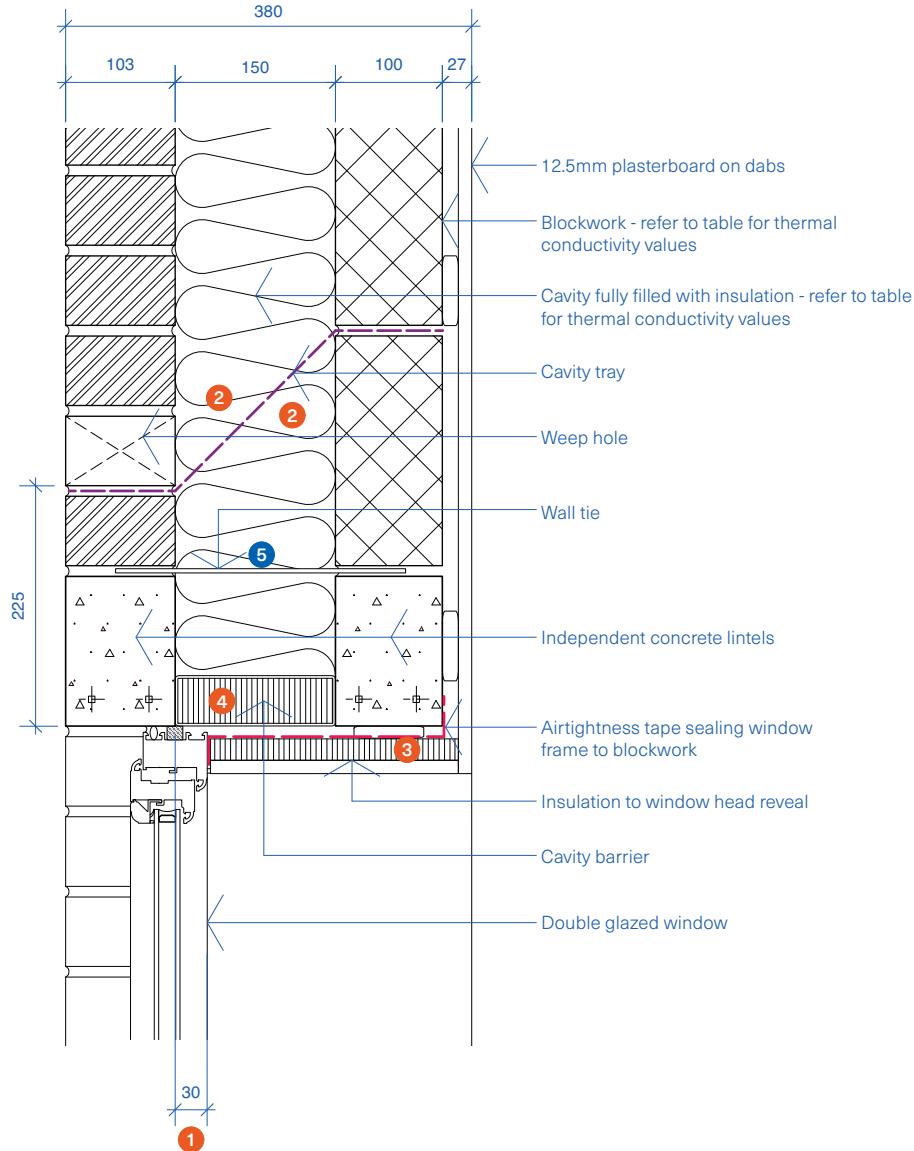


Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.023	0.020	0.019	0.017	0.015	0.014
0.034	0.023	0.020	0.019	0.017	0.015	0.013
0.037	0.023	0.021	0.019	0.016	0.014	0.013

f-values: 0.954 - 0.958 (values above 0.75 indicate low risk of condensation and mould)

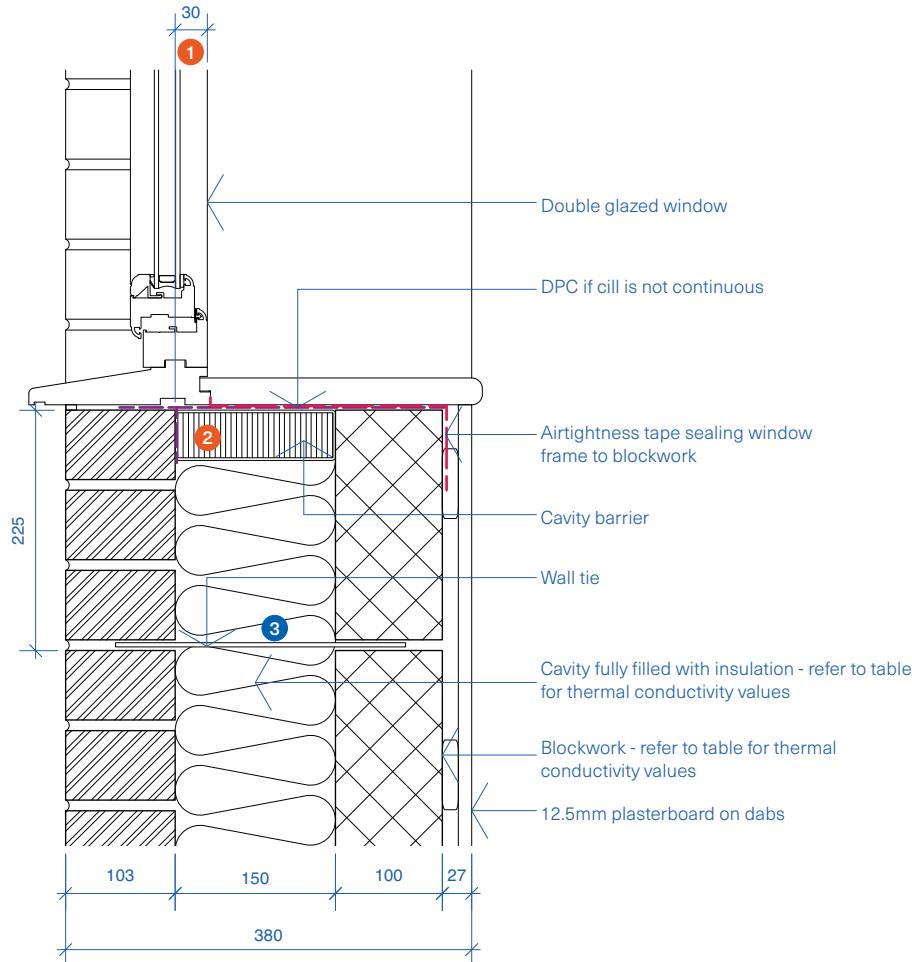
Ψ (Psi) value Thermal Compliance Notes

- ① Minimum 30mm overlap of window frame and insulated wall cavity.
- ② Ensure insulation is fitted around the angle of the cavity tray.
- ③ Minimum 15mm insulation with $\lambda \leq 0.026\text{W/mK}$ to head reveal.
- ④ Insulated cavity barrier with $\lambda \leq 0.026\text{W/mK}$ fixed in accordance with manufacturers guidelines. If fixing spikes are used, they should be installed at the required centres. For compression fit cavity barriers, use the correct size for a compressive fit in the cavity.

Construction Notes

- ⑤ Wall tie: 225mm maximum distance from opening. No greater than 450mm vertical spacing. 450mm horizontal centres for first row of wall ties above and below opening.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.024	0.023	0.022	0.022	0.021	0.021
0.034	0.023	0.022	0.022	0.021	0.021	0.021
0.037	0.023	0.022	0.022	0.021	0.020	0.020

f-values: 0.881 - 0.893 (values above 0.75 indicate low risk of condensation and mould)

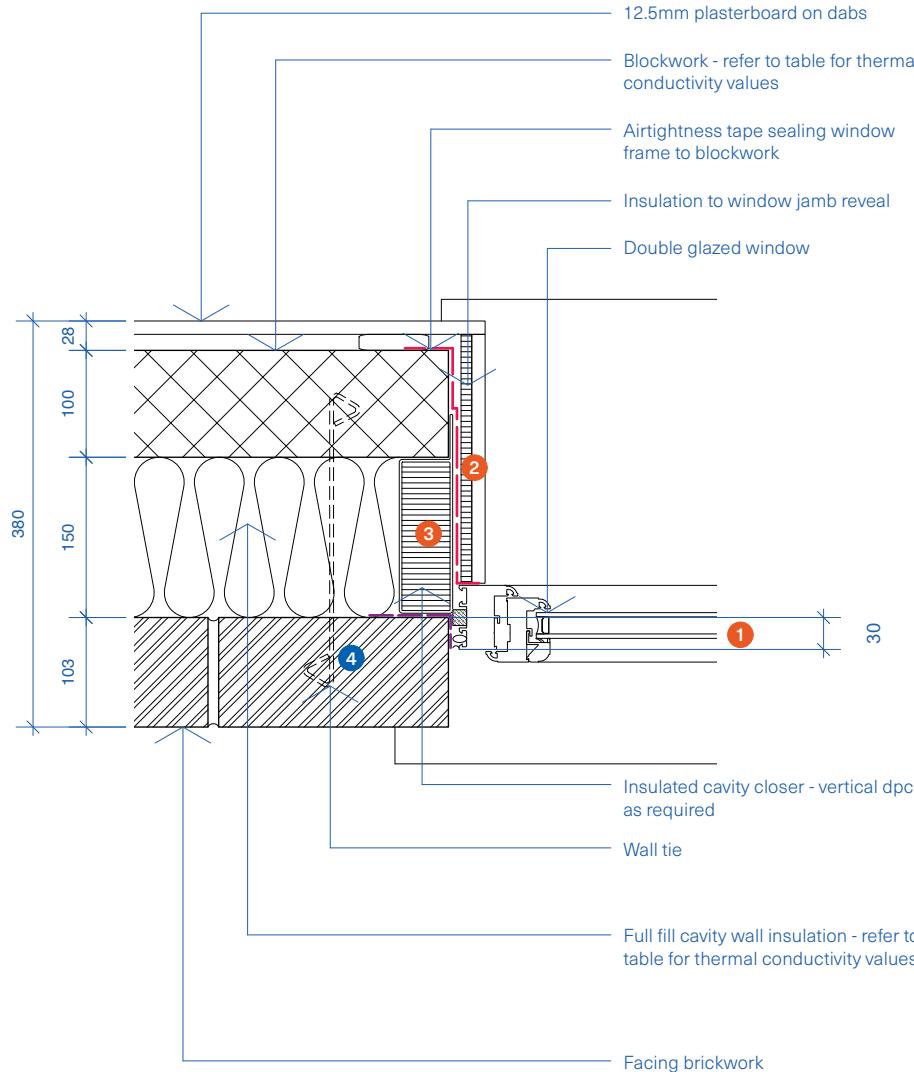
Ψ (Psi) value Thermal Compliance Notes

- ① Minimum 30mm overlap of window frame and insulated wall cavity.
- ② Insulated cavity barrier with $\lambda \leq 0.026 \text{ W/mK}$ fixed in accordance with manufacturers guidelines. If fixing spikes are used, they should be installed at the required centres. For compression fit cavity barriers, use the correct size for a compressive fit in the cavity.

Construction Notes

- ③ Wall tie: 225mm maximum distance from opening. No greater than 450mm vertical spacing. 450mm horizontal centres for first row of wall ties above and below opening.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.019	0.018	0.017	0.017	0.016	0.016
0.034	0.019	0.017	0.017	0.016	0.016	0.016
0.037	0.018	0.017	0.017	0.016	0.015	0.015

f-values: 0.931 - 0.938 (values above 0.75 indicate low risk of condensation and mould)

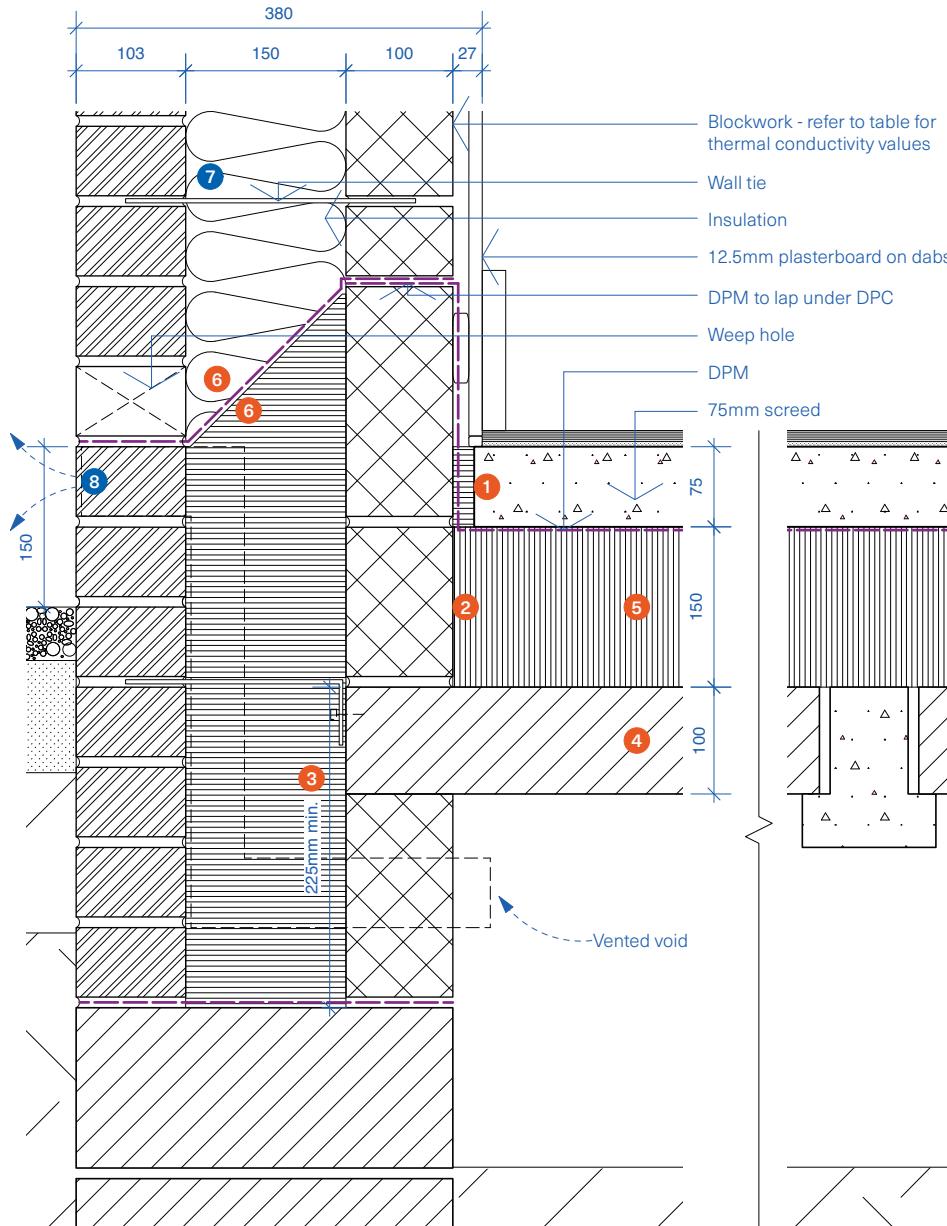
Ψ (Psi) value Thermal Compliance Notes

- ① Minimum 30mm overlap of window frame and insulated wall cavity.
- ② 10mm insulation with $\lambda \leq 0.026$ W/mK to window jamb reveal.
- ③ Insulated cavity barrier with $\lambda \leq 0.026$ W/mK fixed in accordance with manufacturers guidelines. If fixing spikes are used, they should be installed at the required centres. For compression fit cavity barriers, use the correct size for a compressive fit in the cavity.

Construction Notes

- ④ Wall tie: 225mm maximum distance from opening. No greater than 450mm vertical spacing. 450mm horizontal centres for first row of wall ties above and below opening.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.060	0.068	0.067	0.084	0.111	0.144
0.034	0.061	0.068	0.067	0.085	0.111	0.144
0.037	0.062	0.069	0.068	0.085	0.112	0.145

f-values: 0.922 - 0.953 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- ① Minimum 20mm perimeter insulation with $\lambda \leq 0.022 \text{ W/mK}$.
- ② Ensure the floor insulation is tightly butted against the external wall.
- ③ Continue full fill rigid cavity insulation at least 225mm below the top of the beams. Insulation below DPC to provide thermal resistance equal to or better than main wall insulation.
- ④ 150mm Beam and Aircrete block infill.
- ⑤ 150mm insulation (0.022 W/mK) above slab.
- ⑥ Ensure insulation is cut and fitted around the angle of the cavity tray.

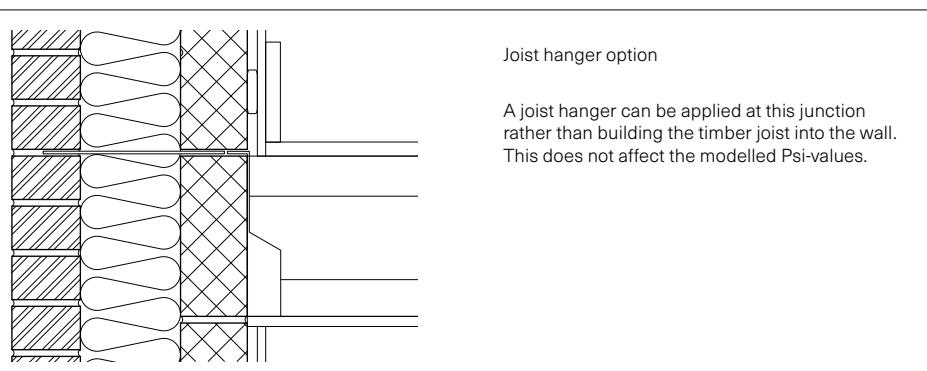
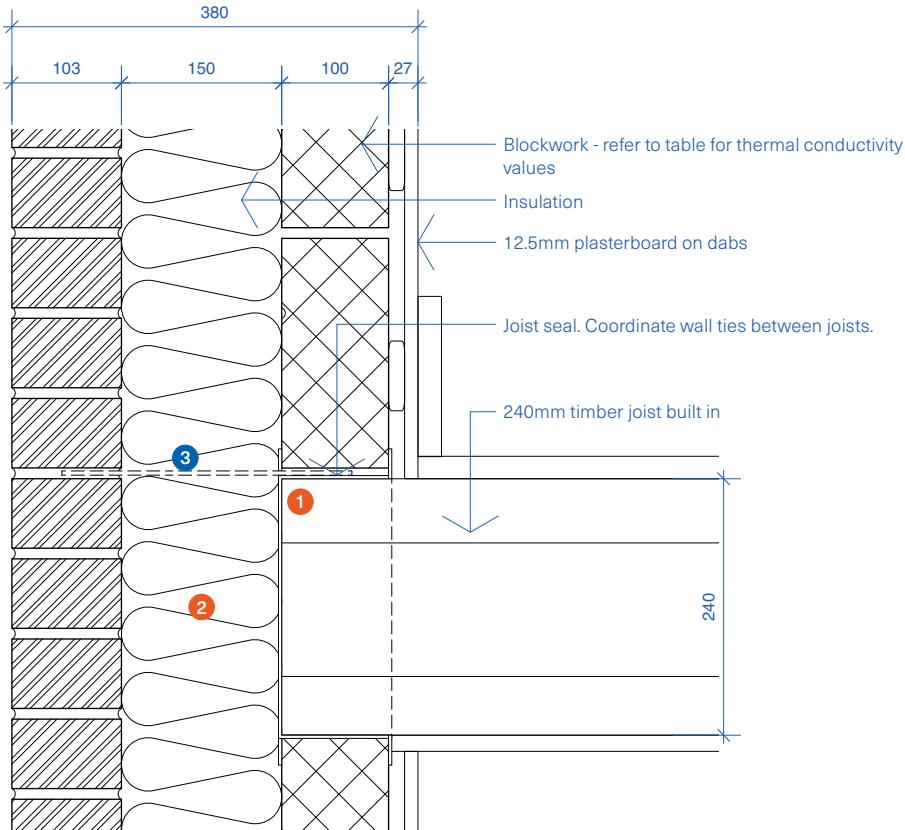
Construction Notes

- ⑦ Wall tie: No greater than 450mm vertical spacing.
- ⑧ Telescopic void vent. Ensure voids around vents are fitted with cut insulation.

General Notes

Rigid insulation below DPC to provide structural stability and stop water ingress.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.000	0.001	0.001	0.001	0.002	0.002
0.034	0.001	0.001	0.001	0.001	0.002	0.003
0.037	0.001	0.001	0.001	0.002	0.002	0.002

f-values: 0.972 - 0.985 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- ① Joist seal to the end of the timber joist, built into the internal leaf blockwork. Airtightness seal.
- ② Insulation to be continuous across floor abutment zone.

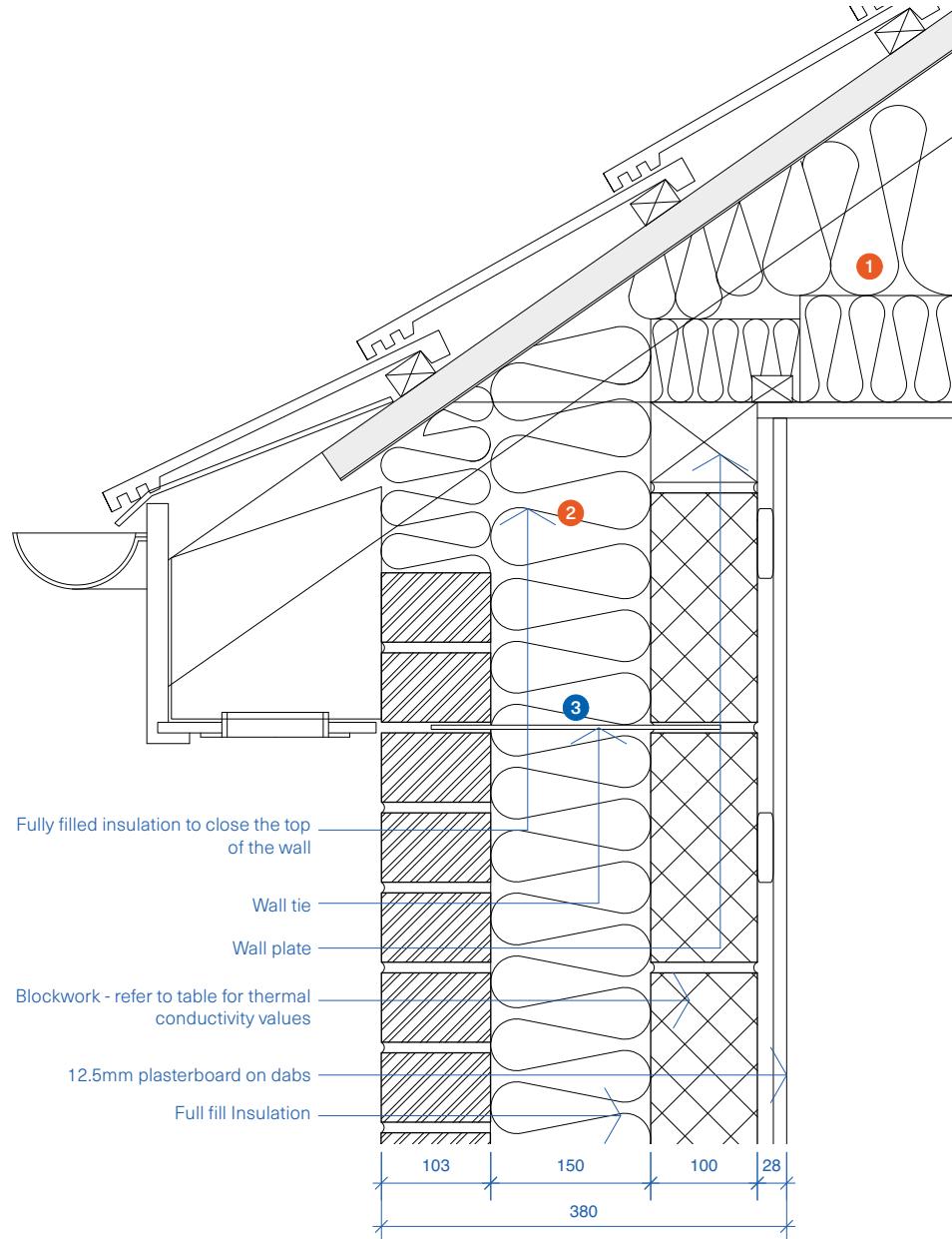
Construction Notes

- ③ Wall tie: No greater than 450mm vertical spacing.

General Notes

You can alternatively build this detail with a joist hanger rather than building the timber joist into the blockwork. Maintain clear separation of components to prevent congestion within the cavity and mortar joints.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.051	0.055	0.057	0.060	0.065	0.068
0.034	0.050	0.053	0.055	0.058	0.063	0.066
0.037	0.047	0.050	0.052	0.055	0.059	0.062

f-values: 0.924 - 0.939 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- ① 400mm insulation quilt (0.044 W/mK), minimum roof pitch 40 degrees.
- ② Ensure continuity of insulation between the loft and external wall.

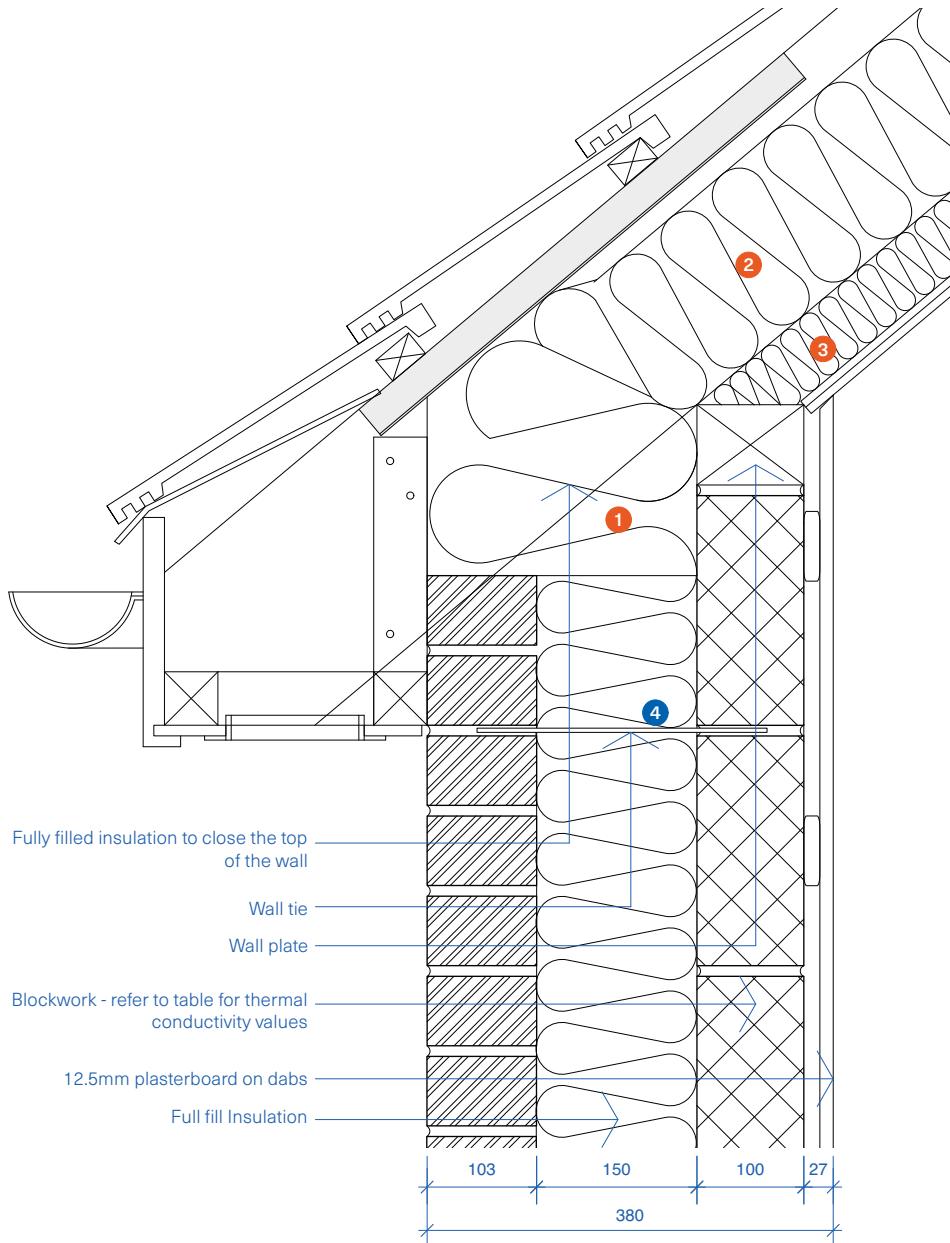
Construction Notes

- ③ Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.018	0.018	0.018	0.018	0.018	0.019
0.034	0.017	0.017	0.017	0.016	0.017	0.018
0.037	0.015	0.015	0.015	0.015	0.015	0.015

f-values: 0.950 - 0.962 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- ① Fully fill the void with insulation and ensure continuity of insulation between the roof and external wall.
- ② 150mm insulation (0.022 W/mK) between rafters.
- ③ 60mm (0.022 W/mK) beneath rafters.

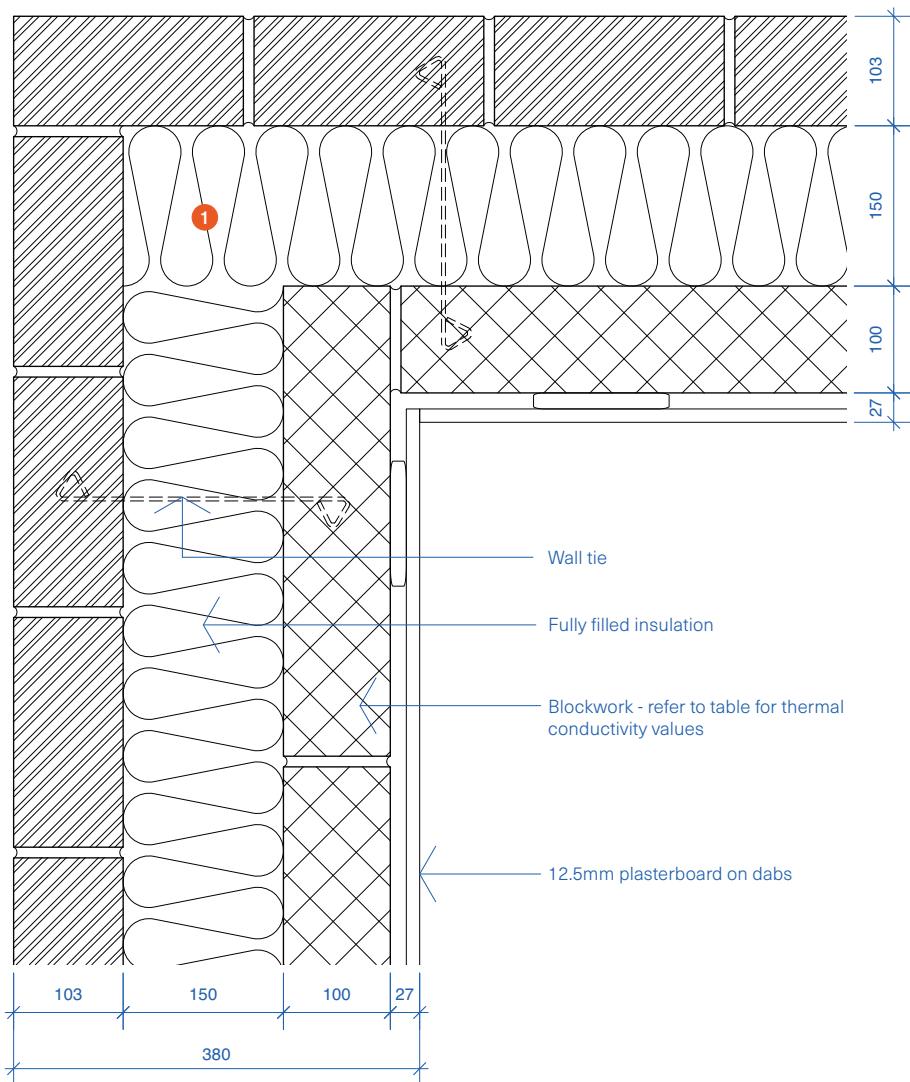
Construction Notes

- ④ Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

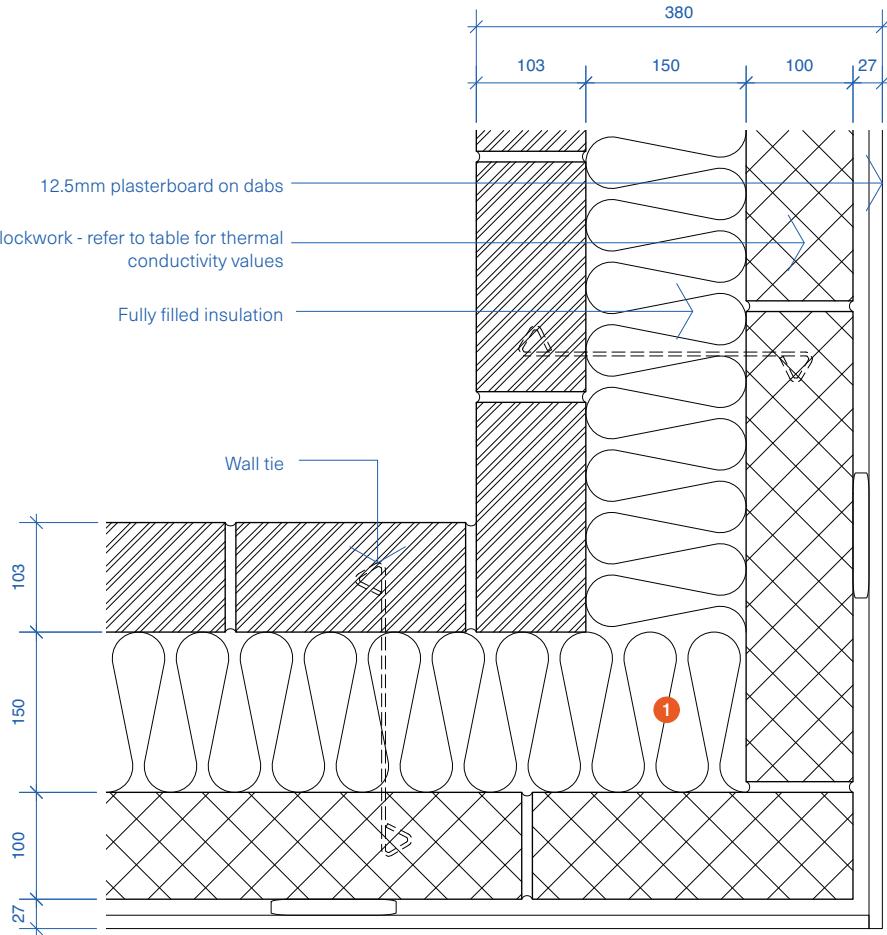
Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.037	0.040	0.042	0.046	0.051	0.054
0.034	0.037	0.041	0.044	0.047	0.054	0.057
0.037	0.039	0.043	0.046	0.051	0.057	0.061

f-values: 0.924 - 0.966 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

1 Ensure continuity of insulation at the corner.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

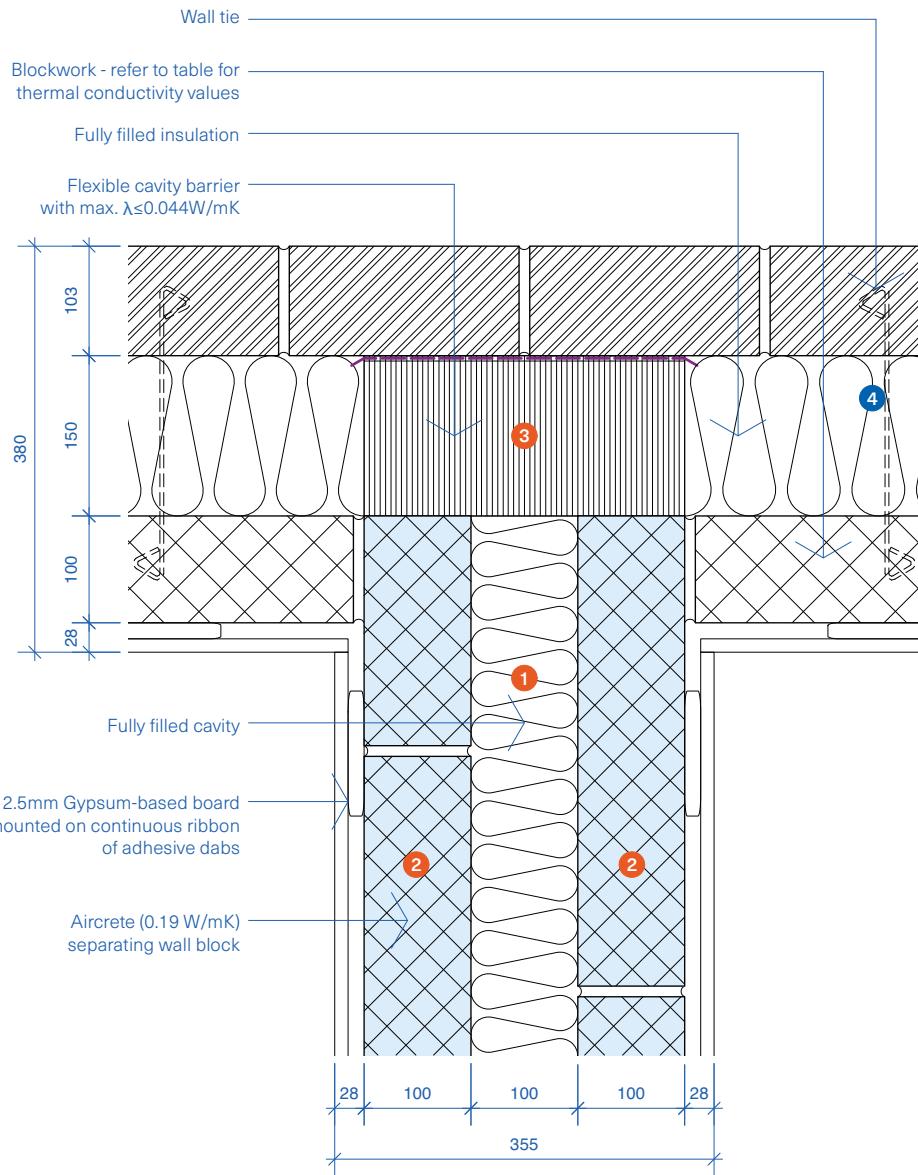
Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	-0.079	-0.082	-0.085	-0.088	-0.091	-0.093
0.034	-0.083	-0.086	-0.089	-0.094	-0.097	-0.098
0.037	-0.087	-0.092	-0.096	-0.099	-0.105	-0.107

f-values: 0.972 - 0.986 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

1 Ensure continuity of insulation at the corner.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.032	0.033	0.033	0.034	0.035	0.036
0.034	0.032	0.033	0.033	0.033	0.035	0.035
0.037	0.033	0.033	0.033	0.034	0.035	0.035

f-values: 0.954 - 0.970 (values above 0.75 indicate low risk of condensation and mould)

The above Psi values are applicable per dwelling on either side of the party wall.

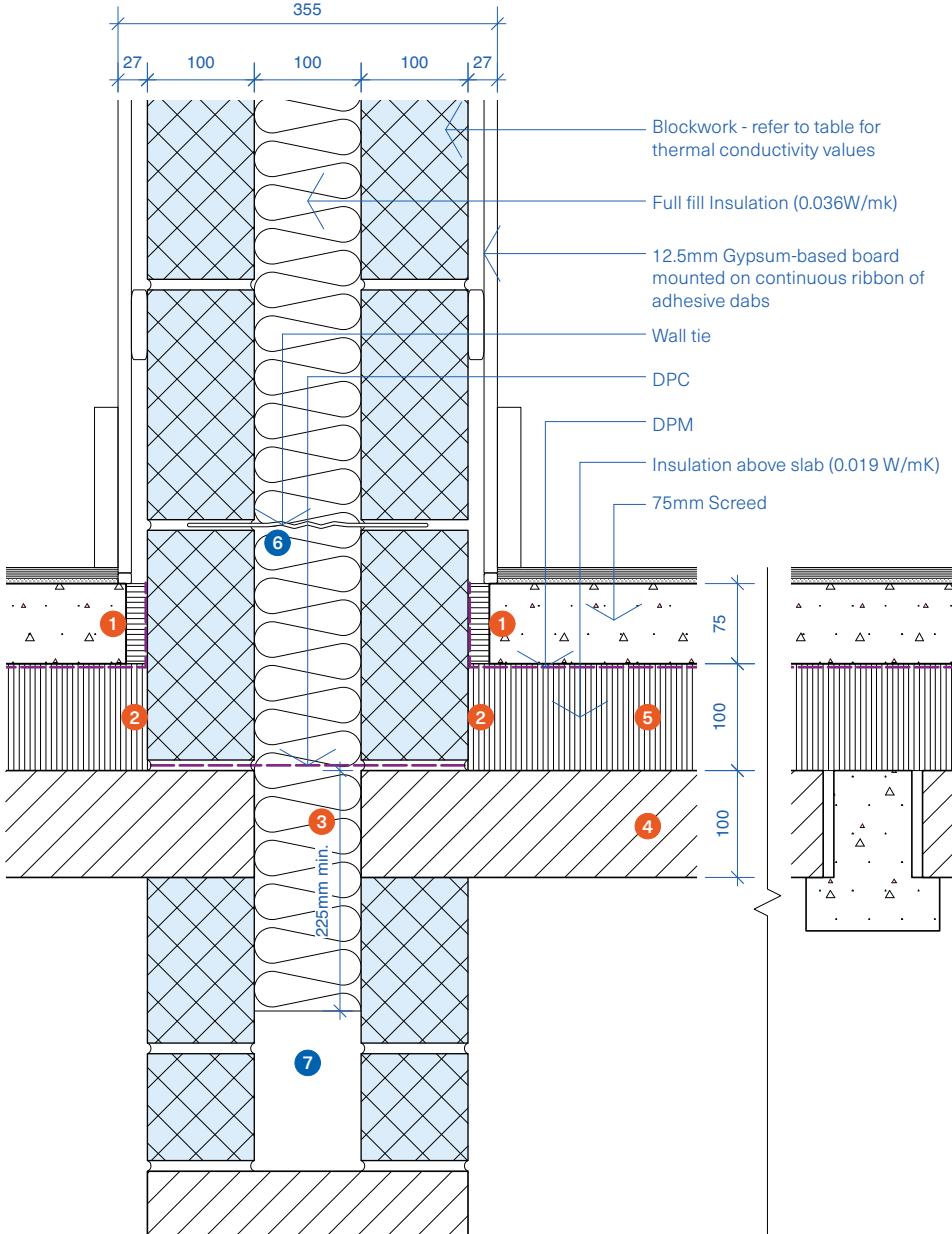
Ψ (Psi) value Thermal Compliance Notes

- ① Fully fill the separating wall 100mm cavity with insulation (0.036 W/mK).
- ② 2 x 100mm Aircrete (0.19 W/mK) block separating wall.
- ③ Close the external wall cavity with flexible cavity barrier with max. $\lambda \leq 0.044$ W/mK. Dependent on the type of cavity barrier used, a DPC should be provided to prevent the barrier absorbing moisture. Horizontal/vertical cavity barriers need to be fixed in accordance with manufacturers guidelines. If fixing spikes are used, they should be installed at the required centres. For compression fit cavity barriers, use the correct size for a compressive fit in the cavity.

Construction Notes

- ④ Type A (part E) wall ties at no more than 2.5 ties/m² (900 x 450mm spacing). Wall ties: no greater than 900mm horizontal spacing.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Separating Wall Block Conductivity: W/mK				
Floor Insulation Thermal Conductivity (W/mK)	0.15	0.19	0.6	1.33
0.019	0.042	0.050	0.086	0.119

f-values: 0.912 - 0.953 (values above 0.75 indicate low risk of condensation and mould).

The above Psi-values are applicable per dwelling on either side of the party wall.

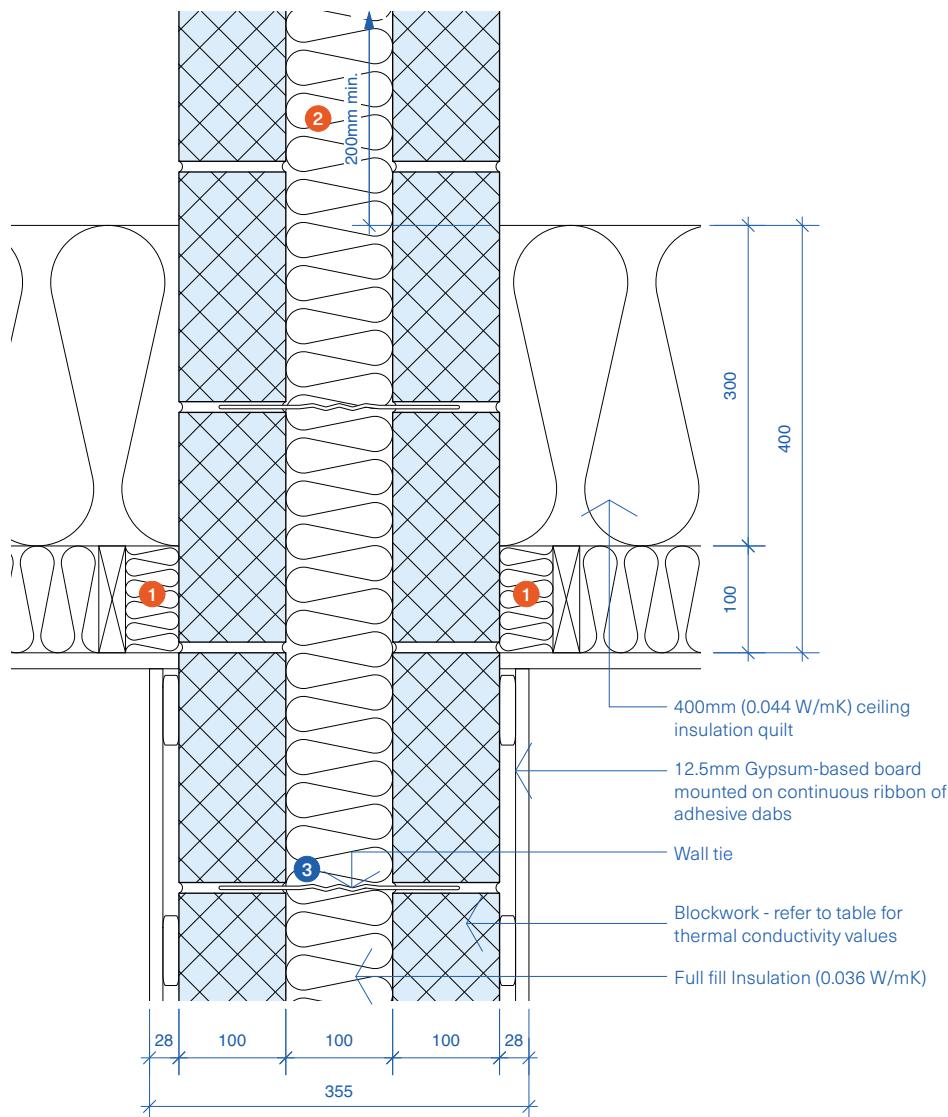
Ψ (Psi) value Thermal Compliance Notes

- 1 Minimum 20mm perimeter insulation with $\lambda \leq 0.022 \text{ W/mK}$.
- 2 Ensure the floor insulation is tightly butted against the separating wall.
- 3 Continue full fill cavity insulation at least 225mm below the top of the beams. Insulation below DPC to provide thermal resistance equal to or better than main wall insulation.
- 4 150mm Beam and Aircrete block infill.
- 5 100mm insulation (0.019 W/mK) above slab.

Construction Notes

- 6 Type A (part E) wall ties at no more than 2.5 ties/m² (900 x 450mm spacing).
Wall ties: no greater than 900mm horizontal spacing.
- 7 Continue the cavity at least 225mm below the underside of the beams.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Separating Wall Block Conductivity: W/mK	0.15	0.19	0.6	1.33
	0.044	0.033	0.040	0.101

f-values: 0.890 - 0.957 (values above 0.75 indicate low risk of condensation and mould)

The above Psi-values are applicable per dwelling on either side of the party wall.

Ψ (Psi) value Thermal Compliance Notes

- ① Fill the space between the separating wall and last joist with insulation.
- ② Ensure that the cavity insulation extends at least 200mm above the top of the loft insulation.

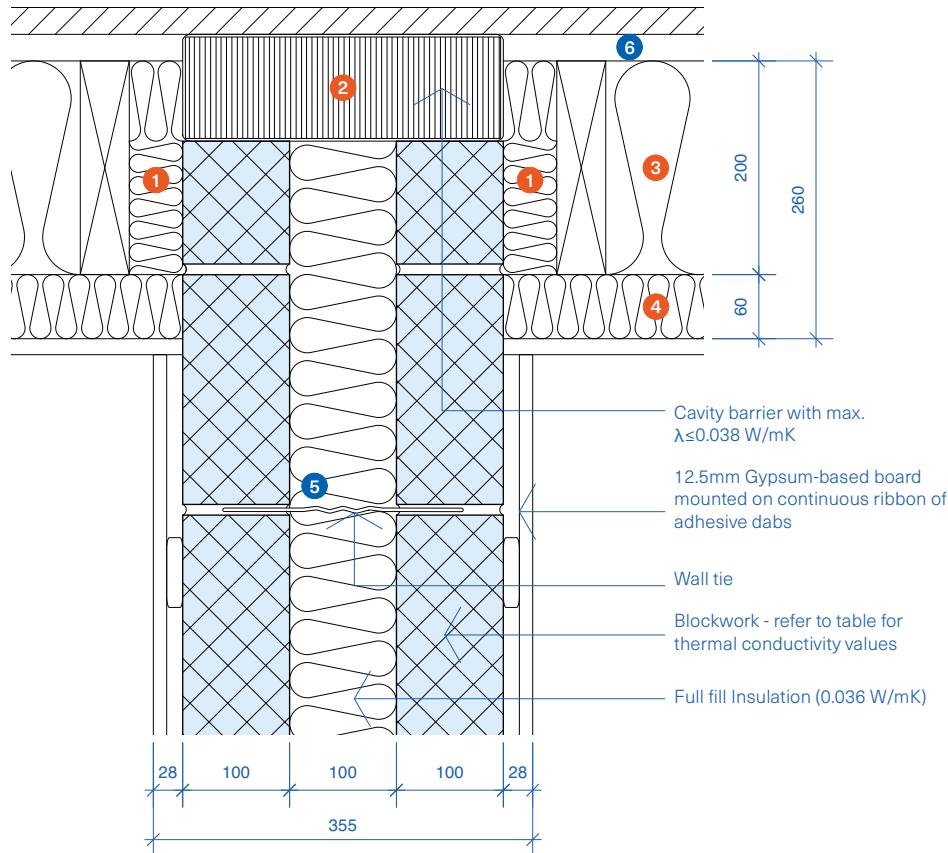
Construction Notes

- ③ Type A (part E) wall ties at no more than 2.5 ties/m² (900 x 450mm spacing).
Wall ties: no greater than 900mm horizontal spacing.

General Notes

The cavity must be fire-stopped (same resistance as the compartment wall) at the top of the wall to the underside of the roof for the provisions of Diagram 8.1 ADBv1 to apply.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Separating Wall Block Conductivity: W/mK				
Roof Insulation between rafters Thermal Conductivity (W/mK)	0.15	0.19	0.6	1.33
0.032	0.028	0.030	0.036	0.039

f-values: 0.955 - 0.972 (values above 0.75 indicate low risk of condensation and mould)

The above Psi-values are applicable per dwelling on either side of the party wall.

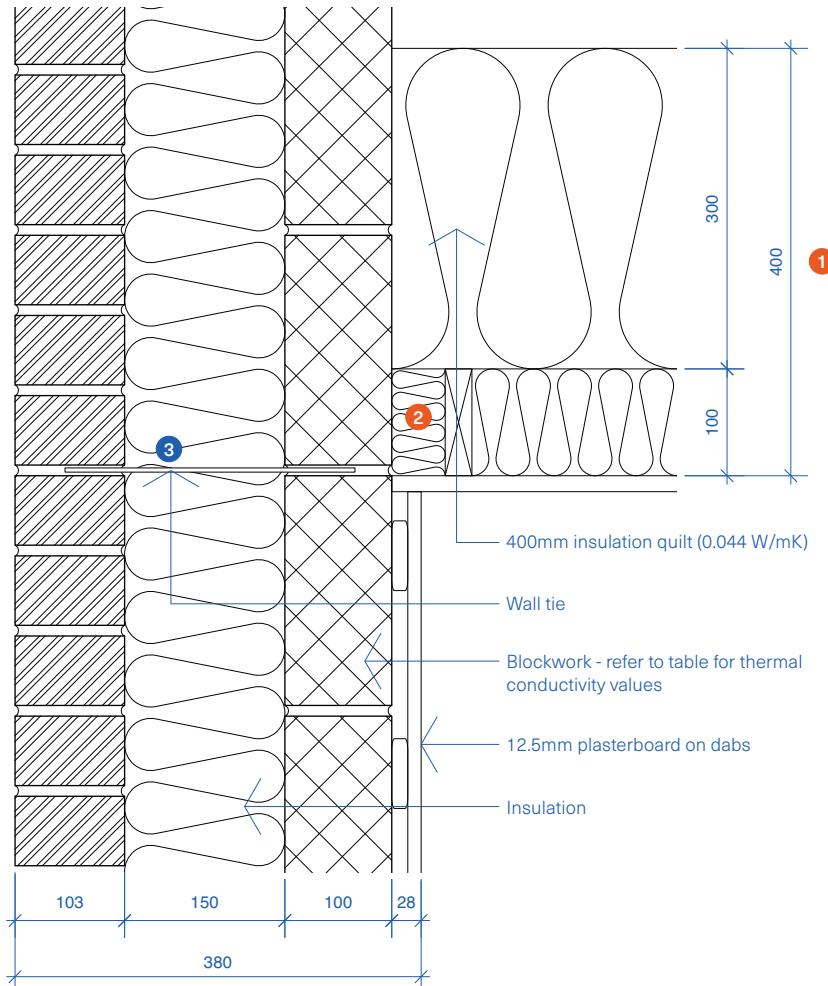
Ψ (Psi) value Thermal Compliance Notes

- ① Fill the space between the separating wall and last rafter with insulation.
- ② Cavity barrier with maximum $\lambda \leq 0.038 \text{ W/mK}$.
The cavity must be fire-stopped (same resistance as the compartment wall) at the top of the wall to the underside of the roof for the provisions of Diagram 8.1 ADBv1 to apply.
- ③ 200mm insulation (0.032 W/mK) between rafters.
- ④ 60mm insulation (0.022 W/mK) beneath rafters.

Construction Notes

- ⑤ Type A (part E) wall ties at no more than 2.5 ties/m² (900 x 450mm spacing).
Wall ties: no greater than 900mm horizontal spacing.
- ⑥ Maintain air gap for ventilation.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

Internal leaf block thermal conductivity (W/mK)						
Insulation thermal conductivity (W/mK)	0.11	0.15	0.19	0.28	0.6	1.33
0.032	0.029	0.037	0.043	0.056	0.097	0.175
0.034	0.030	0.037	0.044	0.057	0.098	0.174
0.037	0.031	0.038	0.044	0.057	0.099	0.174

f-values: 0.878 - 0.949 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- ① 400mm insulation quilt (0.044 W/mK).
- ② Fill the space between the wall and joist with insulation.

Construction Notes

- ③ Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.