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Roof Volume Calculation

47 Sheridan Road, Broadwater, Worthing, BN14 8EU

Project: CCF Sheridan Road
Client: Jeremy Littlejohn
Revision: 00, 17 November 2026
Drawings: CCF 1000 and 1001 rev 00; CCF 2000, 2001, 2002 and 2003 rev 01
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The hip-to-gable enlargement and rear dormer add **41.3 m³** to the original roof space, within the **50 m³** Class B allowance for a semi-detached house.

Part	Calculation (m)	Volume
A. Hip-to-gable infill, pyramid	⅓ × (½ × 7.85 × 3.57) × 3.92	18.3 m³
B. Rear dormer, triangular prism	½ × 2.87 × 2.61 × 6.13	23.0 m³
Total additional roof volume	**A + B**	**41.3 m³**
Allowance	Class B.1(d)(ii), house not terraced	50.0 m³
Margin	50.0 − 41.3	8.7 m³

A: 7.85 × 3.57 m is the new gable triangle at the outside face of the gable wall, above the original hip line; 3.92 m is the hip's length on plan to the ridge end.

B: 2.87 m is the depth on plan from the dormer face to where its roof meets the rear slope; 2.61 m is the height at the face above the slope; 6.13 m is the external width, party-side cheek to gable wall face. B is measured above the rear slope plane; the volume below it, over the former hip, is in A.

Method: measured externally to the outside faces of walls and roof, excluding overhangs, against the existing hipped roof as the original roof (no earlier enlargements known). Dimensions are from the 3D model used for the drawings; roof pitch 42.3°. A numerical check of the model gives 41.4 m³.

Class B limits (GPDO 2015, Schedule 2, Part 1)

Limit	Position
B.1(b) height	Ridge unchanged; top of dormer 0.83 m below the ridge
B.1(c) front roof slope	Unchanged except Class C rooflights (max 150 mm projection)
B.1(e)(ii) soil vent pipe	Soil vent pipe extension relies on Class G
B.2(b)(i) eaves	Eaves kept; dormer 0.44 m from eaves along the slope (min 0.2 m)
B.2(b)(ii) wall line	Within outside wall faces; fascias and verges excluded (B.4)
B.2(c) side windows	Obscure glazed, non-opening below 1.7 m; noted on CCF 2003