



Low Energy Home Update

Verity Close

Performance- before, predicted, after

Performance	Before (Predicted value)	Predicted	After
EPC	D	B	B
Heat loss Parameter	1.31 (c.6.7@50Pa)	Not measured	1.03 (c.5.4@50Pa)
Heat demand	306 kWh/m2/year	66 kWh/m2/year	81 kWh/m2/year
Roof	3.0 W/m2K	0.37 W/m2K	Not measured
External wall	0.68 W/m2K	0.27 W/m2K	0.79±14%
Ground floor	0.7 W/m2K	0.13 W/m2K	Not measured
Windows	2.6 W/m2K	0.8 W/m2K	1.17 W/m2K
Heat Transfer Coefficient	172 W/K	Not measured	254 W/K
Air Permissibility	1.5 (Good)	Not measured	2.4 (Average)

Future Direction

Things we would do again:

Developing a set of feasibility studies to help guide decision making on materials and services

Working with a team of architects to **choose the best materials** for the property – **keeping fire safety at the forefront**

Conducting energy performance measurements to learn what material and services made an impact – pre and post inspection

Use energy saving services to **encourage low carbon living** as well as the **removal of gas**

Installing external equipment such a water butts and composters to **encourage lifestyle changes**

Future Direction

Things we would do differently:

Ensure a full project plan is complete and all parties have a full understanding of the building before starting work.

Before starting the project, **getting accurate measurements of the property** for the purpose of monitoring, and understanding improvement levels. For example, U Values and Thermal performance rating

Provide and obtain **one set of measurements** to all parties involved to ensure consistency. For example, collecting and using one set of heat loss calculations throughout

All services to be designed before the works start to save time and allow room for structural changes (if needed)

If installing an **MVHR** system, to have **one company design, install and commission**

Have the **architects produce all drawings** for the project from inspection to as-built

Decide if the EnerPHit certification will be applied for at the start

MVHR ductwork to be insulated to prevent condensation issues

Replicating at scale helps reduce overall unit costs

Next steps

1. Review costs and experience for residents after 1 year living in the property
2. Review repairs and planned maintenance history and costs after 1 year (so far zero repairs)
3. Identify what we would do differently for similar archetypes (i.e. Verity Close houses)