



ENERGY STATEMENT

CHURCH BARTON HOUSE, HORNS LANE, PAGHAM

JSP SUSTAINABILITY LTD
DECEMBER 2025



CONTENTS

	Page
Executive Summary	2
1 Introduction	3
2 Energy Strategy	5
3 Evaluation	11

Report Completed By	JSP Sustainability Limited The Catalyst, Baird Lane, Heslington, York YO10 5GA 
Reviewed By	Gerard McGuigan BSc PGDipSurvey
Signature	
Revisions	Revision A – site reference updated. Revision B – reference to photovoltaic arrays added to the strategy. Revision C – reference to PV generation added to the strategy.



EXECUTIVE SUMMARY

- Hampshire Home's residential development at Church Barton House, Horns Lane, Pagham includes the construction of 65 no. properties.
- The planning approval for the development site requires the inclusion of renewable or low carbon technologies capable of generating 10% of the site's energy requirement.
- The energy strategy for the development includes robust standards of energy efficiency capable of complying with the revised Fabric Energy Efficiency Standard.
- Photovoltaic arrays will be installed on the roof slopes of every home.
- An electric heating strategy will be pursued at the development. Low carbon air source heat pumps will provide the space and hot water heating for every home.



1 INTRODUCTION

JSP Sustainability Ltd has been commissioned by Hampshire Homes to prepare an Energy Statement in response to condition 22 of the outline planning approval (P/25/17/OUT) for the residential development at Church Barton House, Horns Lane, Pagham. The development includes the construction of 65 no. homes, landscaping, public open space and associated highway works. For completeness the condition is listed below;

“Before development commences a scheme identifying the principles to be incorporated into detailed building design as the means of energy conservation, together with on-site energy renewable devices shall be submitted to and agreed with the Local Planning Authority. Such scheme as is submitted shall seek as a target the provision of on-site renewable energy which will generate an estimated 10% of annual energy requirements of the buildings granted planning permission. In determining the provision of on-site energy generation account will be taken of the impact on the viability of the development. Such scheme as is approved will be implemented in accordance with the scheme.”

Condition 22, P/25/17/OUT

This Statement will detail the energy efficiency and renewable energy measures that will be incorporated into the design and build of every home at the development site. The proposals will deliver compliance with the most recent revisions to Part L of the Building Regulations and a minimum 10% energy from renewable sources. A number of documents have been used to complete this report. These include;

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 sets fabric efficiency standards and together with SAP, establishes a maximum CO₂ emission 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

[Arun District Local Plan](#) includes policy ECC SP2, Energy and Climate Change Mitigation , requires all major development to “produce 10% of the total predicted energy requirements from renewable or low carbon energy generation on site.”



2 ENERGY STRATEGY

2.1 Local Policy

Policy ECC SP2 require new development “to be energy efficient and to demonstrate how they will;

- a. *Achieve energy efficiency measures that reflect the current standards applicable at the time of submission;*
- b. *Use design and layout to promote energy efficiency; and*
- c. *Incorporate decentralised, renewable and low carbon energy supply systems, for example small scale renewable energy systems such as solar panels.*

All major developments must produce 10% of the total predicted energy requirements from renewable or low carbon energy efficiency generation on site, unless it can be demonstrated that this is unviable.”

2.2 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

2.3 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.



2.4 Proposed Strategy

In response to local policy and the new Building Regulations Part L, Hampshire Homes will construct every home at the application site to a robust energy efficient specification capable of delivering compliance with the revised Fabric Energy Efficiency standard. Furthermore, every home will be heated using low carbon air source heat pumps in advance of the introduction of the FHS. Their inclusion will deliver zero carbon ready homes from the point of first occupation requiring no further retrofit measures by homes owners.

2.5 Energy Efficiency Measures

Hampshire Home's 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 have been 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;
- The detailed house type designs will incorporate intelligent junction design to limit heat loss at non-repeating junctions;
- The house types elevations will have sufficient glazing provision in the principal living rooms to allow each home to benefit from helpful solar gain. This reduces the space heating and lighting requirement of each home;
- Each home will be heated using an efficient, low NOx emissions natural gas boiler;
- The heating designs of each house type will include thermostatic and time controls. The heating systems will be designed to a 45 degree flow rate;
- Energy efficient lamps will be installed in every light fitting;
- Each property will be naturally ventilated using efficient decentralised and continuous extract fans to ensure the internal living environment will be healthy and comfortable;
- Each entrance will be illuminated with an energy efficient external light or provision will be made for a purchaser to install such a fixture; and
- The white goods installed in each property or offered to purchasers will be energy efficient with an A+/A rating.



The table below provides a summary of the energy efficiency standards to be achieved in the design and construction of each home;

Table 1 – Specification Summary

Element	Part L	Specification
Wall	0.30W/m ² K	0.18W/m ² K
Party Walls	0.20W/m ² K	0.00W/m ² K
Cold Roof	0.20W/m ² K	0.11W/m ² K
Floor	0.25W/m ² K	0.12W/m ² K
Glazing	2.00W/m ² K	1.40W/m ² K
Door	2.00W/m ² K	1.10W/m ² K
Air Permeability	10 m ³ /(h.m ²) @ 50 Pa	4.50-5.0 m ³ /(h.m ²) @ 50 Pa

The Government has concluded a consultation on the technical specification and the operation of transitional measures for the Future Homes Standard. A response is expected by the close of 2025. At the time of writing, it is not possible to forecast how many plots at the development site, if any, will be constructed post the implementation of the Standard. However, Hampshire Homes will comply with any revised Regulations, and where necessary adhere to revised energy efficiency standards on plots that may start following the introduction of the Standard.

2.6 Housing Heating Strategy

The services specification of every house will include low carbon monobloc air source heat pumps to provide 100% of each property's space heating and hot water requirement. The systems are highly efficient. Correctly designed, commissioned and installed systems operate with coefficients of performance of 3-4. The systems are fed by mains electricity and their carbon reduction performance is expected to accelerate further as the National Grid decarbonises. The technology has also been identified by the Climate Change Committee and the Government as the preferred solution to low carbon heating in homes. Each home will be **zero carbon ready** at the point of first occupation.



2.7 Forecasted Emission Rate & Energy Requirement

The specification summarised overleaf was modelled in SAP 10 to determine the anticipated emission rate and regulated energy requirement of the site. The table below summarises the results calculated.

Table 2 – Pagham Emission Rate

House Type	Target Emission Rate (kg/year)	Calculated Emission Rate (kg/year)	Total Energy Requirement (kWh/year)	Energy Consumption (kWh/year)
1 Bed Bungalow	4,387.21	1,538.60	45,740.76	27,927.02
2 Bed Bungalow	4,702.14	1,754.22	50,743.23	30,620.93
2 Bed House	13,115.70	3,708.90	111,167.45	69,001.58
3 bed House	23,570.96	6,913.54	203,570.95	125,579.20
4 Bed House	6,942.60	2,077.95	61,562.50	38,591.91
TOTAL	52,718.60	15,993.21	472,784.89	291,720.65

The site's forecasted emission rate of 15,993.21kg/year, represents a saving of 69.66% over and above the Building Regulations 2021. As an electrified scheme, the emission rate will lessen in the years ahead as the National Grid is decarbonised.

While heat pumps use electricity in operation, they deliver more energy to a home than they consume in operation (this is the co-efficient of performance). The energy generated by the heat pump is sourced from the ambient air adjacent to the external monobloc and for this reason is considered renewable. Afterall, the energy within the adjacent environment is not depleted by the heat pump and is continually renewed. The calculations confirm that 181,064.25kWh/year of energy will be generated by the heat pumps. This equates to 38.30% of the site's energy requirement (regulated & unregulated).

2.8 Photovoltaic Panels

In June 2025, the Government confirmed that homes constructed to the Future Homes Standard will benefit from photovoltaic arrays. However, the scale of provision will not be confirmed until the Government publishes its' response to the 2023 consultation. In advance of this, Hampshire Homes has committed to providing PV arrays capable of generating 29,172.07kWh/year of electricity. This is equal to 10% of the site's residual energy consumption. The arrays will be apportioned to every homes such that each benefits from a free and zero carbon source of electricity. The arrays will offset an additional 3,967.40kg/year of CO₂ emissions.



2.9 Electrical Vehicle Charging

To support the transition to low carbon transportation, electrical vehicle charging points will be provided to every home. The charging points will comply with the specification requirements of Approved Document S. In addition, infrastructure allowing for the future connection of charging points to the visitor parking bays will be installed.



3 EVALUATION

This has been prepared in response to the outline planning approval for the residential development off Horns Lane, Pagham. The development must include renewable technologies capable of generating 10% of the site's regulated energy requirement. The previous pages of this Statement have detailed the fabric energy efficiency standards and renewable energy measures proposed by Hampshire Homes. However, they can be summarised as follows;

- Each home will achieve robust levels of energy efficiency through the careful selection of insulation and intelligent building design and will comply with the amended Fabric Energy Efficiency Standard;
- The lighting, heating and ventilation services of each home will consume energy efficiently;
- The development will pursue an electric heating strategy in advance of the introduction of the Future Homes Standard;
- Low carbon and highly efficient heat pumps will be included in the services design of every home;
- Photovoltaic arrays will be installed on the roof slope of every home;
- The heat pumps are forecast to generate 38.30% of the site's total energy requirement;
- Photovoltaic arrays capable of generating 29,172.07kWh/year of electricity will be installed on the roof slopes of every home;
- The forecasted emission rate represents a 77.19% saving over Part L 2021; and
- As a zero carbon ready development, the emission rate will shrink in sync with the National Grid.

In conclusion we recommend the approval of these measures by the local planning authority.