SUSTAINABILITY STRATEGY

18/505157/OUT: Outline application with all matters reserved apart from the means of access for residential development of up to 60 dwellings (with an illustrative layout to demonstrate adequacy of emergency and service access together with parking and indicative mix of house types, principles of landscaping ecological enhancement and surface water management) at land north of Sanderling Way, Iwade.

Land North Of Sanderling Way Iwade Kent ME9 8TJ

Prepared by Hume Planning Consultancy Ltd

On behalf of Boat House Properties Limited

Our Reference: HPC_1542

Date: October 2024

1. Introduction

1.1 This Strategy has been prepared on behalf of Boathouse Properties in support of the following development proposal at Land North of Sanderling Way, Iwade, Kent, ME9 8TJ:

Outline planning application with all matters reserved apart from the means of access for residential development of up to 60 dwellings (with an illustrative layout to demonstrate adequacy of emergency and service access together with parking and indicative mix of house types, principles of landscaping ecological enhancement and surface water management).

1.2 The aim of this Sustainability Strategy is to outline the sustainability and energy credentials of the proposed development and specifically respond to Local Plan Policies DM19 and DM21 as well as to the Climate and Ecological Emergency Declaration by Swale Borough Council in June 2019.

1.3 The report considers the measures incorporated into the masterplanning and design of the development to reduce energy use through building design, the viability of renewables, strategic landscaping and biodiversity implications, flood resilience and water management, sustainable transport and pollution, ensuring that future climate change has been planned for.

1.4 The illustrative layout demonstrates how the open space, ecological, drainage and highway considerations have influenced the design process. The masterplan, although illustrative, will establish strong development framework principles to guide a future reserved matters application. The proposal would accord with the objectives of Policy A17 and in so doing would result in sustainable form of development achieving social, economic and environmental benefits.

1.5 These measures will strive to achieve carbon reductions for the dwellings against the Building Regulations, which will be driven forward by the new Future Homes & Buildings Standard, in line with the Swale Carbon Reduction Guidance (2020).

1.6 The sustainable measures are described in as much detail as is possible given that the submission is in outline form and the house type designs are yet to be developed. Where specifics have not been possible, the overall approach and design standards have been described to help ensure that there will be framework in place for ensuring a high quality of sustainable construction.

2. Sustainability Policy Review

2.1 The Development Plan for the purposes of S38 (6) of the Planning and Compulsory Purchase Act (2004) comprises the adopted Local Plan 'Bearing Fruits 2031' (2017) and the Faversham Creek Neighbourhood Plan 2016-2031.

2.2 Swale Borough Council's adopted Local Plan outlines several sustainability policies which inform decisions on proposals. There are two policies in particular to which this Statement directly responds, Policies DM19 and DM21, in addition to the other key environmental, economic and social sustainability policies which are discussed below.

BEARING FRUITS 2031 LOCAL PLAN 2017

- **Policy DM19 Sustainable design and construction -** seeks to ensure that development will include measures to address and adapt to climate change.
- **Policy DM21 Water, flooding and drainage -** promotes the use of sustainable drainage systems, make efficient use of water resources and protect water quality.
- **Policy ST1 Delivering sustainable development in Swale -** seeks to achieve net gains across each of the economic, social and environmental dimensions of sustainable development.
- **Policy A17 Iwade expansion –** permits the development of a minimum of 572 dwellings at Iwade, together with a new country park, landscape and ecological enhancements and community facilities.
- **Policy CP2 Promoting sustainable transport -** aims to minimise the need to travel for employment and services and facilitates sustainable transport.
- **Policy CP3 Delivering a wide choice of high quality homes -** aims to steer development to sustainable locations in accordance with the settlement hierarchy and highlights the need to provide affordable housing.
- **Policy CP4 Requiring good design -** sets out the importance of achieving high quality design and the different objectives of good design which development proposals should meet.
- **Policy CP5 Health and wellbeing -** aims to promote health and wellbeing throughout the community, amongst other things by bringing forward new community facilities, encouraging healthier options of transport including cycling and walking and creating social interaction and safe environments through mixed uses and in the design and layout of new development.
- **Policy CP7 Conserving and enhancing the natural environment -** considers how natural assets should be considered across a range of issues; more specifically how together their protection, enhancement and management can contribute to quality of life, as well as benefiting the natural environment.

- **Policy DM20 Renewable and local carbon energy -** specifically relates to provision of renewable and local carbon energy development.

2.3 Swale Borough Council declared a Climate and Ecological Emergency in June 2019. With this declaration, Swale Borough Council set a target towards carbon neutrality by 2030 for the Borough. Suggested actions for reaching carbon neutrality include deployment of renewable energy, improving the energy efficiency of new and existing dwellings and buildings, improving public transport, encouraging active transport, and encouraging the switch to electric vehicles; as well as protecting natural habitats and providing access to nature. This Statement will explore how the proposed development seeks to address and incorporate these suggested actions and explore renewable energy solutions in order to work towards exceeding Building Regulations and effectively address the Climate Emergency.

2.4 There are also a number of local standards and supplementary planning documents relevant to this Statement and the application submission, including Swale's Air Quality Guidance (July 2019) and the Swale Carbon Reduction Guidance (June 2020).

NATIONAL PLANNING POLICY FRAMEWORK

- Paragraph 8 – economic, social and environmental objectives of sustainable development.
- Paragraph 96 – importance of safe and accessible green infrastructure.
- Paragraph 131 – good design as a key aspect of sustainable development.
- Paragraph 150 – new development to avoid increased vulnerability to the range of impacts arising from climate change and helping to reduce greenhouse gas emissions, such as through its location, orientation and design.
- Paragraph 180 – contribute to and enhance the natural and local environment.
- Paragraph 191 – effects of pollution on health, living conditions and the natural environment.

FUTURE HOMES & BUILDINGS STANDARD

2.5 The Future Homes & Buildings Standard is due to come into effect in 2025 to ensure that new homes and non-domestic buildings produce less carbon emissions which will be delivered through the Building Regulations. The Standard is the next iteration of Part L of the Building Regulations, although Parts O and F are also being considered. Through the updates to the Building Regulations and the Standard becoming a regulatory requirement, it will ensure that new homes built from 2025 are less reliant on fossil fuels and produce less carbon emissions than homes delivered under the old regulations.

3. Sustainability Measures

Fabric First Approach

3.1 A fabric first approach involves careful consideration of the materials utilised for walls, floors, windows, roofs and doors to allow for improved insultation. Key design components include; building orientation, glazing ratio, "form factor", heating and hot water, ventilation and lighting all of which will be matters that are addressed at the reserved matters planning application stage.

3.2 Passive design considerations for the development masterplan will therefore involve;

- the orientation of buildings to optimise south facing roof space to install solar PV panels,
- optimising daylight and beneficial solar gains through dual aspect or higher floor to ceiling heights and size and depth of windows on different elevations,
- the control of solar gains through low g-value glazing,
- the provision of trees and landscaping which will serve to provide shading in the summer and facilitate solar gains in the winter.

3.4 Air tightness measures the infiltration of outdoor air into the building, or in other words how 'draughty' the building is. To address air tightness, key considerations include the use of the most sustainable materials to reduce heat loss, the level of window glazing, requiring floorplans to take into account the space necessary for insulation and draught-proofing.

3.5 As part of the fabric first approach, the detailed design will seek to achieve optimum glazing ratios to the southern elevations, with smaller ratios on all other elevations to support the reduction of heat loss.

3.6 Ventilation through openable windows will be the most appropriate solution to provide enhanced ventilation during summer seasons. However, mechanical ventilation with heat recovery is also a sustainable solution, using a heat exchanger to recover heat from extract air that would otherwise be lost to the outside whilst using this heat to pre-heat the 'fresh air' supply. Mechanical heat recovery ventilation is considered to be more energy efficient than natural ventilation, whilst also providing air quality and acoustics benefits. This is to be considered at the detailed design stage as part of a mixed strategy for ventilation as part of the development, particularly during winter months to reduce heat losses and maintain good indoor air quality.

3.7 High efficiency LED lighting will be utilised throughout the development, to ensure quality of lighting with minimum energy input and low internal heat gains. This design component, combined with the efficient orientation of buildings (i.e. the main habitable room to be south facing to capitalise on higher levels of natural light), will minimise the use of lighting and associated electricity usage as a result.

Solar Photovoltaic

3.8 Solar photovoltaic (PV) converts sunlight into electricity for the consumption on site or can be exported to the grid. A PV cell usually consists of 1 or 2 layers of a semi-conducting material such as silicon. The greater the intensity of sunlight, the more electricity is generated. The technology is most efficient when orientated due south, however panels east or west are suitable but generally require a greater surface area to generate a set amount of energy. Through the design process, the layout will incorporate, where possible, optimum orientations and roof forms to allow the potential for solar panels to support electricity to homes.

Ground and Air Source Heat Pumps

3.9 Heat pump technologies use electricity to upgrade thermal energy from low-grade heat resources such as ground and air. This resource is highly compatible with reaching a net zero carbon position which can be available through the development wide approach or to individual dwellings. Heat pumps have the benefit of being able to provide cooling in the summer months, as well as heat in winter. This is an assumption at this point and will be progressed further at the detailed design stage. On this basis air source heat pumps are identified as the preferred option due to not requiring space for horizontal or vertical boreholes in relation to ground source heat pumps.

Sustainable Travel

3.10 The incorporation of sustainable travel into the development will support a vibrant and healthy society through transport solutions that foster a safe and accessible environment for the community. This will reflect current and future needs and will protect and enhance the environment by ensuring the efficient uses of resources, supporting a lower carbon economy and mitigating and adapting to climate change. The incorporation of features that both encourage sustainable travel and lead to a reduction in emissions and congestion will be achieved through a travel plan.

3.11 The switch to clean and alternatively fuelled vehicles cannot successfully deliver a reduction in carbon/greenhouse gas emissions without the infrastructure to support it. It is proposed that EV charging will be delivered throughout the development to encourage the use of electric vehicles. Active EV charging points will be provided for each residential dwelling, in addition to a minimum of 10% of visitor parking spaces fitted with live EV chargers.

Water Management & Green Infrastructure

3.12 The current nationally determined standard of water consumption for new developments is an average water consumption limit of 110l/day per person. This target is also set out in Policy DM21 of the adopted Local Plan and will be met by the proposed development.

3.13 Fixtures, appliances and fittings will be specified for the proposed development which will considerably reduce water use, such as a combination of reduced-flow taps and showers, dual-flush toilets and moderately sized baths. In addition to internal water efficiency measures, each home with a garden will have an appropriately sized water butt installed as a form of rainwater harvesting.

3.14 The proposed SUDS network as part of the blue and green infrastructure network for Iwade will include drainage basins and swales which will have related benefits for biodiversity.

3.15 The incorporation of blue and green infrastructure at the outline master planning stage will ensure the delivering of valuable landscape, biodiversity net gain, drainage and flood resilience and placemaking benefits. There will also be additional benefits for air quality because of carbon sequestration from the landscaping network.

Minimising Pollution & Waste

3.16 Paragraph 192 of the NPPF states that "*opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement*". Construction Management Plans and detailed Method Statements will provide a framework for managing construction activities and their potential impacts relating to air, noise and water quality.

3.17 The legislative requirements for construction waste management are founded in a number of EU Directives and have been actively implemented in the UK. It is recognised that waste needs to be sustainably managed during the construction process. Prior to the commencement of the development, a dedicated and bespoke Construction and Environmental Management Plan will be completed as part of the construction process. This will provide detail as to the processes related to the management of waste through the construction phase with the aim of reducing waste products.

4. Conclusion

4.1 The scheme has been planned to both minimise its contribution to and adapt to climate change, which will be further enhanced through the next stages of the design process, in order to achieve a resilient and sustainable development that can stand the test of time.

4.2 A detailed energy strategy will be prepared at the reserved matters stage which will be based on the framework measures set out in this Statement. The sustainability framework for the development provided in this Statement demonstrates how at this stage of the design process the proposals will meet Policies DM19 and DM21 of the adopted Local Plan.