Pigeon South
Carmarthen West
Sustainability & Energy Statement

Persimmon
Together, we make a home.

Contents

Persimmon
Together, we make a home.

1. Introduction

This Sustainability Statement has been prepared by Persimmon Homes West Wales to accompany a Full Application for 12 units, which would comprise Phase 3 of the 'Pigeon development'. This is linked to a wider reserved matters application, which this site sits immediately against,

Outline consent was granted under planning applications W/27776 and PL/01626 for up to 250 residential dwellings. The site is currently allocated within Carmarthenshire County Council's Local Development Plan (LDP) as part of the Strategic Allocation GA1/MU1 located on the Western boundary of Carmarthen. This allocation is for a mixed use development consisting of 1100 residential units. The site is also included within the Deposit Plan for Carmarthenshire's Replacement LDP under reference PrC1/MU1.

This statement is intended to outline the sustainability features of the development proposals.

2. Planning Policy Context

The Planning system manages the development and use of land in the public interest, prioritising long term collective benefit and reconciling different interest. In Wales Planning Policy Wales establishes the key principles for the planning system, supported by the Technical Advice Notes.

In Wales the Development Plans apply the key principles of PPW to their plan areas and are shaped by evidence. Development plans are prepared at different scales:

National Planning Policy

Welsh Government Planning Policy is contained within Planning Policy Wales Edition 12 which was published in February 2023. PPW 12 is centred around the Wellbeing of Future Generations (Wales) Act 2015.

Planning Policy Wales establishes the key principles for the planning system in Wales and the Local Development Plans apply these principles to their areas and shape them by evidence. PPW states that 'the planning system should create sustainable places which are attractive, sociable, accessible, active, secure, welcoming, healthy and friendly. Development proposals should create the conditions to bring people together, making them want to live, work and play in areas with a sense of place and well-being'.

In terms of Energy, PPW emphasises heavily that *The Welsh Government's highest priority is to reduce demand wherever possible and affordable. Low carbon electricity must become the main source of energy in Wales. Renewable electricity will be used to provide both heating and transport in addition to power.*

The benefits of renewable and low carbon energy, as part of the overall commitment to tackle the climate emergency and increase energy security, is of paramount importance. The continued extraction of fossil fuels will hinder progress towards achieving overall commitments to tackling climate change.

The planning system should: • integrate development with the provision of additional electricity grid network infrastructure;

• optimise energy storage;

• facilitate the integration of sustainable building design principles in new development;

• optimise the location of new developments to allow for efficient use of resources;

• maximise renewable and low carbon energy generation;

• maximise the use of local energy sources, such as heat networks;

• minimise the carbon impact of other energy generation; and

• move away from the extraction of energy minerals, the burning of which is carbon intensive.

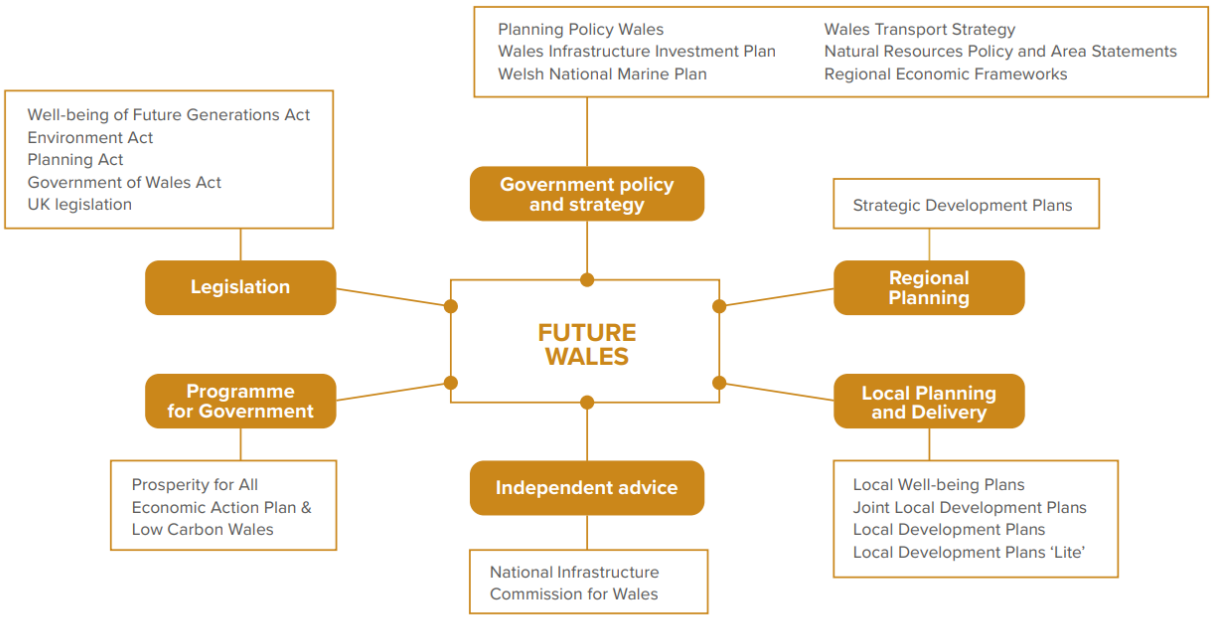
2. Planning Policy Context

Future Wales – The National Plan 2040

Future Wales – the National Plan 2040 is our national development framework, setting the direction for development in Wales to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities.

A key aspect of Future Wales is to *facilitate the decarbonisation of the economy, including energy and transport choices, and promote the principles of a circular economy.*

A particular strand of Future Wales relates to Low Carbon Technology and Decarbonising the construction industry. Future Wales recognises that *Wales is abundant in opportunities to generate renewable energy and the Welsh Government is committed to maximising this potential. Generating renewable energy is a key part of our commitment to decarbonisation and tackling the climate emergency. We have set the following ambitious targets for the generation of renewable energy: • For 70% of electricity consumption to be generated from renewable energy by 2030. • For one gigawatt of renewable energy capacity to be locally owned by 2030. • For new renewable energy projects to have at least an element of local ownership from 2020.*



Persimmon
Together, we make a home.

3. The Applicant

The detailed element of the proposed development is to be directly delivered by the Applicant, Persimmon Homes who are fully committed to responding proactively to addressing the challenges of climate change. Persimmon are fully supportive of the UK Government's targets for reductions in greenhouse gas emissions.

Sustainability is one of Persimmon's key business priorities for ensuring the creation of quality homes for customers and providing sustainable and inclusive communities. Persimmon's key business priorities align around three core pillars which provide direction to all areas of the business:

1 Building for tomorrow

Persimmon will achieve net zero carbon homes in use and in operations, supported by carbon reduction commitments, aligned to climate science. Persimmon have a key role to play in minimising their environmental impacts through their operations, their supply chain and in the homes and communities that they build.

2 Transforming Communities

Persimmon will positively transform communities directly connected to Persimmon's activities, creating great homes and places for customers to live, where people and nature can thrive, and health and well-being is integrated into developments.

3 Safe & Inclusive

Persimmon will create a safe and inclusive culture focused on the wellbeing of customers, communities and workforce. It is a priority that Persimmon's processes meet the stringent standards to deliver quality outputs in all areas, with health and safety a critical deliverable. Persimmon are committed to retaining and recruiting a diverse and talented workforce, where everyone is valued and can be themselves.

Persimmon's key business priorities have been developed in line with both current and emerging policy on sustainability with a drive to meaningfully contribute to both locally and nationally set targets.

New homes delivered by Persimmon are already c.30% more efficient than the existing national housing stock, with an average Standard Assessment Procedure ('SAP') rating of 66 or EPC rating C. The most recent dwellings delivered by Persimmon have an average SAP rating of 87, EPC rating B equivalent.

Persimmon
Together, we make a home.

Reducing Carbon Emissions

Persimmon recognise the significant role they have to play in reducing greenhouse gas emissions to limit the effects of global warming and to achieve net zero by 2050. In that regard, Persimmon have set ambitious carbon reduction targets for operations, homes in use and indirect carbon from the supply chain. The ambitious carbon targets include the following:

- achieve net zero carbon in our homes in use by 2030; and
- achieve net zero carbon in our operations by 2040.

Persimmon have also committed to a range of science-based carbon reduction targets which align with the Paris Agreement. The targets were formally approved by the blue-ribbon Science Based Target Initiative in August 2021. The science-based carbon reduction targets include the following:

- Reduce absolute carbon emissions by 46.2% in our own operations by 2030 (against a 2019 baseline); and
- Reduce carbon emissions by 22% per m^2 of completed floor area by 2030 (against a 2019 baseline).

Persimmon's ambitious carbon reduction targets are supported by roadmaps, action plans and relevant key performance indicators to ensure delivery of the commitments made.

Reduce absolute carbon emissions by **46.2%** in our own operations by **2030**

Achieve net zero carbon in our operations by **2040**

Achieve net zero carbon in our homes in use by **2030**

Reduce carbon emissions by **22% PER M²** of completed floor area by **2030**

Persimmon
Together, we make a home.

Transition to low carbon energy solutions

Persimmon are carefully planning the transition to a zero carbon society with holistic design, energy efficiency and heating solutions. Innovative products and new solutions are emerging rapidly onto the market, and Persimmon are at the forefront of this technology (described in detail below) to identify optimised solutions. Persimmon utilise Space4 timber frame products to provide an effective 'fabric first' approach to deliver increased insulation and thermal efficiency which will be a key contributor to achieving the Building Regulations requirements. Persimmon's commitment to this transition to zero carbon is further evidenced by their financial investment to expand capability in this key area with a new production facility to be based in Loughborough which is due to be operational by 2025.

The Part L 2025 Standards in Wales is due to come into force in 2026/7, requires a significant step change in energy efficiency and carbon reduction, to achieve a 75-80% reduction in carbon emissions. The legislation is still going through consultation, and whilst some elements of the design will be core, such as increased thermal efficiency, there will be a number of options available which will need to be considered as part of each site design to achieve the carbon reductions required these include:

- Further increased thermal efficiency through the fabric such as additional insulation in the floors, walls, roofs will be required, and the potential increased use of panelised walls systems

- Gas heating will be banned from new homes when the FHS comes into force during 2025, and therefore alternative heating systems will be required such as all electric heating or air source heat pumps (ASHPs).

- Options for localised heating systems such as ground source heat pumps, or small scale district heating systems will need to be explored, and will be region and location dependant. Detailed studies on each development will be conducted to ensure the most optimised solutions.

- Waste water heat recover systems, and mechanical heat and ventilation systems maybe required, which capture and re-use heat which would otherwise be wasted.

- Increased air tightness of the homes, and improved glazing specifications such as triple glazing.

- Solar PV and battery storage systems may be required to support renewable energy requirements.

All of the above options will be carefully considered for each site to ensure the best option for the local environment.

Persimmon
Together, we make a home.

At the forefront of technology

Persimmon are fully committed to responding proactively to addressing the challenges of climate change and have been undertaking a number of new technology tests and detailed trials to best optimise energy efficiency solutions including:

Zero Carbon House
Germany Beck, York

Persimmon built a Zero Carbon Home at the Germany Beck development in York to evaluate how the Future Homes Standard could be achieved in a practical, repeatable and cost efficient way.

The house is a traditional 3-bed home built in traditional methods of brick and block, to provide a true test of labour and supply capabilities, options, and technologies. The following energy efficiency steps were taken:

- Increased insulation in the walls, floors and loft
- Higher degree of air tightness to retain heat and avoid drafts;
- Solar PV panels fitted on the roof which provided electricity to a battery in the garage for storage;
- An air source heat pump for the heating system, plus a hot water cylinder;
- Two wastewater heat recovery systems included to gather heat from showers and baths;
- Installation of a 'MVHR' (mechanical, ventilation, heat recovery) system to provide fresh air and capture waste heat for re-use; and
- EV charging system, connected to the battery storage system.

Persimmon partnered with the University of Salford early in the project to provide guidance on the technologies and understand how the home functions under real life living conditions. In March 2022 a family moved in for 12-month period as a living trial and the University of Salford are monitoring the performance of the house in detail. The outcome of the trial will inform Persimmon's future design approach to achieving the Future Home Standard Building Regulations.

Infra-red integrated heating system trial
Whittlesey, Cambridge

Two dwellings on the Whittlesey development in Cambridge were built with the Project Better Energy Curv range of products. The installation included an integrated system with infra-red panel heaters, complemented with zero carbon technologies comprising an air source cylinder to heat hot water, integrated solar PV tiles, battery storage and EV charging points.

The method of infra-red heating provided by the Project Better Energy Curv range of products is exceptionally efficient, heating objects and surfaces much like the sun, rather than volumes of air. Both dwellings were recently EPC A rated.

Both dwellings have recently been sold and Persimmon will be tracking the building performance and occupier experience to gain a greater understanding on the liveability of such products and heating methods.

Air Source Heat Pumps
Lawrence Weston, Bristol

Persimmon undertook a large-scale trial of Air Source Heat Pumps ('ASHP') and a higher grade of insulation within the Space4 panel system at their Lawrence Weston development in Bristol.

Persimmon are tracking occupier experience with ASHPs, which are seen as the viable alternative to traditional gas boilers. Initial feedback is already yielding useful design feedback. For example, ASHPs requires larger radiators which is at odds with an occupiers demand for usable wall space. Therefore, alternative such as ASHPs with underfloor heating systems are under consideration as part of future design approaches.

Zero Carbon Homes Trial
Backbridge, Malmesbury

Following on from the Germany Beck trial, Persimmon are constructing another range of highly thermally efficient timber frame zero carbon homes to the Future Homes Standard. The trial uses Persimmons new Future Homes Standard wall cassettes from Space4 (which has been informed by previous trials), together with zero carbon heating from air source heat pumps.

Additional technologies such as solar PV and waste water heat recovery are also being evaluated as opportunities to deliver zero carbon homes in operation as part of the trial.

Liveability experience and energy efficiency are being tracked as part of the Beckbridge trial.

All of the above trials are just some examples of Persimmon's commitment to sustainability. The trials will provide valuable information to inform future design approaches to development.

District Heat Networks
Cranbrook, Exeter

Since 2011 Persimmon have been connecting residents to District Heat Networks in the Exeter area. Across the Cranbrook, Hill Barton and Ashworth developments Persimmon have already successfully connection c.2,000 new homes with many more to follow as part of a wider consortium development in this popular area.

In line with the Government's heat ambitions, Persimmon remain a willing participant and partner in the development of various low carbon heat network solutions.

Persimmon are also actively engaged with BEIS through the HNDU channels to explore how the proposed development in South Carlisle may support Carlisle & Cumbria's decarbonisation ambitions for their St Cuthbert's Garden Village project. In short, Persimmon have a wealth of knowledge and experience with district heat networks and continue to explore low carbon heat network solutions.

4. Securing Sustainability

The following section outlines how the various sustainability measures outlined in this Sustainability Statement can be secured in planning. It is considered that there are four key areas including:

1. **The proposed development** (as detailed in Section 3.0 of this Sustainability Statement);
2. **Construction of the proposed development**
3. **Delivery of the detailed element**
4. **Commitments to be secured at future design/ planning application stages**

1 The proposed development

The sustainability credentials of the proposed development are enshrined with design and house types.

The location, scale, and general built form of the proposed development will be secured by compliance with the submitted plans to be approved.

The design of the proposed development, for the detailed element, will be secured by compliance with the submitted house type plans.

The housing mix of the proposed development will be secured via the appropriate planning mechanism which is likely to comprises of a mix of planning conditions and planning obligations.

Delivery of the substantial amenity green and open space will be secured by compliance with the submitted plans to be approved and legally bound in a future planning obligation agreement. It is supported by an open space strategy, Green Infrastructure Plan and Landscaping Details and will be subject to a landscape management plan which will be agreed with Swansea Council by condition, ensuring all typologies of space are provided and maintained.

Commitments to on and off-site transport measures will be secured by compliance with the submitted plans to be approved and legally bound SAB Agreement with Swansea Council.

Commitments to on and off-site surface water management measures will be secured by compliance with the submitted plans to be approved and legally bound in a future planning obligation agreement.

Persimmon
Together, we make a home.

2 Construction of the proposed development

Commitments to deliver the proposed development sustainably such as reducing waste and disturbance to existing residents will be secured by compliance with a comprehensive Construction Environmental Management Plan ("CEMP").

A planning condition will secure the submission and approval of the CEMP prior to the commencement of development.

3 Delivery of the detailed element

The detailed element of the proposed development is to be directly delivered by the Applicant, Persimmon Homes, who are fully committed to responding proactively to addressing the challenges of climate change as demonstrated in this Sustainability Statement.

Persimmon will be the primary signatory on any future planning obligation which will secure their commitment to delivery of the detailed element of the proposed development.

Beyond the planning permission, the detailed delivery of the proposed development will be controlled by the current Building Regulations which this Sustainability Statement includes commitments to reducing carbon emissions.

4 Commitments to be secured at future design/planning application stages

The outline element of the proposed development will be controlled by the principles established by the site-wide plans such as the general built form and location of development. But detailed elements such the final design of the school, will be secured by planning conditions through future reserved matters planning applications.

Future delivery of the outline element will also be controlled by the current Building Regulations at the

5. Conclusion

The purpose of this Sustainability Statement is twofold: (i) to demonstrate how sustainability has been considered, addressed and/or how it will be addressed at future design/application stages and (ii) outline how the sustainability measures can be secured in planning.

The national policy context is clear, a reduction in carbon emissions is of paramount importance to mitigate the effects of climate change. A reduction in carbon emissions is required across all activities of life, including construction.

It has been demonstrated that sustainability has been at the heart of the proposed development which is inherently sustainable in both its design and location. The site sits to the immediate north of the existing town, with easy access by all modes to a range of facilities and services.

The proposed development is to be directly delivered by the Applicant, Persimmon Homes, who are fully committed to responding proactively to addressing the challenges of climate change. Persimmon are fully supportive of the UK Government's targets for reductions in greenhouse gas emissions and have set a number of ambitious sustainability targets as a business which will be adhered to as the proposed development is delivered. This site will accord with Part L 2025 standards in Wales.

The aspiration is for none of the heating for the development to be fuelled by fossil fuels.

In summary, this Sustainability Statement has demonstrated how the proposed development has considered, addressed and will secure sustainability, in line with Planning Policy and legislation requirements. There is no doubt that the proposed development maximises the contribution of renewable and low carbon energy technology, as defined in PPW 12, Future Wales and LDP policy.

Therefore, the planning application to which this Sustainability Statement supports should be approved in accordance with national planning policy and local policy guidance.

Persimmon

Together, we make your home