



ENERGY STATEMENT

DXC SITE, EUXTON LANE, CHORLEY

JSP SUSTAINABILITY LTD
DECEMBER 2021



CONTENTS

	Page
Executive Summary	2
1 Introduction	3
2 Energy Strategy	4
3 Evaluation	9

Report Completed By	JSP Sustainability Limited Innovation Centre, Innovation Way, York Science Park, Heslington, York, YO10 5DG 
Reviewed By	Gerard McGuigan BSc PGDipSurvey
Signature	



EXECUTIVE SUMMARY

- The proposed development at the former DXC site, Chorley includes the construction of 118 no. homes by Bellway Homes.
- Bellway Homes proposes to construct each home to an efficient fabric and services specification.
- Photovoltaic panels capable of generating 42,605.03kWh/year will be installed across the development.
- The site's emission rate will better Part L by 19%.



1 INTRODUCTION

JSP Sustainability Ltd has been commissioned by Bellway Homes to complete an Energy Statement to accompany the planning application for the proposed residential development at the former DXC site, Euxton Lane, Chorley. The application seeks permission for the construction of 118 no. homes, landscaping and associated highway works.

This Statement details the energy efficiency and renewable energy measures proposed by Bellway Homes to achieve a sustainable development in line with national and local policy. 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 L1A](#) 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.

[Central Lancashire Core Strategy 2012](#) includes policy 27, Sustainable Resources and New Developments, which requires new development to achieve Code for Sustainable Homes Level 4. Since the suspension of the Code in 2015, the local planning authorities require new residential development to achieve a 19% reduction.



2 ENERGY STRATEGY

2.1 Strategy Proposal

Bellway Homes proposes to construct each home to an efficient fabric and building services specification and install photovoltaic panels on the roof slopes of a number of properties such that the site's net emission rate better Part L of the Building Regulations by 19%.



2.2 Energy Efficiency Design Measures

Bellway 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 company'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;
- Each of the house types elevations has sufficient glazing provision to the principal living rooms to allow each home to benefit from solar gain. This reduces the space heating and lighting requirement of each home;
- The house type elevation drawings confirm that the rear elevation of each property accounts for a majority of the glazing provision to each home. The exception to this are the corner plots, where a majority of the glazing is located on the side elevations, but importantly to the bedrooms, living room and kitchen/dining room;
- The detailed house type designs incorporate the thermal bridging guidance produced by Constructive Details and others, thereby reducing a significant source of heat loss;
- An efficient gas condensing boiler will be installed in each property. The specified boilers will have confirmed NO_x emissions rate of 40mg/kWh or less. The heating designs of each house type will include dual zone controls with delayed start thermostats;
- Energy efficient lamps will be installed in every light fitting;
- Each property will be naturally ventilated using a positive input ventilation system which will ensure each home complies with Part F and a healthy internal environment is maintained;
- 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 overleaf 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	Enhanced Specification
Wall	0.30W/m ² K	0.24W/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	0.15W/m ² K
Glazing	2.00W/m ² K	1.30W/m ² K
Door	2.00W/m ² K	1.40W/m ² K
Air Permeability	10 m ³ /(h.m ²) @ 50 Pa	5.0 m ³ /(h.m ²) @ 50 Pa



2.3 Reduced CO₂ Emission Rate

The specification summarised overleaf was modelled in SAP to determine the site's forecasted CO₂ emission rate. The table below summarises the calculations;

Table 2 – DXC Chorley Energy Efficiencies

House Type	No	Target Emission Rate (kg/year)	Emission Rate (kg/year)
Bowyer	3	6,360.65	6,175.10
Scrivener	7	13,160.08	12,774.38
Farrier	9	17,703.50	17,022.96
Sawyer	10	18,495.20	16,777.44
Mason	8	14,088.14	12,882.58
Baxter	9	15,249.90	14,813.96
Lymner	7	11,910.53	11,113.98
Chandler	10	15,051.00	13,736.20
Thespian	3	4,713.11	4,300.78
Tailor	23	30,993.61	28,407.22
Joiner	23	26,308.88	24,146.50
Apartments	6	6,563.34	6,245.24
TOTAL	118	180,597.94	168,396.34

The calculations confirm that the site has a forecasted emission rate of 168,396.34kg/year. This represents a saving of 12,201.60kg/year of 6.76% over Part L of the Building Regulations.



2.4 Photovoltaic Panels

Bellway Homes will install photovoltaic arrays on the roof slopes of a number of properties sufficient to generate 42,605.03kWh/year of electricity and offset 22,112.01kg/year of CO₂ emissions. Such installations will ensure the development site's net emission rate better Part L of the Building Regulations by at least 19%. The SAP Appendix M calculation methodology estimates that arrays totalling 49.6kWp will meet this generation target. Note however that the Microgeneration Certification Scheme method of calculation will determine a lower kWp figure for the same level of generation.



3 EVALUATION

JSP Sustainability was commissioned by Bellway Homes to review the sustainable construction measures to be incorporated into the design and build of the proposed development at the DXC site, Euxton Lane, Chorley and confirm compliance policy 27 of the Central Lancashire Core Strategy. Following a review, we can confirm the following;

- Bellway Homes proposes to construct each home to an efficient construction specification incorporating high levels of insulation and intelligent building services.
- The building services of each home will include dual zone heating controls, smart metering and A-rated compliances which will assist home owners in regulating and reducing their long-term energy consumption.
- The proposed energy efficiency measures will shrink CO₂ emissions by 12,201.60kg/year or 6.76%
- Photovoltaic arrays capable of generating 42,605.03kWh/year of electricity will be installed on the roofs of a number of properties.
- The proposed measures will shrink CO₂ emissions by 34,313.61kg/years or 19% over and above Part L of the Building Regulations.

The measures proposed by Bellway Homes will deliver a sustainable development compliant with local policy. As such we recommend the adoption of these measures by Bellway Homes and their approval by the Local Planning Authority.