over the M27). This will give direct, safe and separated footpath/ cycle access to north Fareham;
- The provision of a range of community facilities, including a potential village store and community hall;
- Two areas of green space and new planting; and

- Provision of cycle storage to facilitate sustainable and active modes of transport to local facilities and employment.

Furthermore, the design of new homes 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 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 announced its ambition to extend the UKs carbon target to a 100% reduction 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 homes and other 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.

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 support the reduction of energy demand through efficient building design.

Local Policy supports the Government's objectives for sustainable development, requiring energy efficiency measures to be incorporated and renewable technologies to be considered.

The detailed design of the development and homes will be carried out in accordance with the energy hierarchy, 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, is shown within **Figure 3**.

The following sections set out the measures to be considered to deliver an energy efficient, low carbon development.

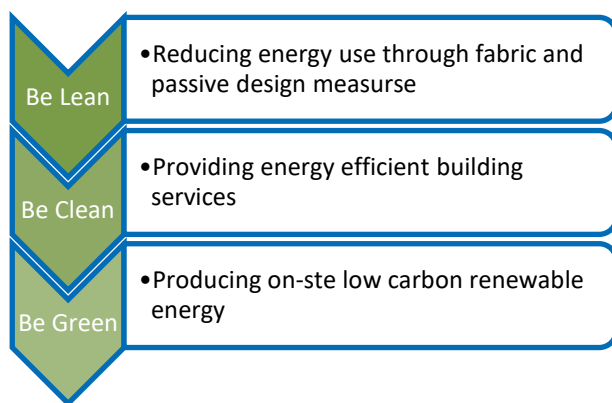


Figure 4: The Energy Hierarchy

Be Lean

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) rather than the much shorter lifespan (around 25 years) of a renewable energy technology;
- Virtually no maintenance and/or replacement costs to maintain carbon reductions through improved fabric; and,
- No reliance on an occupier's behaviour to deliver carbon reductions. Achieving carbon savings from renewable energy technologies require education, awareness and often, behavioural changes from occupants.

The following measures to reduce energy use and carbon emissions have been considered within the design:

- Design and layout to promote passive solar gains, maximise natural daylight, sunlight and ventilation with homes orientated towards the south where possible;
- Design of new homes to optimise natural daylight in all the habitable spaces with suitable window sizes relative to living spaces and bedrooms;
- Development which balances minimising the direct adverse impact of shading from other buildings and landscape features and improving access to passive solar gains;
- Material selection which will balance the aesthetics, robustness and durability with optimal thermal benefits for each home;
- High performance glazing with appropriate window u-values and g-values to reduce heat loss and optimise positive solar gain while reducing the potential for overheating;
- Incorporating high efficiency lighting targeting 100% of all light fittings as low energy lighting;
- Use of high efficiency heating systems to reduce energy consumption; and,
- Where appropriate, specification of high energy efficient rated appliances will be provided that use less energy and water.

Through the provision of fabric and energy efficiency measures the development will aim to exceed the requirements of the current Building Regulations (Part L 2013).

The final fabric specification and provision of energy efficiency measures will be defined as part of the detailed design of individual homes and may also vary as a result of changes to the Building Regulations anticipated as a result of the Future Homes Standard consultation / Part L 2020 update.

Be Clean

The next stage of the Energy Hierarchy is the provision of energy efficiently, i.e. from a decentralised energy system such as a Heat Network.

District Heating Networks (DHN) 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.

DHNs are suited to development with high thermal demand, typically provided by sufficient density or a large anchor load, i.e. high density flats, leisure centres and industrial process.

Typically, small scale housing developments of well insulated homes do not have a sufficient heating demand to warrant the installation of a network.

The continued decarbonisation of the national electricity grid as supported by the draft SAP10.1 document published in October 2019, is also reducing the carbon benefit of gas CHP systems.

The development of thermally insulated, low density, high efficiency homes such as those proposed limits the heating demand of development and therefore the feasibility and viability of the installation of CHP and district heating.

In this context it is considered that the installation of a heat network is unsuitable for this development.

Be Green

The final stage of the energy hierarchy is the generation of on-site low carbon renewable energy. The use of a fabric first approach to design and construction and provision of energy efficiency measures recognises that the most effective route to delivering long term energy and carbon reductions is through efficient building design. The specification of low carbon and renewable technologies should be considered after the reduction of energy demand and improved energy efficiency measures of the building services.

A brief feasibility study of each technology has been completed and is summarised below.

Heat Pumps - Heat pumps provide low grade heat from the ground (Ground Source Heat Pumps, GSHP) or air (Air Source Heat Pumps, ASHP) and are suited to fabric efficient homes such as those proposed.

In this context ASHP systems may be technically feasible, however, GHSPs are subject to specific ground constraints and in addition their cost is very high compared to carbon savings and this technology has therefore been discounted.

While ASHP systems may be technically feasible, there are issues with user interactions with a new style of heating system and increased maintenance requirements. Careful consideration of the use of this system is required.

Solar Photovoltaics and Solar Thermal -

Photovoltaic (PV) Cells convert solar radiation into electrical energy. They are feasible on roofs orientated within 30 degrees of south on pitched or flat roofs and must not be overshadowed by other buildings or natural features such as trees.

Solar Thermal Hot Water systems convert radiant energy from the sun into thermal energy for water heating. Systems require orientation within 30 degrees of south and internal space for a hot water storage tank. However, they are not efficient in winter and require further roof space for a tank. They are unlikely to provide all of the domestic hot water demand, therefore a secondary system would be required to make up the shortfall.

It is considered that solar PV would be more appropriate than solar thermal as it is more effective in winter months.



Biomass - Biomass boilers can provide hot water and space heating. However, due to the development type and required maintenance demands, this technology is not well suited to this development type.

Hydro Power - No suitable water sources are located within or near the proposed development which prevents the use of this technology.

Wind - The location of the site, within an existing residential area and the potential for turbulent wind flows to be created as the development is constructed prevents the use of this technology.



Low Carbon and Renewable Feasibility Summary

Generating low carbon energy onsite can reduce reliance on fossil fuels and minimises energy lost through transmission and contribute to security of supply and better connections between energy demand and generation.

At this stage it is considered that the most suitable potential low and zero carbon technology option for installation within the development is Solar PV and will be considered as part of the detailed design of the development and homes.

Energy Strategy Summary

The new dwellings at Land South of Funtley Road will be designed and constructed in accordance with the principles of the energy hierarchy.

Solar PV has been identified as the most suitable low carbon renewable energy system for the development and its use will be considered as part of the detailed design of new homes.

At this stage it is anticipated the development will exceed the requirements of the 2013 Building Regulations through a range of passive and active energy efficiency measures.

The final fabric specification and provision of energy efficiency measures and low carbon renewable energy will be defined as part of the detailed design of individual homes and may also vary as a result of changes to the Building Regulations anticipated as a result of the Future Homes Standard consultation.

3.6.2 Climate Change Adaptation

To ensure the proposed development is resilient to the effects of climate change it will incorporate a number of key design measures in response to the climate predictions set out in the UKCP18 projections.

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 homes 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. The site is within the 'Thames Water' area and is therefore classified as within an area of serious water stress.

In this context the development at Land South of Funtley Road will reduce water consumption during occupation the new homes through a range of water efficiency measures such as:

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

Through the use of these measures new homes will achieve a water consumption rate of 110l/p/d in accordance with (emerging) Policy D5: Energy and Water Efficiency, which is significantly below the UK average of 150l/p/d.

External water use will be limited through the provision of external water butts, where appropriate to allow the capture of rainwater for garden irrigation which also contributes to reducing surface water run-off.

Flood Risk and Sustainable Drainage

The site is located within Flood Zone 1 and is therefore assessed as having a low annual probability of flooding from fluvial sources.

SuDS will be developed on site within the landscaped buffer along the northern boundary. A pond is also provided to the south of the developed area.

The surface water drainage strategy will be further refined as the detailed layout is developed: porous pavings and 2 balancing ponds are proposed at this stage. These ponds have been sized to store the

storm water volume in the critical '1 in 100 years plus 40% climate change' event. In the detailed design a significant proportion of the volume will be shifted over to the porous paved drives.

Please refer to the Flood Risk Assessment and Drainage Strategy submitted to support the planning application.

Overheating

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

In recognition of this, Part L 'Conservation of Fuel & Power' of the Building Regulations are scheduled to be updated in 2020 to take better account of potential summertime overheating risks as a result of future climate change. Homes will be assessed to minimise the risk of overheating and provide comfortable living environments.

Through the provision of mitigation measures homes will be able to adapt to and be resilient to future climatic changes.

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 the impact of the development and enhance site biodiversity, as well as incorporate measures to reduce pollution from the site.

3.7.1 Ecology

A Phase 1 walkover survey and subsequent Ecological Assessment was produced by Ecology Solutions Ltd to support the planning application. The reports are submitted as part of the application and should be read in conjunction with this report.

The site consists of semi-improved grassland, woodland and hardstanding, with hedgerows and tree lines located predominantly on the borders and small parcels of ruderal vegetation and scrub present. The majority of the grassland is short grazed, forming a number of paddocks used by horses.

There are several statutory designations within the site's zone of influence. No adverse impacts have been identified in relation to any designated sites of nature conservation importance. The application site contains a SINC and ancient woodland, both of which are to be appropriately protected, retained and enhanced as part of the development proposals

These can be seen in the Ecological Designations plan (Figure 5).

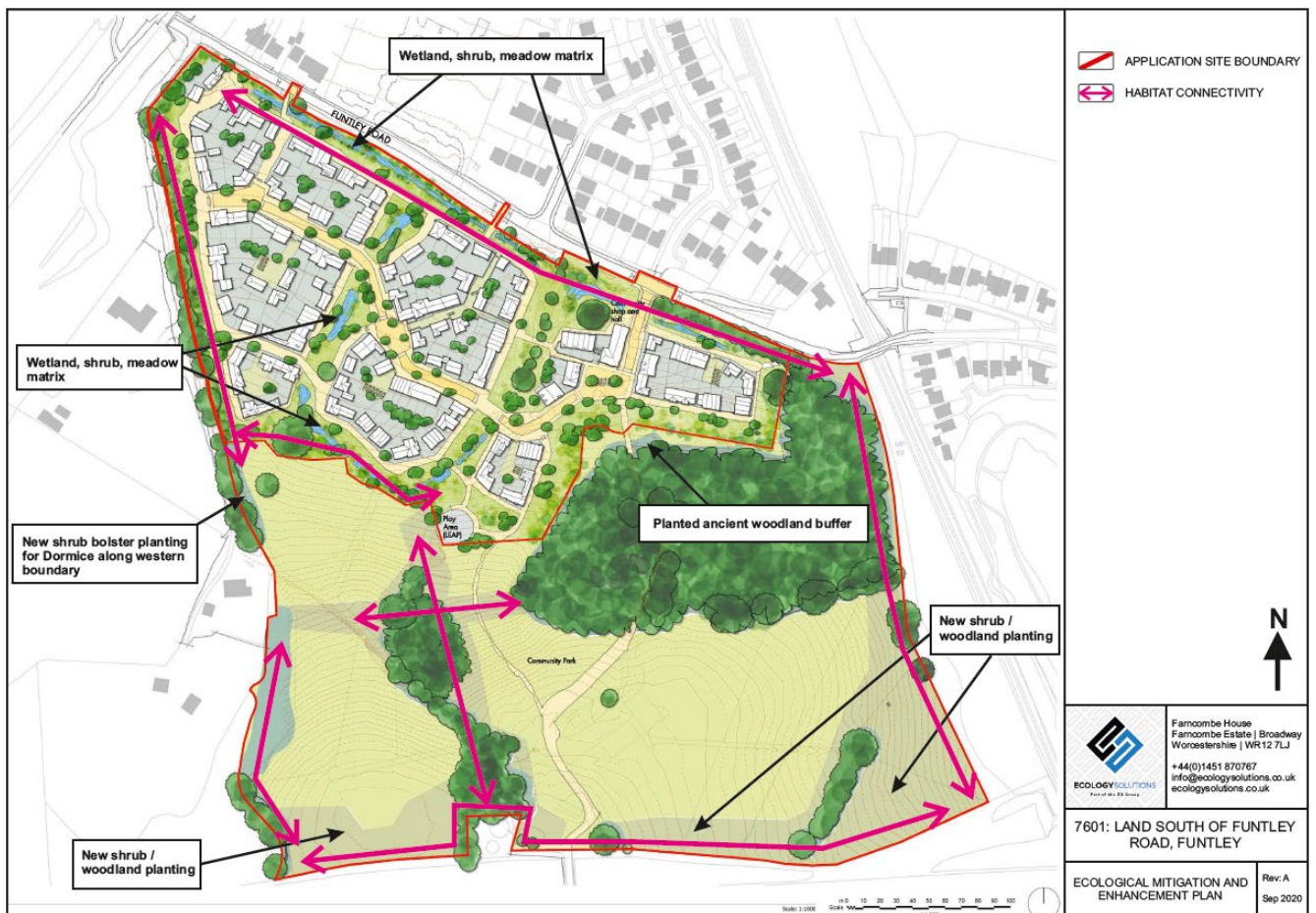


Figure 5: Ecological Designations (Ecology Solutions)

Protected Species

The site provides habitat for a low number of reptiles (Slow Worm, Grass Snake) and a translocation of these reptiles prior to any works clearance works is required. Dormouse surveys recorded three nests considered to be that of a Dormouse within hedgerow H4 and H6 and it is considered therefore that Dormouse are present within the application site. Three badger setts have also been recorded outside of the development footprint. The hedgerows and trees offer nesting and foraging opportunities for birds, and also offer suitable foraging and navigational resources for bats.

Mitigation and Enhancement

Appropriate planted buffers are proposed to both of the SNCI and Ancient Woodland designations, with fencing also to be installed where appropriate to further deter public access. In addition, new woodland planting is also proposed, extending from Beamond Coppice westwards towards Honey Lane delivering a valuable wildlife corridor complementing the measures to increase habitat connectivity throughout the site. The new planting will form a new community woodland for Funtley

The Ecologists have confirmed that based on the evidence of the ecological surveys undertaken, the majority application site is not considered to be of high intrinsic value from an ecology and nature conservation perspective. The design of the proposed development and the implementation of mitigation measures as recommended in this report will ensure there are no adverse effects on any designated sites or protected species as a result of development at the application site.

3.7.2 Pollution

Water

Throughout construction and operation 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 ponds, streams and downstream habitats in accordance with Environment Agency Pollution Prevention Guidance (PPG) until superseded by an updated guide.

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.

For other elements of construction, the BRE's Green Guide to Specification will be considered. A majority percentage by area of key building elements will achieve an A or A+ rating where feasible.

Additionally, all timber will be sourced from sustainable suppliers with FSC or equivalent certification.

BES6001, CARES Steel and / or ISO14001 accredited suppliers will be sought for major building materials where possible. Products with Environmental Product Declarations will be favoured over those which do not report environmental impacts such as embodied carbon.

Construction Air Quality Management

Construction Impacts – Prior to the construction phase a Construction Environmental Management Plan (CEMP) will be developed. This will list any required mitigation related to the effects of dust from earthworks, construction and trackout. Mitigation measures may include:

- Erect screens or barriers around the site boundary;
- Switch off vehicle engines when stationary and impose speed limits on site; and
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation.

Operational Impacts – the design of the development incorporates several measures to control air quality impacts on the surrounding area. A Travel Plan has been developed to introduce initiatives to reduce private car travel and associated emissions. These measures may include improvement to public transport and walking and cycling in the local area, and car sharing schemes. Cycle parking will also be provided. Electric vehicle charging points will be considered at detailed design with an aim for these points to be provided in approximately 10% of homes.

3.8 Sustainable Waste Management

The proposed development will ensure the minimisation of waste and maximisation of recycling of any waste generated during construction and operation.

3.8.1 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.

3.8.2 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 applicant will deliver a sustainable development in line with National and Local Policy.

The proposed development supports the sustainability objectives and includes a range of sustainable design measures to respond positively to Local Policy and National Policy.

The proposed development will include the following sustainable design measures which will provide a range of economic, social benefits, protect and enhance the environment, as well as mitigating and adapting to the effects of climate change.

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

- Development designed in response to local constraints and opportunities considering measures to ensure the character of the development reflects the character of the environment and creates a safe and sustainable community;
- Development of new homes which will benefit local businesses through construction and provide an increase in local population supporting local businesses and services and the vitality of Fareham;
- Pedestrian and cycle access to Fareham, providing future residents with a wide range of local amenities and employment opportunities;
- Provision of £150 worth of vouchers for cycle equipment with the aim of reducing reliance on private car travel; and,
- The design of new homes which provides provide adaptable, comfortable living environments which prioritise natural lighting and ventilation.

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

- The specification of sustainable materials and construction methods which reduces resource use and reduces the environmental impact of development through good design;
- The use of measures to reduce pollution during construction and operation including measures related to noise pollution, air quality and water pollution; and,
- Protection and enhancement of habitats including creation of a pond, along with native planting of mixed shrub, species rich meadow and wetland features to achieve a matrix of higher ecological value than that currently present.

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 proposed at this stage include:

- Homes designed to reduce carbon emissions to exceed with Part L 2013 Building Regulations and address the impacts of climate change;
- Provision of Electric Vehicle charging points for up to 10% of homes.
- Provision of water efficient fittings to target water use of 110l/p/d, in accordance with the

Building Regulations high water efficiency standard in line with the requirements of the emerging Local Plan; and

- Development of a site within Flood Zone 1 with low risk of surface water flooding and implementation of a SuDS strategy with 40% allowance for climate change.

The proposed development at Land South of Funtley Road, Fareham aims to deliver sustainable new dwellings which respond positively to National and Local Policy. The development objectives incorporate sustainability and tackle the impacts of Climate Change.

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