

# Energy Statement Addendum

Richard Avenue, Wivenhoe CO7 0HY

On behalf of Taylor Wimpey London Ltd

TA.RA.CO7

Revision – 00

Date: 23<sup>rd</sup> May 2022



## REVISION HISTORY

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Calculations contained within this report have been produced based on information supplied by the Client and the design team. Any alterations to the technical specification on which this report is based will invalidate its findings.

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## 1. INTRODUCTION

The Energy Statement produced by Energist UK on the 5<sup>th</sup> April 2022 on behalf of Taylor Wimpey London Ltd ('the Applicant') set out the measures planned by the Applicant to achieve energy reductions at the proposed development site: Richard Avenue, Wivenhoe ('the Development') demonstrating compliance with:

- i) National Planning Policy Framework.
- ii) Approved Document Part L of the Building Regulations 2013.
- iii) The local planning policy requirements for Colchester Borough Council to meet:
  - Policy CC1: Climate Change

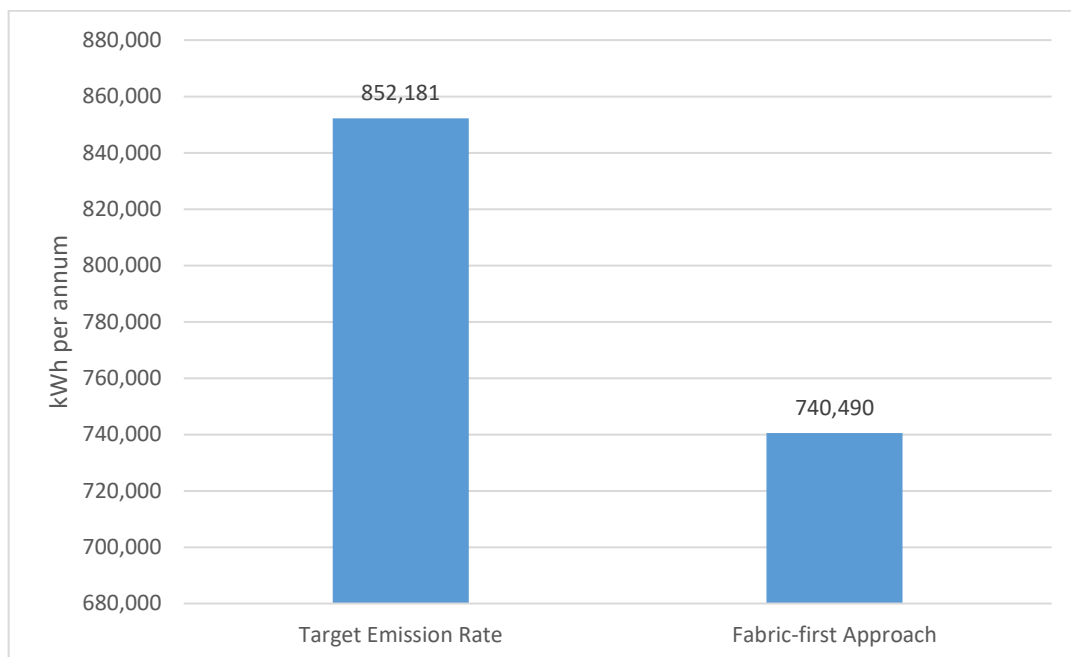
The Energy Statement concluded that the following combination of measures, summarised here in Table 1, will be incorporated into the Development demonstrating how the energy standard will be delivered by the Applicant.

Table 1: Measures incorporated to deliver the energy standard.

Fabric first: Demand-reduction measures	<ul style="list-style-type: none"><li>▪ Energy-efficient building fabric and insulation to all heat loss floors, walls and roofs.</li><li>▪ High-efficiency double-glazed windows throughout.</li><li>▪ Quality of build will be confirmed by achieving good air-tightness results throughout.</li><li>▪ Efficient-building services including high-efficiency heating systems.</li><li>▪ Decentralised Mechanical Ventilation Extract system.</li><li>▪ Low-energy lighting throughout the building.</li></ul>
Low-carbon & Renewable Energy	<ul style="list-style-type: none"><li>▪ The applicant has opted to develop the site using the fabric-first approach in order to reach the required target.</li></ul>

The impact of these design measures in terms of how the Applicant delivers the energy standard is illustrated in Figure 1 overleaf.

Figure 1: How the Development meets the energy standard.



The calculated reduction in energy and the percentage reduction in kWh over the ADL 2013 Baseline is demonstrated in Table 2.

Table 2: Energy in kWh and percentage reduction over ADL 2013.

	Energy in kWh	
	kWh per annum	% reduction
Target Energy in kWh: Compliant with ADL 2013	852,181	-
Fabric first: Demand-reduction measures	740,490	13.1%
Target Energy Reduction in kWh	111,691	13.1%

## 2. IMPROVEMENTS TO THE ENERGY REDUCTION MEASURES

Recent changes to the requested energy reduction measures provided by Colchester Borough Council, in light of the climate crisis, have meant that the development is now required to achieve an additional 10% improvement over ADL2013 in order to enhance the schemes potential.

With this in mind, the Applicant has opted retain the fabric-first measures listed in Table 4 below, and in addition, to install a total of 84kWp Photovoltaic array across the site (approx. 0.7kWp per dwelling) which will ensure a further 10% reduction in energy demand for the development.

Table 4. The fabric-first design specification at Richard Avenue, Wivenhoe.

Element	Fabric-First Design Specification
Ground Floor U-Value (W/m <sup>2</sup> .K)	0.15
External Wall U-Value (W/m <sup>2</sup> .K)	0.25
Party Wall U-Value (W/m <sup>2</sup> .K)	0 (fully filled and sealed)
Roof – insulated at ceiling U-Value (W/m <sup>2</sup> .K)	0.11
Glazing U-Value – including Frame (W/m <sup>2</sup> .K)	1.4
Door U-Value (W/m <sup>2</sup> .K)	1
Design Air Permeability	5
Space Heating	Ideal Logic Combi ESP1
Heating Controls	Time and temperature zone control and a delayed start thermostat.
Domestic Hot Water	From main heating system

Ventilation	Decentralised Mechanical Ventilation Extract
Low Energy Lighting	100%
Thermal Bridging	Taylor Wimpey bespoke psi values.