ALLISON HOMES

ENERGY & SUSTAINABILITY STATEMENT

LAND EAST OF NORMANTON ROAD

CROWLAND

August 2025

Rev -



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1. Introduction

1.1 This statement has been developed in support of the full planning application for 80 dwellings at Land East of Normanton Road in Crowland.

1.2 This report reviews the proposed energy and carbon reduction strategy advanced by Allison Homes within the context of local and national planning policy.

1.3 The following documents were considered when formulating the report:

- National Planning Policy Framework 2024 – The NPPF strengthens the emphasis on sustainable development and encourages Local Authorities to adopt standards consistent with the Government's zero carbon building policy and other nationally described standards.

- Building Regulations Part L 2021– Approved Document L 2021 Conservation of Fuel and Power in new dwellings sets minimum energy efficiency and fabric efficiency standards for all new domestic buildings

- South East Lincolnshire Local Plan (2011-36) – Policy 3 (Design of New Development, Policy 31: Climate Change and Renewable and Low Carbon Energy

1.4 This statement highlights the proposed sustainable measures used throughout site.

2. Sustainable Design

2.1. The building fabric, the building services and the management of a building broadly determine the energy use of a building. In understanding this, design teams can take measures to advance sustainable design from the earliest stages of a development. However, sustainability is not limited to issues concerning energy consumption. Material selection, the protection of local environments, addressing flood risk and the health and wellbeing of future occupants are all issues requiring consideration.

2.2. Allison Homes will undertake the following through the design and construction of the development to improve sustainability:

- Local sourcing of bricks and materials where possible.
- Use of sustainable urban drainage systems on site.

- Reduction of impermeable surfaces by providing permeable paving where required for drainage.
- Recycling and re-use of waste on site
- Accurate specifications of materials and volumes.
- Plots and gardens orientated to maximise solar gain where possible.
- Internal and external recycling facilities in line with South Holland standards.

3. Water Efficiency

3.1. The average person consumes some 150 litres per day; this represents an annual increase of 1% since the 1930s. Despite the United Kingdom's wet and temperate climate, climate change will most probably result in an increase in the occurrence of drought orders and hosepipe bans. In response to this water efficiency has gained equal billing, alongside energy efficiency.

3.2. The following are the principal policy drivers. The Approved Document G (2015) restricts new build dwellings to a maximum consumption of 125 litres per person per day. The Water Efficiency Calculator of New Dwellings also includes an allowance for external water use.

Installation Type	Unit of Measurement	Capacity/Flow Rate	use Factor	Fixed use	Litres Per Person Per Day
WC (Single Flush)	Full Flush (litres)	0	4.42	0	0
WC (Dual Flush)	Full Flush (litres)	6	1.46	0	8.76
	Part Flush (litres)	3	2.96	0	8.88
WC (Multiple Fittings)	Average Effective Flushing Volume (litres)	0	4.42	0	0
Taps (excluding kitchen tap)	Flow rate (litres/minute)	5	1.58	1.58	9.48
Bath (where shower present)	Capacity to overflow (litres)	156	0.11	0	17.16
Shower (where bath present)	Flow rate (litres/minute)	9	4.37	0	39.33
Bath Only	Capacity to Overflow (litres)	0	0.50	0	0
Shower Only	Flow Rate (Litres/minute)	0	5.60	0	0

Kitchen sink tap	Flow rate (litres/minute)	5	0.44	10.36	12.56
Washing Machine	Litres/kg dry load	7	2.10	0	14.7
Dishwasher	Litres/place setting	0.9	3.6	0	3.24
Waste Disposal Unit (if present = 1, Not present = 0	Litres/use	0	3.08	0	0
Water softener	Litres/Person/Day	0	1.0	0	0
				Total	114.11

Contribution from Greywater (litres/person/day)	0
Contribution from Rainwater (litres/person/day)	0
Normalisation Factor	0.91
Total Water Consumption (Code for sustainable Homes) = [(5) – (6) – (7)] x 8 (litres/person/day)	103.84
External Water Use	5.00
Total Water Consumption (Building regulations) = [(9) = (10) (litres/person/day)	108.84

4. Renewable Technologies

4.1. There are a number of recognised renewable technologies which have the potential to reduce the energy consumption of a dwelling. Both Photovoltaic and Air Source Heat Pumps would be suitable for a development of this size.

4.2. Photovoltaic panels convert sunlight into electricity for use within a dwelling. PV panels use cells to convert light into electricity. A PV cell usually consists of 1 or 2 layers of a semi-conducting material such as silicon. The greater the intensity of sunlight, the more electricity is generated PV systems can come in different forms. Most popular are modules which can either sit on the roof or be integrated into it. The technology is most efficient when oriented due south. However panels orientated south of east or west are suitable. Generally panels orientated away from due south require a greater surface area to generate a set amount of energy. PV is a viable option and if installed on a select number of plots across a development, would cause a site wide reduction of CO2.

4.3. Air source heat pumps extract heat from the outside air. The heat is absorbed into a fluid, which is pumped through a heat exchanger. Low grade heat is then extracted by the refrigeration system and after passing through the compressor is concentrated into a higher temperature. This energy is then used to heat water for space and hot

water use within the dwelling. While heat pumps use national grid electricity, and so are not a renewable resource, they utilise a heat source which is naturally renewed in our environment and so are considered a low carbon technology.

4.4. The development will use Photovoltaic Panels and/or Air Source Heat Pumps to provide sustainable energy through the use of renewable technology in line with building regulation requirements.

5. Fabric First

5.1. The proposed development fall under the scope of Approved Document L 2021 and/or Future Homes Standards. The Approved Document sets minimum fabric energy efficiency standards and a maximum CO2 emission rate for residential buildings.

5.2. By reducing the energy requirement of the building, the sustainable credentials of each development are enhanced and are not validated by simply bolting on expensive renewable equipment. By focusing on fabric performance and the provision of efficient heating systems each dwelling is intrinsically “green”.

Element	Part L 2021 Minimum Standard
External Walls	0.26W/m2K
Roof	0.16W/m2K
Floor	0.18W/m2K
Glazing & Doors	1.60W/m2K
Air Test	8.00m3/h,m2 at 50Pa

6. Energy Strategy

6.1. Allison Homes will follow an energy strategy which follows the principle of the energy hierarchy of being lean by reducing the need for energy, clean by using energy efficiently, and green by supplying energy from renewable sources.

Be Lean.

Allison Homes are using measures to reduce fabric heat loss across the building envelope. This reduces the need for energy within a dwelling.

Be Clean.

Allison Homes will use clean measures which include high efficiency PV panels and/or ASHPs with heating controls to allow the user to control to ensure efficient use of the main heating system. 100% Low Energy Lighting will also be installed.

Be Green.

Homes will have PV panels and/or ASHPs installed to future proof for the Future Homes Standard along with EV charging points to promote the use of electric/hybrid vehicles.

6.2. In addition to reducing fabric heat loss and using PV panels and/or ASHPs, Allison Homes will use the following measures to promote sustainability within the plot itself:

- Use of independent heating systems with room controls to give occupants control over their heating.
- Energy efficient light fittings used.
- Water consumption reduced to a maximum of 125 litres per person per day
- Provision of electric charging points to all plots.

6.3. The methods listed in this statement highlight the important of providing energy efficient homes, benefiting the occupier and adheres to the principles and aspirations of sustainable design and construction as advanced by national and local government and the house building industry.