

Juniper Place, Wilburton

High-performance, replicable, precision built homes delivered at scale using advanced offsite manufacturing

CASE STUDY



Juniper Place, Wilburton

Etopia

Headline information

DEVELOPER
Etopia UK

LOCATION
Wilburton, East Cambridgeshire

HOMES DELIVERED
30 homes (21 private sale, 9 affordable via Cross Keys Housing Association)

COMPLETION
2024

CONSTRUCTION
High-performance Structural Insulated Panels (SIPs), factory manufactured and site assembled

BUILD METHOD
Superstructure assembled in as little as 4 days per unit, reducing waste and ensuring precision

DESIGN GOALS
Deliver net zero-ready homes aligned with 2025 Future Homes Standard and EDGE Zero Carbon certification

Key features

- EPC A rated homes
- ASHPs, MVHR, underfloor heating, solar PV (3.45–4.15 kW)
- Smart controls and EV charging points
- Large internal space (12 percent above NDSS), low density with larger gardens

Why this matters

Juniper Place demonstrates that high-performance, replicable, precision-built homes can be delivered at scale using advanced offsite manufacturing. The project sets a clear benchmark for sustainable residential construction.

Current site



Site plan key

TWO BEDROOM HOMES

- The Hatfield | Plot: 22, 23 & 24
- The Parkhurst | Plot: 26
- The Arden | Plot: 25
- The Sherwood | Plot: 27 & 28

THREE BEDROOM HOMES

- The Foxley | Plot: 29 & 30
- The Ashdown | Plot: 4, 5, 13, & 14
- The Tollymore | Plot: 2, 3 & 10

FOUR BEDROOM HOMES

- The Worlebury | Plot: 7 & 9
- The Rendlesham | Plot: 1, 6 & 8

HOMES FOR CROSS KEYS HOMES



Energy summary of Juniper Place

Analysis of Energy Use Intensity (EUI) across 6 monitored plots shows strong results:

PLOTS 26 AND 44

~38 kWh/m²/yr

PLOT 3

47 kWh/m²/yr

ALL PLOTS

- All plots outperform UK Part L 2023 and Future Homes Standard requirements
- Majority exceed or are close to UKGBC 2035-2050 target (55 kWh/m²/yr)

ENERGY EFFICIENCY AND SUSTAINABILITY

- Homes compare very favourably to UK housing stock: over 60 percent lower EUI than national average (UCL 3DStock model)

Fabric-first design delivers strong results:

- Walls, floors, roofs, windows all meet or closely align with LETI best practice
- Air permeability (2 m³/h.m² @ 50 Pa) and Y-value (0.08) indicate areas for further improvement, informing system refinements

KEY INSIGHT

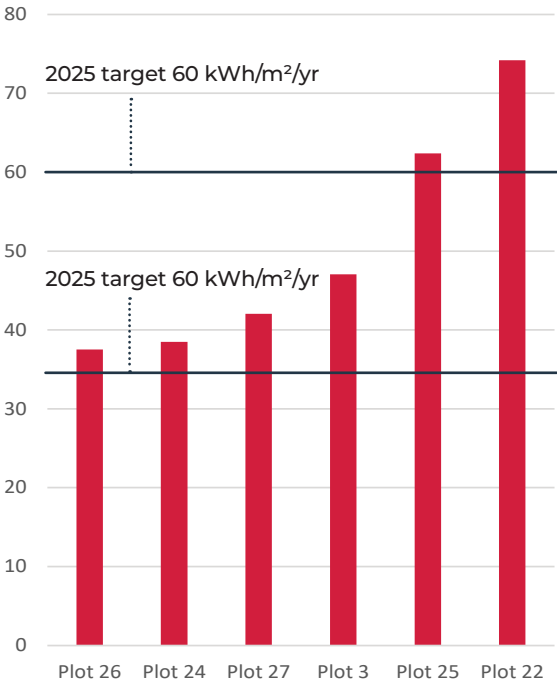
While Etopia's SIP system is capable of consistent low-energy performance, real-world outcomes are influenced by occupant behaviour, EV charging, export tariffs and aftercare

Conclusion: Juniper Place proves that Etopia's system can consistently deliver high-performance homes that exceed current standards and approach future net zero targets in practice.

Element	LETI Target	Wilburton	LETI Compliancy
Wall U-value	0.13-0.15	0.15	Yes (upper limit)
Floor U-value	0.08-0.10	0.1	Yes
Roof U-value	0.10-0.12	0.12	Yes (upper limit)
Window U-value	0.80 (triple glazed)	0.8	Yes
Door U-value	1	1	Yes
Air permeability	<1.0	2	No
Y-value	0.04	0.08	No

Element	Etopia U-value (W/m ² ·K)	Part L Requirements	LETI Compliancy
Roof	0.12	0.16	Yes
Wall	0.15	0.26	Yes
Floor	0.1	0.18	Yes
Window	0.8	1.6	Yes
Door	1	1.6	Yes
Air permeability	2	8	Yes

RIBA 2030 Targets – EUI (kWh/m²/yr)



SUCCESS OF JUNIPER PLACE

ZERO CARBON CERTIFICATION PATHWAY				AFFORDABILITY AND SOCIAL VALUE			
First UK residential scheme to target full EDGE Zero Carbon status	Real-time performance data collected via smart sensors in each home	12-month in-use data to be submitted for final certification	Backed by the UN <i>Climate Neutral Now</i> initiative	9 affordable homes delivered via Section 106 agreement	£3.6m funding secured from Homes England	Reduced energy bills for residents	Lower lifetime cost of ownership, especially during energy price volatility
							

Stakeholder endorsement

Lucy Frazer, MP for South East Cambridgeshire

"I am pleased to have visited Etopia's show home and to find out more about what they are doing to tackle climate change."

Summary

Juniper Place sets a new standard for affordable, sustainable housing. By combining advanced offsite manufacturing, cutting-edge energy systems and digital performance monitoring, Etopia has delivered one of the UK's most forward-looking residential developments. The project proves that net zero is not only achievable – it is replicable, affordable, and beneficial for residents and the planet alike.

Etopia commented that:

"We were able to increase on National Described Space Standards (NDSS) by 12% on our homes whilst maintaining a low housing density on the site. This enabled the homes to feel larger to residents in addition to providing larger gardens."

Testimonial

Claire Higgins, CEO, Cross Keys Homes

"We need to do all we can to protect our planet while supporting residents with the cost of living. We're delighted with these new A-rated homes."

