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Timber Frame New Build - England

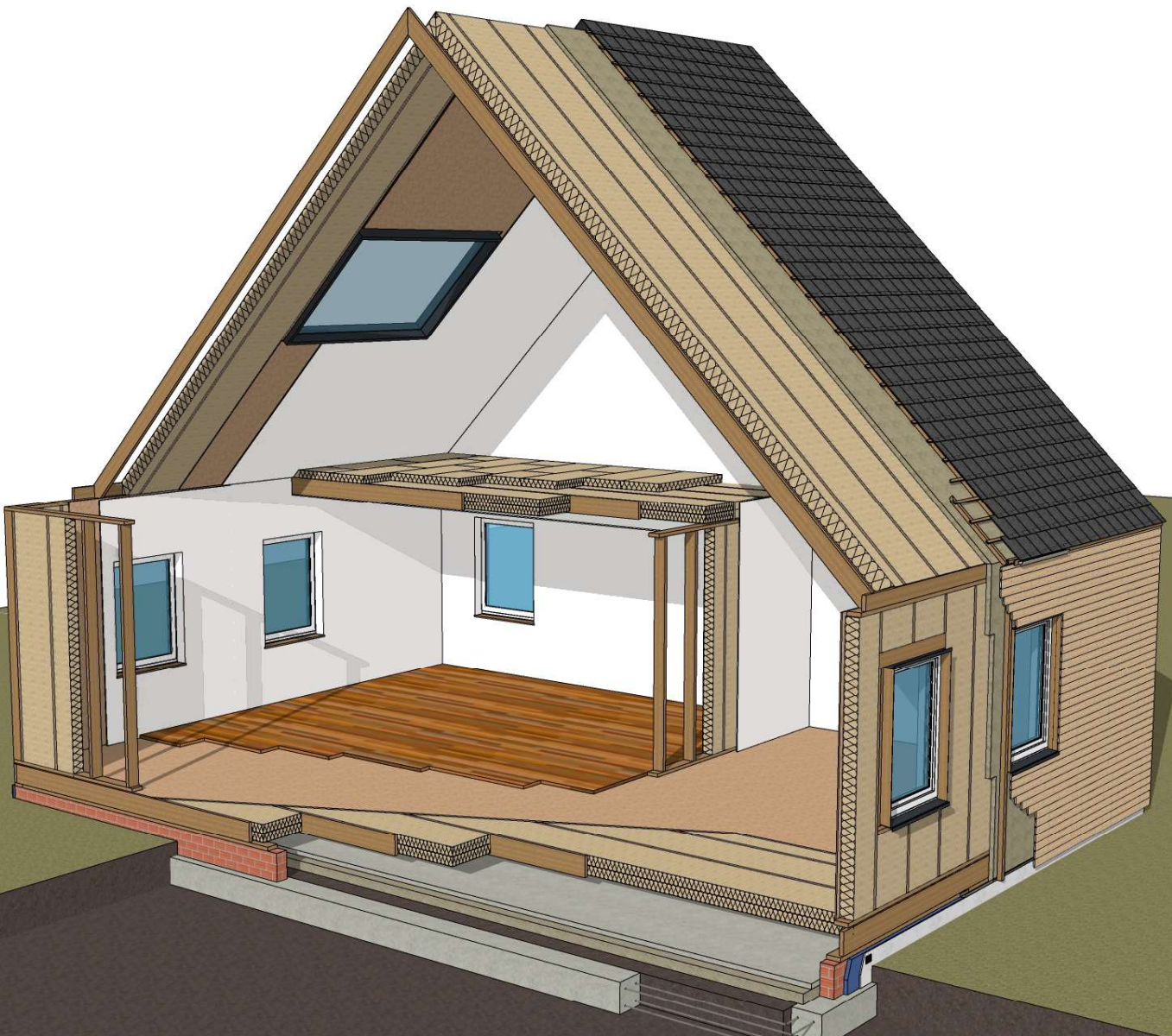
This chapter provides the detailing guidelines to ensure the correct installation and optimal performance of IndiTherm insulation in timber frame buildings with timber cladding.

Product information section:

All IndiNature products are easy to handle, cut and install. Care should be taken to make sure all material friction fits between timber studs so as to minimise any air gaps. Product should be installed in a clean, dry condition in a dry application and not be left permanently exposed to the elements. For cutting please see cutting guide at the end of this document.

Contents

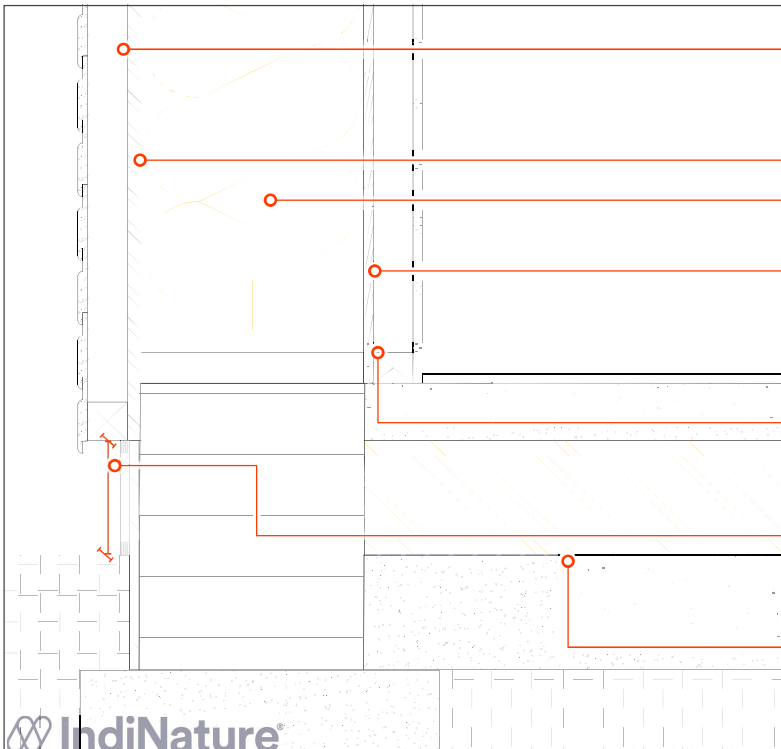
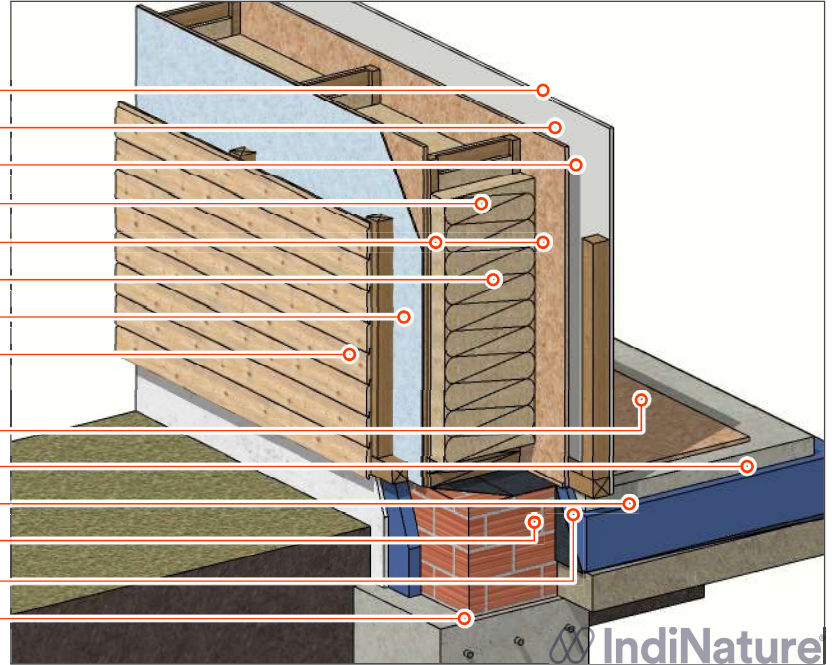
- 4.1 Foundation
- 4.2 Foundation, Suspended Floor
- 4.3 Intermediate Floor
- 4.4 Warm Roof
- 4.5 Cold Roof
- 4.6 Window, Sil, Jamb, Head



4.1 Conventional timber frame house foundation, using concrete strips and a solid slab floor

Foundation - Slab Floor

- Timber stud
- Plasterboard
- Service gap
- Vapour control layer
- OSB
- 280mm IndiTherm between timber studs
- Breathable membrane
- Rainscreen
- OSB Subfloor
- Rigid Insulation
- Concrete Screed
- Blockwork
- DPC/DPM
- Concrete foundation

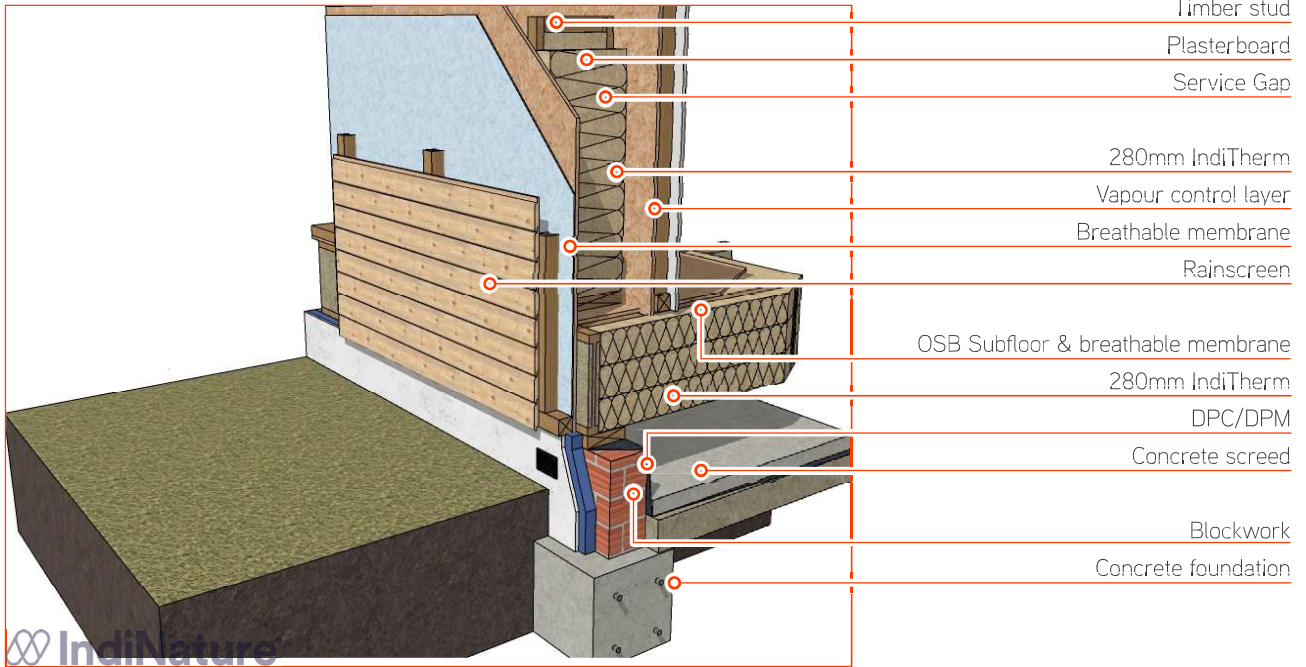


- 50mm air gap required between cladding
- Waterproof Breathable membrane fixed to the OSB
- 280mm Inditherm between timber studs
- 50mm service gap between OSB and plasterboard
- Airtight sealing tape between OSB and screed
- Minimum 150mm between ground level and base of insulation
- DPC beneath rigid subfloor insulation, and lapped over foundation blockwork

Conventional timber frame house foundation, using concrete strip, and a suspended floor with a crawl space

4.2

Foundation – Suspended Floor

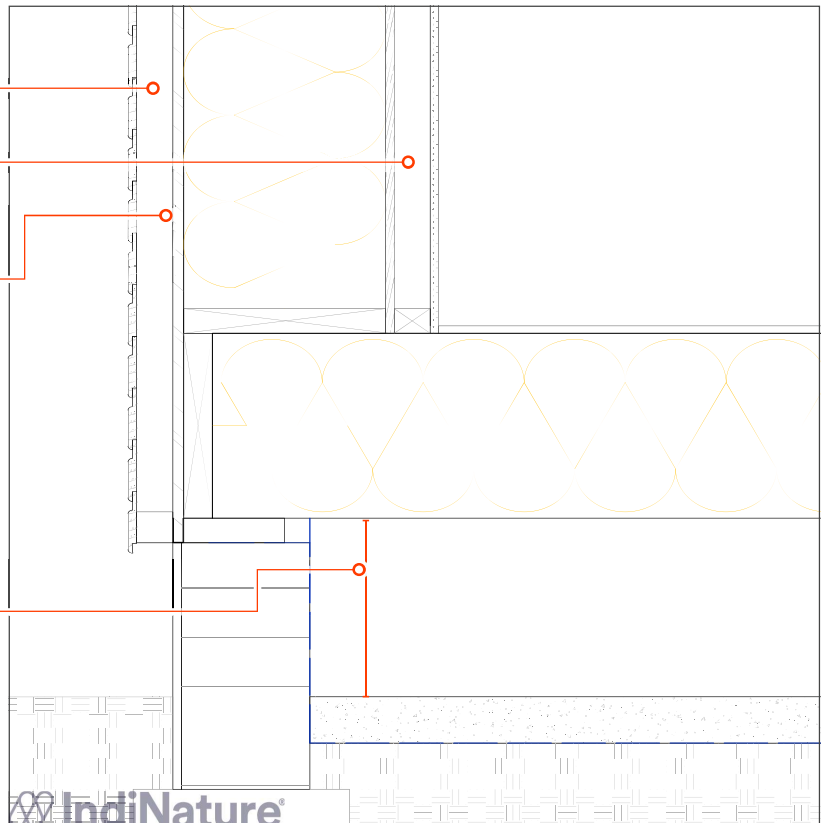


50mm air gap required between cladding and OSB

50mm service gap between OSB and plasterboard

Waterproof membrane fixed to the inside of the insulation should be breathable to allow vapour passage through the wall

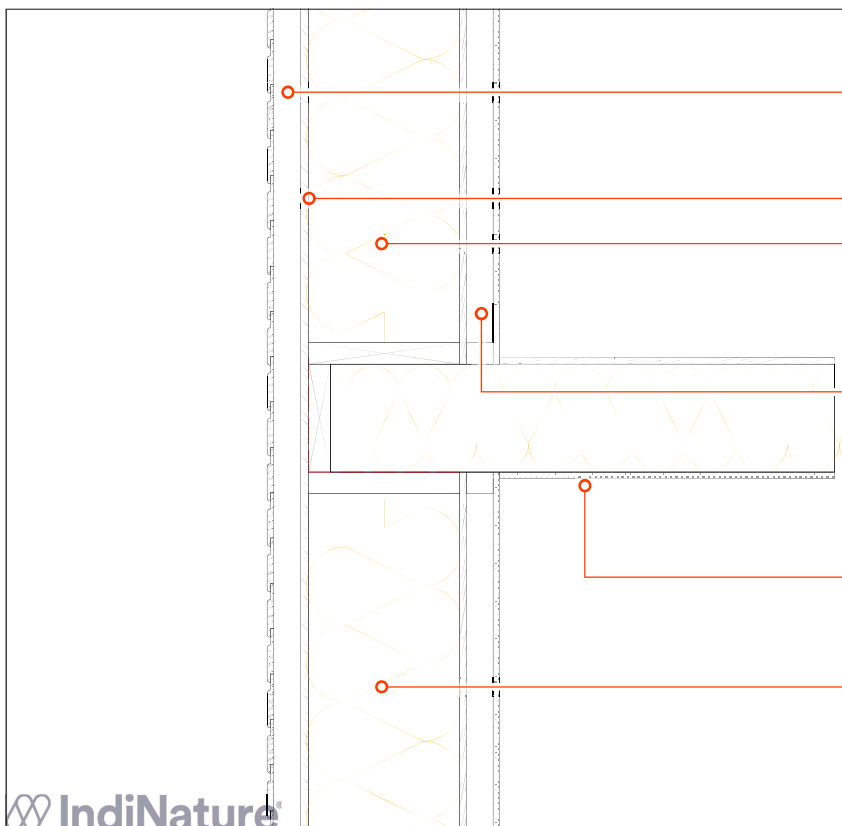
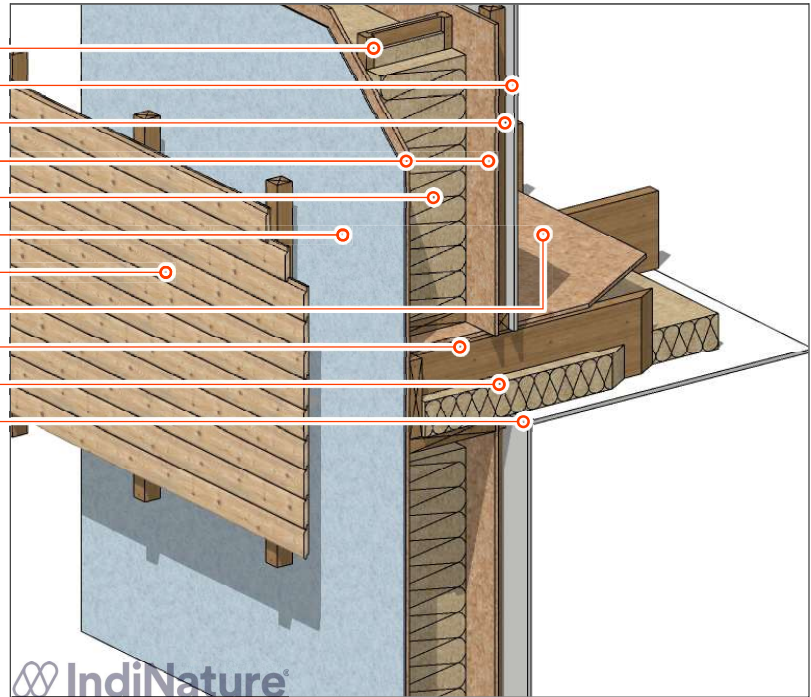
Minimum 150mm between ground level and base of insulation



4.3 Insulating and sealing around an intermediate floor

Intermediate Floor

- Timber stud
- Plasterboard
- Service Gap
- OSB
- 280mm IndiTherm
- Breathable Membrane
- Rainscreen
- OSB Subfloor
- Timber floor joists
- IndiTherm
- Plasterboard



50mm air gap required between cladding and OSB board.

Waterproof membrane fixed to the outside of the insulation
280mm IndiTherm between timber studs

50mm service gap between OSB and plasterboard.

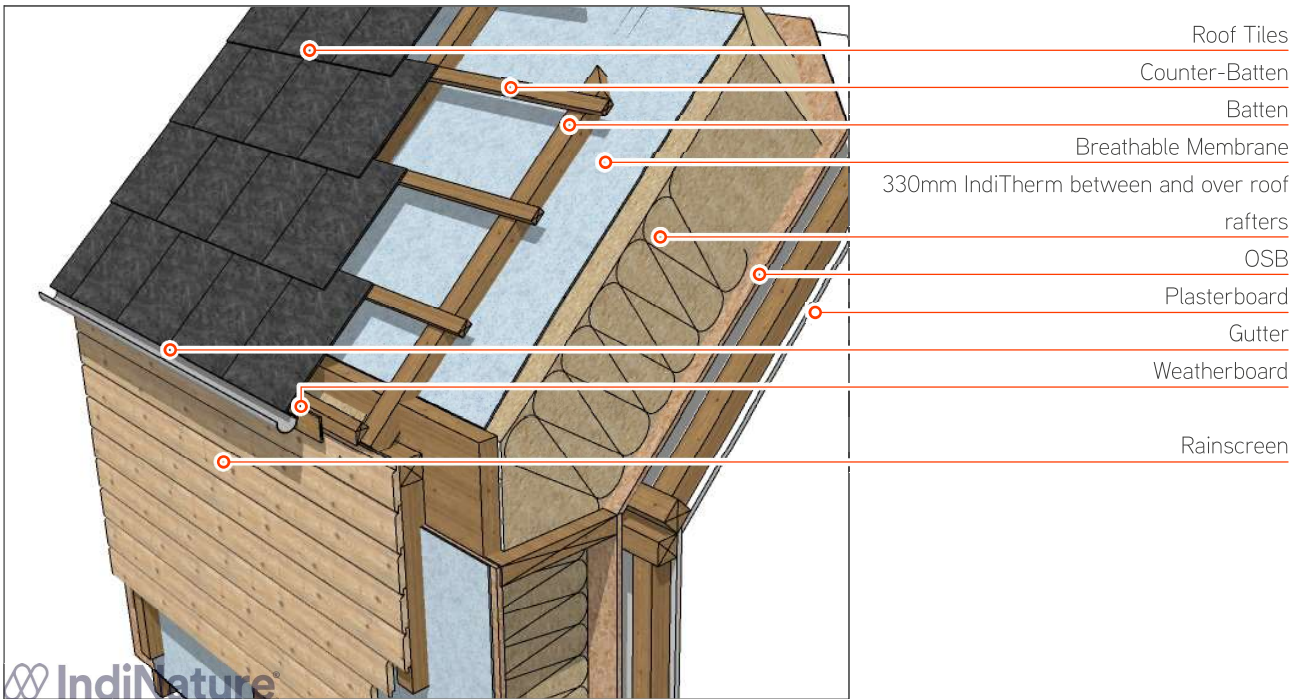
Plasterboard ceiling and IndiTherm fitted between floor joists to minimise sound transmission between levels.

Vapour control layer should be sealed with airtight tape to the OSB layers in order to maintain air tightness.

Insulating the roof to create a warm loft space

4.4

Loft – Warm Roof



Roof finish to designers specification

Min. 50mm continuous ventilation gap between tiles and insulation

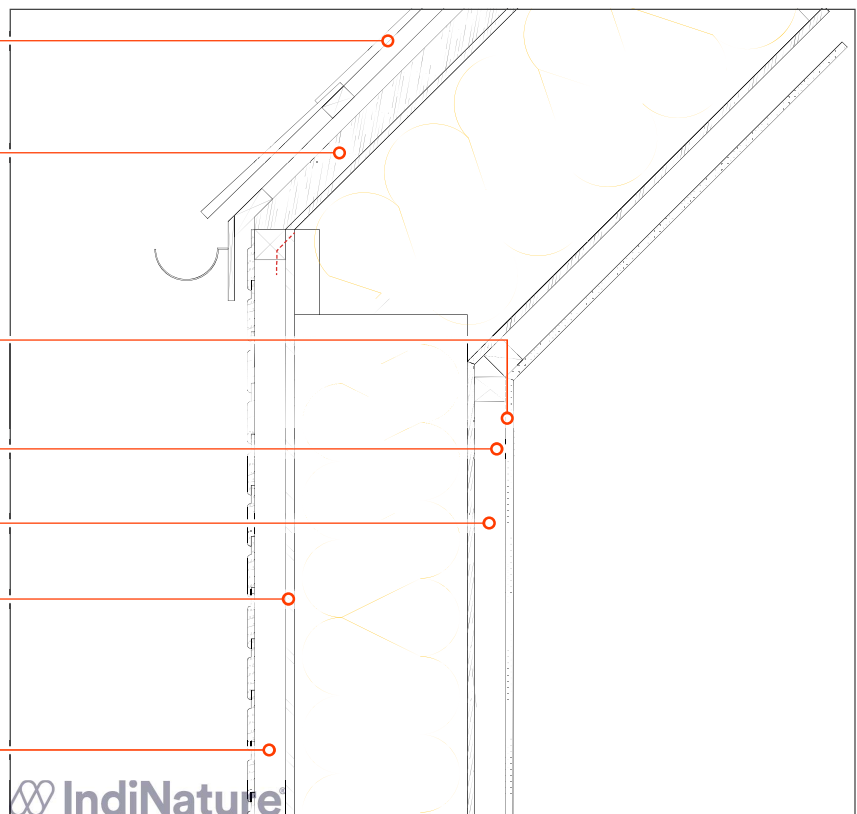
Joint between wall and roof to be sealed with butyl tape

OSB sealed with tape to form air tight layer

50mm service gap between OSB and plasterboard

Waterproof membrane fixed to the outside of the insulation

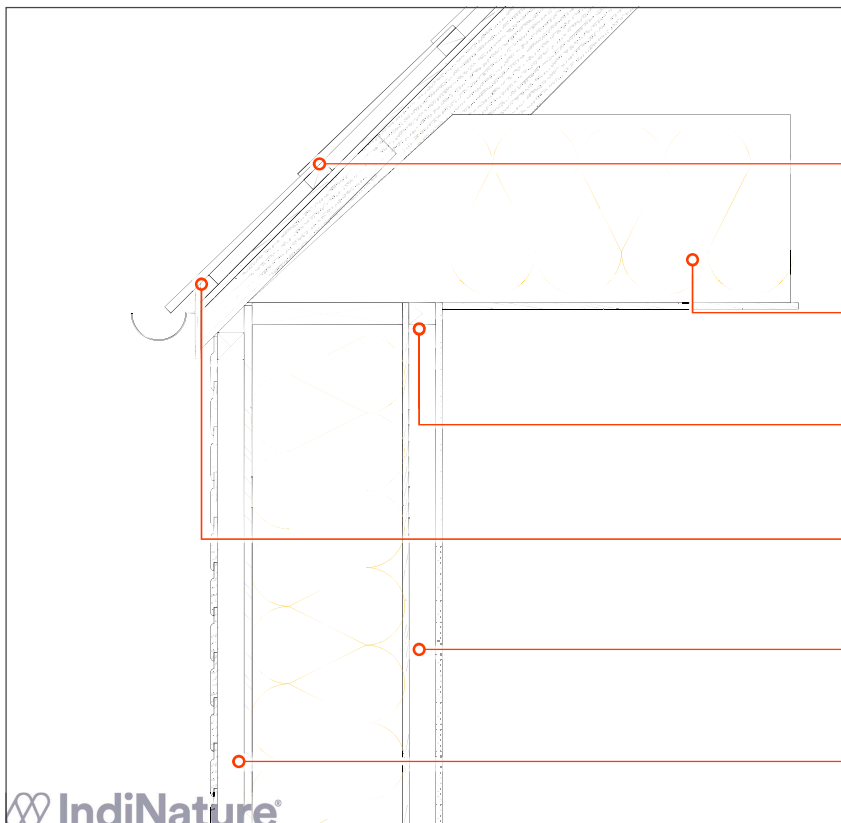
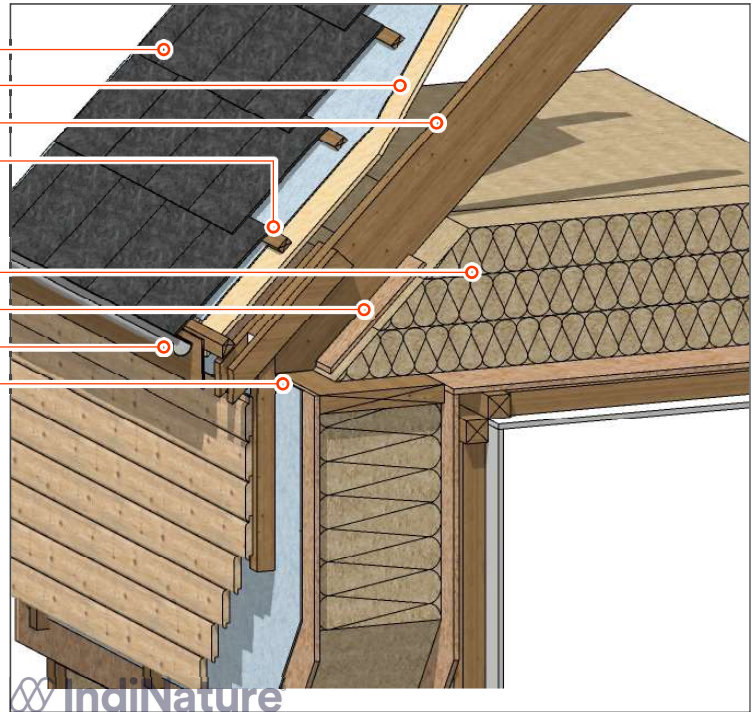
50mm air gap required between cladding and rigid insulation



4.5 Insulating the roof to create a cold loft space

Loft - Cold Roof

- Roof Tiles
- Sarking Board
- Roof Joists
- Tile Batten
- 330mm IndiTherm
- OSB
- Gutter
- Breathable Membrane



Roof finish to designers specification. Shown here is a traditional design of tiles on battens and sarking board

IndiTherm cross-laid to minimise gaps and maximise performance

OSB sealed with tape to form air tight layer

Min. 50mm continuous ventilation gap at eaves to allow air circulation in the roof

50mm service gap between OSB and plasterboard

50mm air gap required between cladding and OSB



Insulating and sealing around window openings

4.6

Window Details

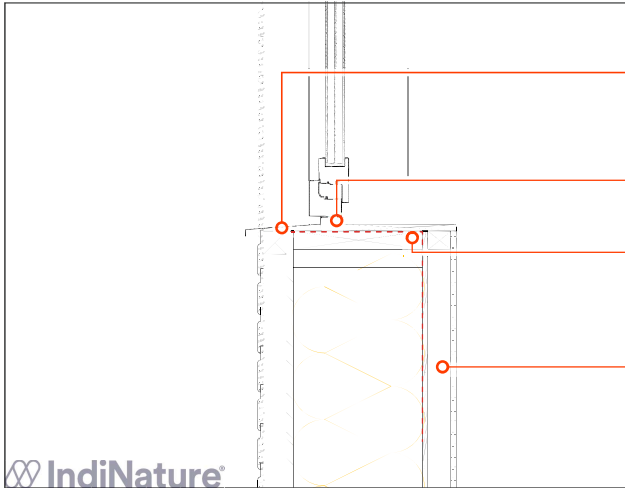
Window Sill

Double sided tape to externally seal insulation to window sill

Silicone sealed sill fixings

Airtight membrane taped to OSB to maintain airtight layer

50mm service gap between OSB and plasterboard

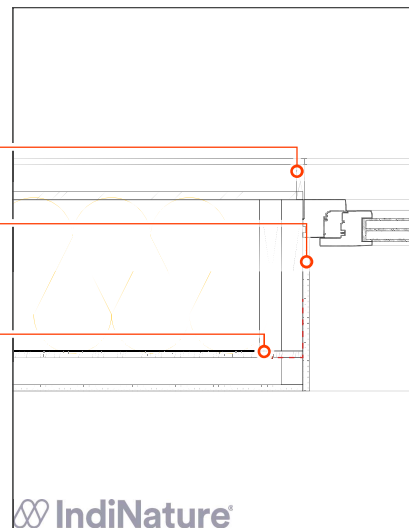


Window Jamb

Timber board matching cladding to protect the wall insulation

Expanding foam to fully fill shim space

Airtight membrane taped to OSB to maintain airtight layer

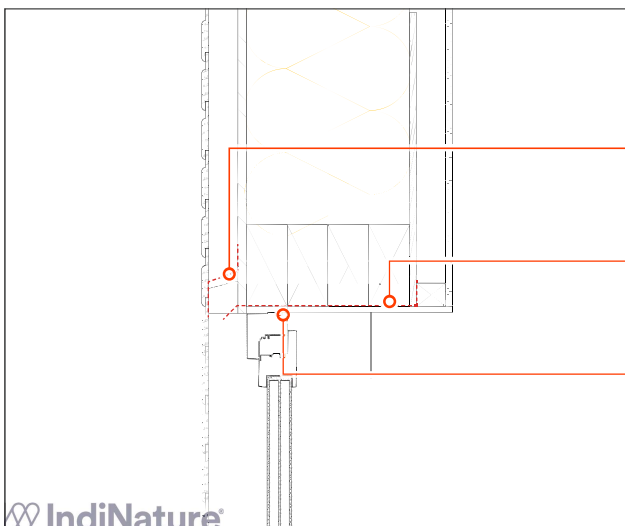


Window Head

Breathable DPM membrane drip fixed to 25mm x 50mm batten

Airtight membrane taped to OSB to maintain airtight layer

Expanding foam to fully fill shim space



Insulating and sealing around window openings

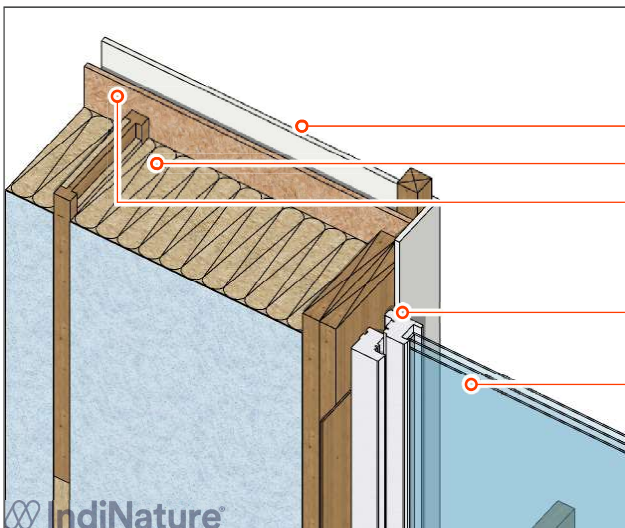
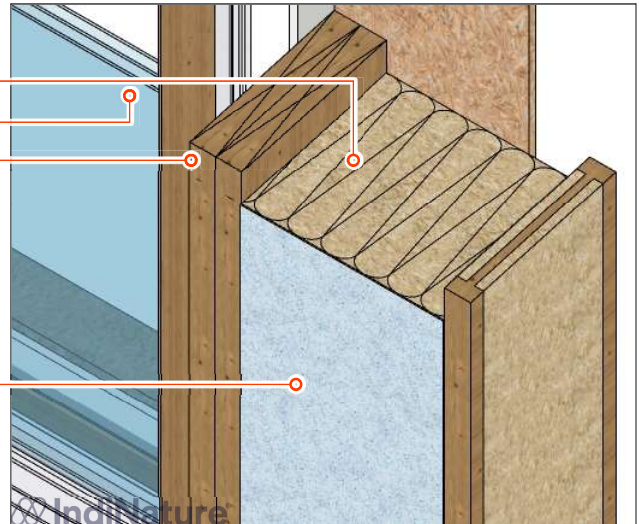
Window Sill

IndiTherm

Triple Glazing

Window Frame

Taped Breathable Membrane



Window Jamb

Plasterboard

IndiTherm

OSB

Window Frame

Triple Glazing

Window Head

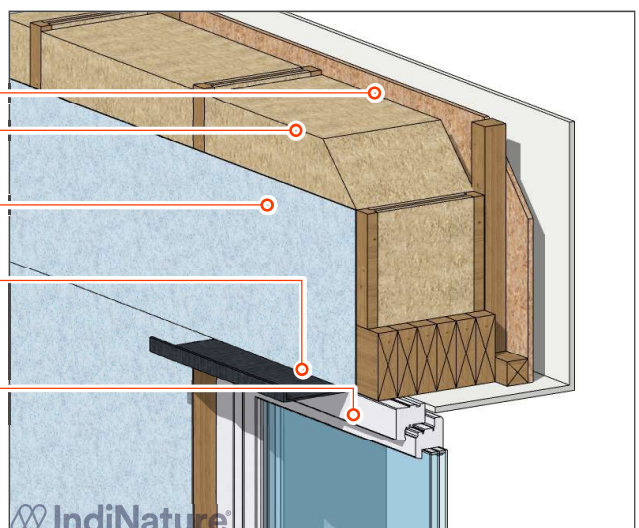
OSB

IndiTherm

Breathable Membrane

Aluminium window head

Window Frame



IndiTherm®

Product Cutting Tools

IndiTherm natural fibre insulation batts can be cut to size using a number of different tools.

This sheet provides guidance and examples of recommended tools for cutting IndiTherm easily and quickly. Other tools are available.



Bahco Insulation Specific Hand Saw

Bahco manufacture a hand saw with 'wave-formed' teeth which are specifically designed to cut insulation and is preferable to dulled hand saws while still being an inexpensive solution. This saw can easily be found in online trade stores.



DeWalt Cordless Alligator Saw

DeWalt manufacture a cordless saw capable of cutting a range of materials. This solution is a more expensive one, but is worth considering for larger projects or tradesmen who will be working frequently with insulation materials. This tool can easily be found at online trade stores.



Festool Cordless Insulation Saw

The Festool Insulation Material Saw is specifically design for cutting insulation materials quickly, with minimal effort, and maximum precision. It can be bought with a range of guides and accessories to ensure a precise cutting. It is much more compact than the DeWalt alligator saw which increases its convenience in both transport and use. It is the most expensive tool on this list, and as such we would only recommend this for very large projects or trade use.

