



ENERGY STATEMENT

MANOR FARM, BEDHAMPTON

JSP SUSTAINABILITY LTD
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EXECUTIVE SUMMARY

- The proposed development at Manor Farm, Bedhampton includes the construction of 50 no. properties and associated works.
- The developer is required by Havant Borough Council to achieve a 19% improvement over the Building Regulations Part L1A.
- Bargate Homes proposes to construct each home to an efficient construction specification and install roof mounted photovoltaic arrays on a number of homes.



1 INTRODUCTION

JSP Sustainability Ltd has been commissioned by Bargate Homes to prepare an Energy Statement to accompany the planning application for the proposed residential development at Manor Farm, off Lower Road, Bedhampton. The development proposals include the construction of 50 no. homes, landscaping and associated works.

This Statement will detail and assess the energy efficiency and renewable energy measures proposed by Bargate Homes to achieve a 19% improvement over the Building Regulations L1A. 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 and was most recently amended in April 2014.

Havant Borough Council Local Plan Pre-Submission Draft includes policy E12 which requires new residential development to achieve a 19% improvement over the Building Regulations Part L1A Target Emission Rate.



2 ENERGY STRATEGY

2.1 Proposed Strategy

In response to emerging policy E12, Bargate Homes proposes to build each home to an energy efficient construction specification and install roof mounted photovoltaic arrays on each property such that a 19% improvement is achieved.

2.2 Energy Efficiency Measures

Bargate 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 developer'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.
- The detailed house type designs will incorporate the thermal bridging guidance produced by the Constructive Details, thereby reducing a significant source of heat loss.
- An efficient condensing boiler will be installed in each property. 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 efficient decentralised 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.

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	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	0.10W/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	1.40W/m ² K
Air Permeability	10 m ³ /(h.m ²) @ 50 Pa	5.0 m ³ /(h.m ²) @ 50 Pa

2.3 Renewable Technologies

Bargate Homes proposes to install photovoltaic arrays on the roof slopes of every home such that the DER of each property better Part L1A by 19%. The arrays will be sized specifically to achieve this level of performance and will generally be installed on the rear facing roof slope.

Table 2 – House Type DERS & Indicative PV Sizes

House Type	TER	DER	PV Arrays (kWp)	% Improvement
A	15.59	12.15	0.9	22.07
B & C	17.82	13.22	0.6	25.81
E	18.81	14.56	0.3	22.59
F	18.62	14.17	0.6	23.90
G	19.35	15.06	0.3	22.17
H	18.47	14.02	0.6	24.09
J	16.89	13.17	0.6	22.02
K	16.36	12.58	0.6	23.11
L	16.29	12.50	0.6	23.27
M	20.72	16.02	0.6	22.68
N	18.25	14.65	0.6	19.73
HA	18.52	14.51	0.6	21.65
AA	16.16	13.02	0.6	19.43
JA	17.10	13.38	0.6	21.75
O	17.63	13.34	0.6	24.33

The calculations confirm that the strategy proposed by Bargate Homes will comply with Policy E12.



3 EVALUATION

Bargate Homes is required by emerging policy E12 of the Havant Borough Council Local Plan to achieve a 19% improvement over the Building Regulations Part L1A at their Manor Farm development in Bedhampton. JSP Sustainability was instructed by the Bargate Homes to review their proposals to address the policy. Following calculations we can confirm the following;

- Each property will be designed and constructed to a specification which betters the minimum standards of Part L of the Building Regulations and the Domestic Building Services Compliance Guide.
- Photovoltaic arrays between 0.3 & 0.9kWp will be installed on the rear facing roof slopes of every property.
- Each property will achieve a minimum 19% improvement over Part L1A.

In conclusion the proposals advanced by Bargate Homes comply with policy E12. We therefore recommend the adoption of the proposals by Bargate Homes and their approval by Havant Borough Council.