



SUSTAINABILITY STATEMENT

PADDOCK ROAD, KIRKBURTON

JSP SUSTAINABILITY LTD
SEPTEMBER 2026



CONTENTS

	Page
Executive Summary	2
1 Introduction	3
2 Material Selection	4
3 Water Efficiency	5
4 Policy Framework	7
5 Energy Efficiency	10
6 Evaluation	14

Report Completed By	JSP Sustainability Limited The Catalyst, Baird Lane, Heslington, York YO10 5GA 
Reviewed By	Gerard McGuigan BSc PGDipSurvey
Revision	Revision A – Number of properties updated. Revision B – NPPF references updated.



EXECUTIVE SUMMARY

- Persimmon Homes' proposed residential development off Paddock Road, Kirkburton includes the construction of up to 160 no. properties.
- Measures will be enacted throughout the construction phase to ensure a sustainable development is created.
- Persimmon Homes operates a nationwide timber procurement policy and affords advantage to materials with a lesser environmental impact.
- Eco-sanitary ware and flow restriction devices will be included in the construction of every property.
- Each home will be constructed to the prevailing Part L standards at the time of construction.



1 INTRODUCTION

JSP Sustainability Ltd has been commissioned by Persimmon Homes to prepare a Sustainability Statement to accompany the outline planning application for the proposed residential development at the land off Paddock Road, Kirkburton. The application seeks outline planning permission for all matters reserved except access for the construction of up to 160 no. residential properties, landscaping and associated highway works.

This Statement establishes the broad principles of the Sustainability strategy to be implemented across the development site. The Strategy will primarily deliver compliance with the version of Part L applicable at the time of the reserved matters submission and include renewable or low carbon technologies. The following documents have been consulted;

[National Planning Policy Framework \(NPPF\)](#) includes a presumption in favour of sustainable development. The Framework expands upon the guiding principles and objectives of a successful planning system. These include the building of a strong and competitive economy, delivering high quality housing, requiring good design and meeting the challenges of climate change.

[Approved Document L – Conservation of Fuel & Power](#) sets fabric efficiency standards and together with SAP, establishes a maximum CO₂ emission rate and primary energy rate for new build residential properties. The Approved Document is the Government's sustainable design benchmark in England.

[The Future Homes Standard: 2019 Consultation on changes to Part L and Part F of the Building Regulations for new dwellings. \(January 2021\)](#) provides a summary of the received responses to the 2019 consultation and the Government's intentions to revise Part L of the Building Regulations in 2022 and introduce a FHS in 2025.

[The Future Homes and Buildings Standards: 2023 Consultation](#) was published in December 2023. Within the consultation the Government presented two options for the technical specification of the Future Homes Standard. Both options confirm a shift to low carbon electric heating.

[Kirklees Local Plan Strategy and Policies 2019](#) includes policy LP26, Renewable and Low Carbon Energy, which expects new development to be delivered sustainably in accordance with policies of the National Planning Policy Framework. Therefore, encouraging local authorities to “adopt proactive strategies to mitigate and adapt to climate change”.



2 MATERIAL SELECTION

Persimmon Homes operates a nationwide timber procurement policy. At its core is a requirement that timber products are sourced from suppliers who can adequately demonstrate and provide appropriate evidence that the supplied material is responsibly and legally procured from a sustainable source. In all instances, suppliers must present Chain of Custody or FSC certificates demonstrating compliance prior to the purchase of materials.

Included within Persimmon Homes Environmental Policy is a commitment to minimise environmental impacts from all operations and activities, to be efficient with materials, avoid the creation of waste, and a requirement to use sustainable, re-usable or recyclable materials where possible. This policy is applicable to all Persimmon Homes suppliers. As part of the procurement process, Persimmon Homes reviews the environmental credential of suppliers, and requires compliance with its Supplier Principles, which includes requirements on environmental compliance, use of materials, use of toxic and hazardous materials, health and safety, working hours, age and benefits, discrimination and ethical behaviour.



3 WATER EFFICIENCY

Approved Document G of the Building Regulations requires each new home to achieve a water consumption rate of no more than 125 litres per person per day. Persimmon Homes proposes to incorporate low flow sanitary ware and eco-sanitary products into the design of each property to achieve a low water consumption rate. This strategy will permanently reduce water consumption. The tables below summarise the proposed flow rates and capacities and the water efficiency calculation.

Table 1 – Flow Rates & Capacities

Fitting	
Toilets	6 & 4 litre dual flush
WHB Taps	5 litres/min
Kitchen Taps	12 litres/min
Bath	181 litres
Shower	6 litres/min



Table 2 - Water Efficiency Calculation

Installation Type	Unit of Measurement	Capacity/Flow Rate (1)	Use Factor (2)	Fixed Use (litres/ person/ day) (3)	Litres per Person day. =[(1) x (2)] +(3) (4)
WC (Dual Flush)	Full Flush (litres)	6.00	1.46	0.00	8.76
	Part Flush (litres)	4.00	2.96	0.00	11.84
Taps (excluding kitchen tap)	Flow rate (litres/min)	5.00	1.58	1.58	9.48
Bath (where shower present)	Capacity to overflow (litres)	181	0.11	0.00	19.91
Shower (where bath present)	Flow rate (litres/min)	6.00	4.37	0.00	26.22
Kitchen/utility room sink taps	Flow rate (litres/min)	12.00	0.44	10.36	15.64
Washing machine	Litres/kg dry load	8.17	2.10	0.00	17.16
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
TOTAL	(5)				113.51

(5)	Total Internal Water Consumption	113.51
(6)	Normalisation Factor	0.91
(7)	Internal Water Consumption [(5) x (6)]	103.29
(8)	External Water Use	5.00
(9)	Part G Water Consumption [(8) + (7)]	108.29

The calculations above confirm a water consumption of 108.29 litres per person per day, with an internal consumption of 103.29 litres per person per day.



4 POLICY FRAMEWORK

4.1 National Planning Policy Framework December 2026

Paragraph 164b) of the National Planning Policy Framework (NPPF) asks that new development Policy CC1 notes that *“development plans should take a proactive approach to mitigating climate change and supporting the transition to net zero, in accordance with the objectives and provisions of the Climate Change Act 2008.”*

Policy CC2 notes that development proposals should *“use design approaches which conserve energy and other resources in accordance with policy DP3(2)(b)...take advantage of opportunities to draw low carbon energy from decentralised networks (such as district heat networks), where these are available, and to co-locate energy and heat generators and users, especially to take advantage of suppliers of surplus heat and energy.”*

Policy DP3 notes that new development should *“contribute to climate change mitigation and adaptation and the transition to net zero by using building layouts, building orientation, massing, landscaping and materials which conserve energy and other resources, and which minimise risks from the impacts of climate change including overheating.”*

4.2 Future Homes Standard

In January 2021 the Government responded to the public consultation on the Future Homes Standard (FHS) and proposed revisions to Part L. The Government confirmed;

“The introduction of the Future Homes Standard will ensure that an average home will produce at least 75% lower CO₂ emissions than one built to current energy efficiency requirements...Homes built under the Future Homes Standard will be “zero carbon ready”, which means that in the longer term, no further retro-fit work for energy efficiency will be necessary to enable them to become zero carbon homes as the electricity grid continues to decarbonise.”

“The Building Regulations will continue to set a performance-based standard rather than mandating or banning the use of any technologies. However, to ensure that new homes are zero carbon ready, we intend to set the performance standard of the Future Homes Standard at a level which means that new homes will not be built with fossil fuel heating, such as natural gas.”

“Currently electrification is one of the few proven scalable options for decarbonising heat. As set out in the consultation, we expect heat pumps will become the primary heating technology for new homes under the Future Homes Standard.”



A consultation on the full technical specification for the FHS was launched in December 2023. Within the consultation the Government presented two options for the notional dwelling within the new Home Energy Model. However, both recipes include the specification of electric heat pumps with a co-efficient of performance greater than one.

Importantly the Government concluded that further improvements to fabric energy efficiency were not desirable or necessary;

The performance requirements in this consultation closely resemble the fabric standards in the 2021 Part L uplift to the Building Regulations. We investigated including better walls, floors, roofs, triple glazing and improved thermal bridging. However, the only cost effective and practical improvement we found could be made to the standard was an improvement in airtightness. This improvement in airtightness is matched with the change to a decentralised mechanical extract ventilation system, in line with Approved Document F, Volume 1: Dwellings.

The decision to keep fabric standards largely the same is driven by several factors. Firstly, the level set in 2021 will ensure that (with adequate ventilation) new homes do not generally experience damp and mould or excessive temperatures; an increase in fabric beyond this level does not give significant additional benefit. Secondly, it allows efficient low carbon heating, including modern heat pumps, to function well. The move to low carbon heating is central to the government's commitments to decarbonise housing, and so fabric must be set at a level that allows these systems to work efficiently. Again, increasing fabric beyond the proposed level does not deliver significant gains to the efficiency of heating systems. Thirdly, because the electricity grid is decarbonising rapidly, and the efficiency of heat pumps significantly reduces energy demand, further reducing total energy use is relatively less important than switching to electric sources of heat in efforts to decarbonise. Grid decarbonisation also means that fabric improvements are increasingly not a cost-effective intervention to reduce carbon. This means that as we increase fabric beyond the proposed level, the monetary value of carbon saved by increasing fabric efficiency is less than the cost of installing that additional fabric. As such, there are other interventions that decrease carbon and consumer bills in a more cost-effective way, such as (above) switching heat source and including solar PV panels."

Paragraph 4.2.3, Future Homes & Building Standard Consultation 2023

4.3 Part L of the Building Regulations

In anticipation of the FHS, the Government amended Part L of the Building Regulations on June 15th 2022 to deliver a saving of 31% in CO₂ emissions. The revisions are expected to provide the industry and supply chains with the incentive, skills and time to prepare for the FHS. The Part L 2021 Regulations include improved u-value backstops, the inclusion of a new Primary Energy



target, updated CO₂ emission factors to take account of the progressive decarbonisation of the national grid and the retention of the Fabric Energy Efficiency Standard. The formulation of the target recipe also makes it necessary to include renewable generation or low carbon heating to deliver compliance with the target metrics.

4.4 Kirklees Local Plan Strategy and Policies

Policy LP26, Renewable and low carbon energy, notes the following;

“Renewable and low carbon energy proposals (excluding wind) will be supported and planning permission granted where the following criteria are met:

- a. The proposal would not have an unacceptable impact on landscape character and visual appearance of the local area, including the urban environment;*
- b. The proposal would not have either individually or cumulatively an unacceptable impact on protected species, designated sites of importance for biodiversity or heritage assets;*
- c. The statutory protection of any area of development is mitigated so as not to cause unacceptable detriment to local amenity;*
- d. Any significant adverse effects of the proposal are mitigated by wider environmental, social and economic benefits.*

Where the above criteria are met, the council encourages dialogue with local community groups promoting community renewable and low carbon energy schemes.

The creation of district heat networks is encouraged across Kirklees. Heat networks can be developed at different scales and all new developments should consider their potential. Proposals requiring a master plan should explore the potential of developing a heat network or connecting to an existing network”.

4.5 Proposed Strategy

Each home at the application site will be constructed to the version of Part L of the Building Regulations in force at the time of construction. At the time of writing the Government has consulted on the full technical specification of the Future Homes Standard, the implementation period of the Regulations and the operation of transitional measures. The Government has committed to a consultation response by the close of 2025 but there remains uncertainty over the exact date of implementation. Therefore, it is not possible to say with certainty if any of the plots at the application site will commence post implementation of the Standard.

Full details on the energy efficiency standards and low carbon or renewable energy measures will accompany the reserved matters application.



5 ENERGY EFFICIENCY

Local policy and national guidance necessitate that all new development should be energy efficient. Energy efficient design however is not limited to low fabric u-values. Daylighting, solar gain, thermal mass, shading, ventilation and construction detailing are all elements of intelligent low energy design.

5.1 Passive Solar Designs

In simple terms designers should seek to plan and locate homes so that each of the principal living rooms can take advantage of the positive benefits of solar gain. By doing so once can reduce the space heating and lighting requirement of a new home.

It is entirely possible for developers to integrate sufficient glazing into the design of every home on any given development. And indeed, the standard Persimmon Homes' house type portfolio features adequate glazing provision. However, it is not realistic to suppose that every home will have a favourable southerly orientation. The location of plots is necessarily a compromise between the size and shape of a site, the location of highways and key infrastructure, the location of planned or existing landscaping, the desire to achieve a satisfactory mix of house type designs and tenure and the agreed density of a scheme.

This desire must be balanced with the need to prevent overheating in summer months. Part O of the Building Regulation requires designs to restrict the potential for excessive solar gains and provide adequate ventilation in all homes to remove heat naturally from a home. Persimmon Homes will submit details to the relevant Building Control Body that compliance with Part O is satisfied. This can take the form of simplified calculations or dynamic thermal models.

5.2 Thermal Mass

The building specification of a home or building should seek to provide adequate thermal mass. In this way the building envelope and internal structures absorb heat from the sun and the internal heating system. The heat is released when it is exposed to cooler temperatures. This helps the internal temperature remain cool when it is warm outside and warm with it is cool outside. The higher the thermal efficiency of a material, the better it is at internalising and storing temperatures.

5.3 Fabric U-Values

Part L establishes fabric backstops or minimum performance standards. However, the Fabric Energy Efficiency Standard and the Target Recipe within SAP 10 require developers to achieve higher standards than the backstops.



5.4 Persimmon Homes Fabric Specification

Persimmon Homes exposure to the marketplace has confirmed that purchasers demand energy efficient homes with low operating costs and familiar user-friendly technologies. As such the Group's current construction specification has been tailored to these demands and incorporates many of the lean and clean measures of the Energy Hierarchy. Listed below are some of the measures that will be incorporated into the detailed design of the scheme;

- The construction specification of every home will include high levels of insulation in the ground floor, external walls and roof spaces. This will lessen heat loss from the building envelope and lower the energy requirement of every home;
- Homes at the development may be built using traditional masonry construction methods. This approach contributes to climate resilience through thermal mass properties which help moderate internal temperatures and reduce reliance on mechanical heating and cooling systems. As a result, operational energy demand is reduced, aligning with national and local policy objectives to lower carbon emissions in the built environment.
- As the thermal efficiency of the building improves, heat losses from cold bridging takes on greater prominence. The detailed house type designs will incorporate intelligent junction design, including the specification of thermally broken lintels in traditional construction forms, to limit heat loss at non-repeating junctions; and
- High performance double glazing will be installed in every property.

The table below provides a summary of the energy efficiency standards delivered by Persimmon Homes current national construction specification;

Table 4 – Specification Summary

Element	Part L 2021	Persimmon Homes
Wall (Traditional)	0.26W/m ² K	0.24W/m ² K
Party Walls	0.00W/m ² K	0.00W/m ² K
Cold Roof	0.16W/m ² K	0.09W/m ² K
Floor	0.18W/m ² K	0.12W/m ² K
Glazing	1.60W/m ² K	1.30W/m ² K
Door	1.60W/m ² K	1.20W/m ² K
Air Permeability	5.0 m ³ /(h.m ²) @ 50 Pa	5.01 m ³ /(h.m ²) @ 50 Pa

Note that the specification above is specific to Part L 2021. Future reserved matters applications will provide clarity on the standards relevant at the time of submission and the standards to be delivered by Persimmon Homes.



5.5 Efficient Building Services

The following features are present in the current Persimmon Homes specification;

- 100% low energy lighting will be included in the services specification of every home;
- System 3 continuous extract fans will be provided in each home's kitchen and wet rooms. The system provides a continuous trickle extract rate with a user operated boost function. The installations are accompanied with background ventilation and represent a low energy natural ventilation strategy;
- Highly efficient heating systems designed to operate at 55 degrees C will be included in the heating designs of every home. This may include natural gas boilers or low carbon heating. The relevant reserved matters energy strategy will confirm the specific heating solution for each parcel;
- Heating systems will include time and temperature controls; and
- Home User Guides and careful inductions in the operation of high efficiency low carbon heating systems will be provided to homeowners.

5.6 Heat Pumps

The Government has consulted on two options for the technical specification of the FHS. Both options feature low carbon electric heating with a co-efficient of performance of 2.5+. This makes the specification of heat pumps all but essential to deliver compliance with the Standard.

Ground source heat pumps (GSHPs) work by extracting heat from the ground. A refrigerant is pumped through a series of underground pipes. The heat from the ground is absorbed into the liquid, compressed to a higher temperature and then passed through a heat exchanger before being used to heat water for space and hot water heating. Air source heat pumps (ASHPs) work in a similar fashion, except the refrigerant runs within a compact network of pumps in an external unit which extracts heat from the outside air.

Both variants are highly efficient, with correctly designed and installed systems operating with coefficients of performance of between 3 & 4. The systems are fed by mains electricity and so represent a zero-carbon ready solution to space heating.

GSHP installations require a ground loop or borehole distribution network which demands copious external space. This makes it an unappealing solution for a large housing development, such as Popes Lane. There are no obvious impediments to the installation of ASHPs at the



application site. Indeed, it is likely that most homes will be heated via this technology to satisfy the FHS.

5.7 Photovoltaic Panels

Photovoltaic (PV) panels are compatible to most roof designs and in advance of reserved matters applications Persimmon Homes will take into consideration the need to install arrays when siting plots, selecting house types and designing roofscapes. The installations will provide each homeowner with a free and zero carbon source of electricity. Furthermore, the homeowner/homeowners will benefit from the Smart Export Guarantee for generation that is exported to the Grid. The exact financial benefit to the homeowner will be entirely dependent on the ratio of electricity consumed and exported.

Future reserved matters applications will provide details on the provision or otherwise of PV panels.

5.8 District Heat Networks

One could examine a district heat network powered by commercial scale heat pumps, or a communal ambient loop network supplying individual ground source heat pumps. However, it is not obvious how such a network would be preferable to individual heat pump installations. Individual systems give homeowners the freedom to change utility suppliers and avoid charges associated with networks. The absence of distribution losses would also amplify the energy reduction performance of individual heat installations.



6 EVALUATION

This Statement accompanies the outline planning application for the Persimmon Homes residential development off Paddock Road, Kirkburton and includes details on material selection, water efficiency and energy efficiency. The key endeavours are;

- Persimmon Homes operates a robust Sustainable Procurement Policy which emphasises the legal and sustainable sourcing of timber and other building materials;
- Eco sanitary ware and flow restriction devices will be installed in every property;
- The scale of development is such that some homes at the application site may commence post the implementation of the Future Homes Standard. A public consultation on the Standard has concluded, though the Government has still to respond to the consultation. As such this Statement is silent on the exact energy efficiency measures that will be form part of the Strategy post the implementation of the Standard;
- The reserved matters submission for the development site will include an updated Energy Strategy providing consumption and emission data demonstrating compliance with the standards relevant at the time of submission;
- Low carbon air source heat pumps are likely to feature in the services design of the development. They will deliver compliance with the FHS and a zero-carbon ready development;
- A District Heat Network is not a viable solution at the development site. In this case, there are no obvious advantages to a district heat network over individual dwelling level installations; and
- Photovoltaic panels may feature in the design. Their provision would provide a zero-carbon source of electricity to serviced homes.