

Design Note – Part L Compliance Statement

54 Matlock Road – Single Storey Rear and Side Extension, increasing ground floor area from approx. 50m² to 80m².

Property: Existing early 1920s solid brick dwelling (uninsulated)

Prepared by: Consult Sustain, Sam Luker

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1. Existing Building Summary

The existing dwelling comprises solid brick external walls (approx. 225 mm) with no cavity or insulation, an uninsulated suspended timber ground floor, and a loft with limited insulation (estimated <100 mm mineral wool). Glazing is double-glazed throughout, and space heating is provided via a gas-fired condensing combination boiler with radiators.

2. Proposed Works

The proposed development comprises a single-storey rear and side extension constructed to current Building Regulations standards, with the following thermal specification:

Area	U-value
Ground floor – suspended timber	$\leq 0.18 \text{ W/m}^2\text{K}$
External walls – timber stud, insulated between studs	$\leq 0.28 \text{ W/m}^2\text{K}$
Roof – mono-pitched timber rafter	$\leq 0.15 \text{ W/m}^2\text{K}$
Glazing – double glazed timber windows	$\leq 1.4 \text{ W/m}^2\text{K}$

Airtightness: Construction detailing in accordance with Accredited Construction Details to minimise thermal bridging

The existing heating system (gas-fired condensing combi boiler) will be retained and extended to serve the new space.

3. Energy Performance Justification

Although the main dwelling retains its original solid-wall construction, the addition of the highly insulated extension represents a net improvement in the overall energy efficiency of the property. The new elements will significantly reduce fabric heat losses in comparison to the original envelope, and the overall Dwelling Emission Rate (DER) for the extended property will be reduced compared to the existing building's notional rate.

Indicatively:

- The new thermal elements (floor, walls, and roof) will perform well above the limiting U-values of Part L1B.

- The additional glazing area will be balanced by the superior thermal performance of the extension envelope.
- The retained efficient boiler ensures that system efficiency remains compliant.
- The DER < BER (existing baseline) condition will therefore be met, as demonstrated through SAP-based assessment principles.

4. Conclusion

Based on the above, the proposed extension and associated thermal upgrades will deliver a net reduction in the dwelling's overall carbon emissions and energy demand. The works are therefore considered to achieve compliance with Approved Document Part L1B, demonstrating that the proposed DER is less than the existing DER in accordance with Regulation L1(b).