Integral Tape Roofing

Don & Low
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RoofTX® CONSEAL

The underlay can be used in both ventilated and non-ventilated cold & warm pitched roof systems below tiles and slates. In mainland UK and Northern Ireland the underlay should be installed in accordance with the relevant Agrément Certification as identified on the roll insert. For general information please see details below.

Non Ventilated Roofs

In non ventilated cold roof constructions, tiling battens at least 25mm thick must be used to ensure an adequate airspace between the roof covering and the underlay to allow water vapour to disperse above the underlay. If an airtight tiling system is used, the counter battens and batten space must also be ventilated, i.e. proprietary ventilators must be installed. In non-ventilated cold roofs, it is essential to maintain a convection tight ceiling. The use of an air and vapour control layer, vapour check plasterboard should always be considered.

Warm Roofs

If a vapour permeable underlay is used in a warm pitched roof construction there must be an adequate flow of air through the batten space. If airtight roof tiles are used, batten space ventilators must be installed. Where the underlay is fully supported, e.g. on the insulation, counter battens will be needed to provide an effective ventilation void. (Counter battens are required in all warm roofs in Republic of Ireland)

General Installation Information

The main function of an underlay is to provide a secondary barrier, preventing the ingress of wind driven rain, snow and dust. The period of exposure should be kept to a minimum. Consequently the primary waterproofing should be installed as soon as practically possible.

BBA has issued guidance relating to good site practice when using vapour permeable underlays. This highlights:

- An underlay is not a totally waterproof barrier and, if used as a temporary cover, some rain penetration may occur.
- An exposed underlay will be subject to UV light which may cause deterioration and can lead to premature failure. The exposure period should therefore be kept to a minimum.
- In certain conditions, particularly if there is persistent heavy rain combined with subsequent freeze/ thaw conditions, an underlay should not be exposed for more than a few days.

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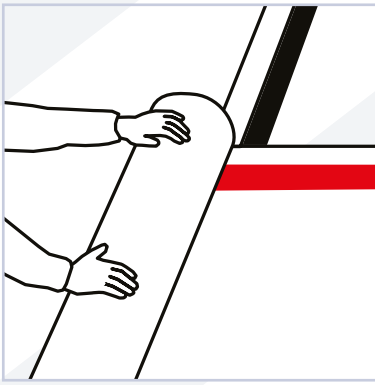
A copy of BBA Information Bulletin No. 2- Permeable Roof Tile Underlay Guide to Good Site Practice is available at www.donlow.co.ukUnroll the underlay exactly as indicated in Figure 1, such that the inner surface of the roll is facing uppermost and the adhesive tape strip (indicted by a red line on figure 1) is towards the ridge. Where the underlay is unsupported, ensure there is sufficient drape to allow moisture and air movement. Where the underlay is required to be draped this should be more than 6mm and less than 25mm. The underlay is unrolled horizontally across the roof starting at the eaves. Subsequent rows of underlay should be lapped over the underlying row to shed water out and down the slope. Sufficient vertical overlap should also be allowed - see table and Figure 3 below. Once the overlaying underlay is in position the protective covering over the tape strip should be removed and the two layers of underlay brought together. Compression of the tape between the two layers may be assisted by having a colleague providing some resistance behind the underlay, from within the roof space. Tiling battens, and where appropriate counter battens, should be now fixed over the underlay ensuring that any drape is maintained.

Figure 1 - Unrolling



Installation in low temperatures: with lower external temperatures, typically below 10°C, additional pressure may be required to ensure effective adhesion. The product should not be installed where the external temperature is below 5°C, particularly where the surface of the membrane is moist or icy. Once effectively bonded, low temperatures do not affect tape adhesion.

Alternatively, where taping of overlaps is not required, the installation instructions are identical to those above, except that the protective covering over the tape strip should not be removed.

Where softwood boarding or timber sheeting is used below the underlay, counter battens are typically required to provide effective drainage below the battens. Where timber counter battens are positioned above the underlay, there is no need to tape overlaps to resist wind uplift.

Minimum Overlaps

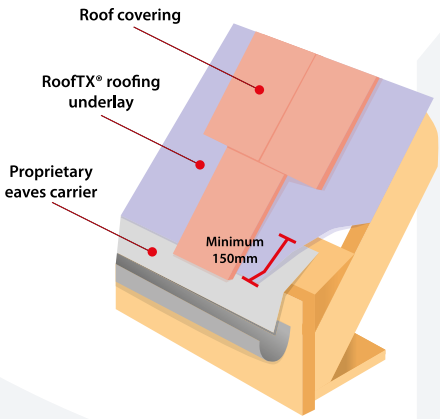
Roof Pitch°	Horizontal Lap (mm)		Vertical Lap Limit
	Partially Supported	Fully Supported	(mm)
12.5 to 14	225	150	100
15 +	150	100	100

Note: For Republic of Ireland a horizontal overlap of 225mm should be maintained for partially supported roofs up to a roof pitch up to 22.5°. All other values in the table above are valid for ROI.*

** Not applicable to RoofTX® Extra.*

Eaves and roof edges: The underlay should be unrolled across the roof and draped a minimum of 150mm onto the proprietary eaves carrier. The eaves carrier needs to extend beyond the outer fascia board / tilting fillet edge to ensure effective drainage into the gutter – see figure 2.

Figure 2 - Eaves Detail



Underlay to extend a minimum of 150mm over proprietary eaves carrier, which must extend beyond the fascia to ensure effective drainage into the gutter

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Ridges: In duo-pitched roofs the underlay from one elevation should overlap the other by at least 150mm see figure 3. The underlay should be sealed around penetrations through the roof at the ridge to accommodate high level void ventilation. With mono-pitched roofs the underlay should be extended over the mono ridge by at least 100mm. It is recommended that the underlay be extended to provide protection to the ends of roof timbers.

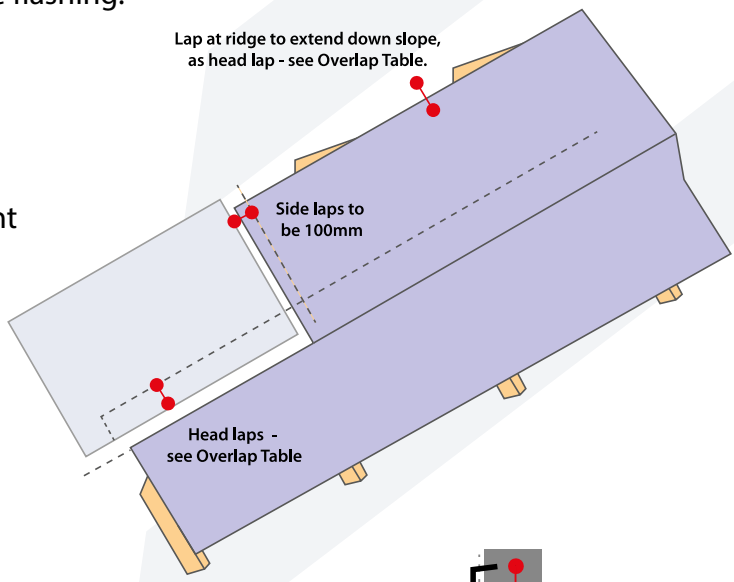
Verges: At verges the underlay should be lapped over the outer walling (typically brickwork) by at least 50mm. Where the verge has a constructed overhang the underlay should be fixed to the outer rafter.

Abutments: The underlay should be returned up the abutment by at least 75mm below either a proprietary plastics or lead flashing – see figure 4.

Hips and valleys: Should be covered with a separate 600mm wide strip of Underlay

Details: Ensure that when detailing around service penetrations, roof lights or chimneys the underlay is dressed a minimum of 100mm to the up-stand and is effectively sealed and weathered by an appropriate flashing.

Figure 3 - Overlap Detail



Regulation requirements relating specifically to Southern Ireland*

Section 2 of Irish Technical Guidance Document F, provides guidance on the requirements for ventilation of roofs. This specifies that:

- All warm roofs should have a 50mm gap between the covering and underlay, which typically means that counter battens will be required.
- There is no requirement for counter battens in cold roofs with most slating and tiling systems. If an airtight tiling system is used, BS 5250 indicates that the counter batten/ batten space be ventilated.

In Republic of Ireland, in a non ventilated cold roof, the use of an air and vapour control layer, on the warm side of the insulation, is essential. See section relating to installation in relevant Irish Agrément certificate

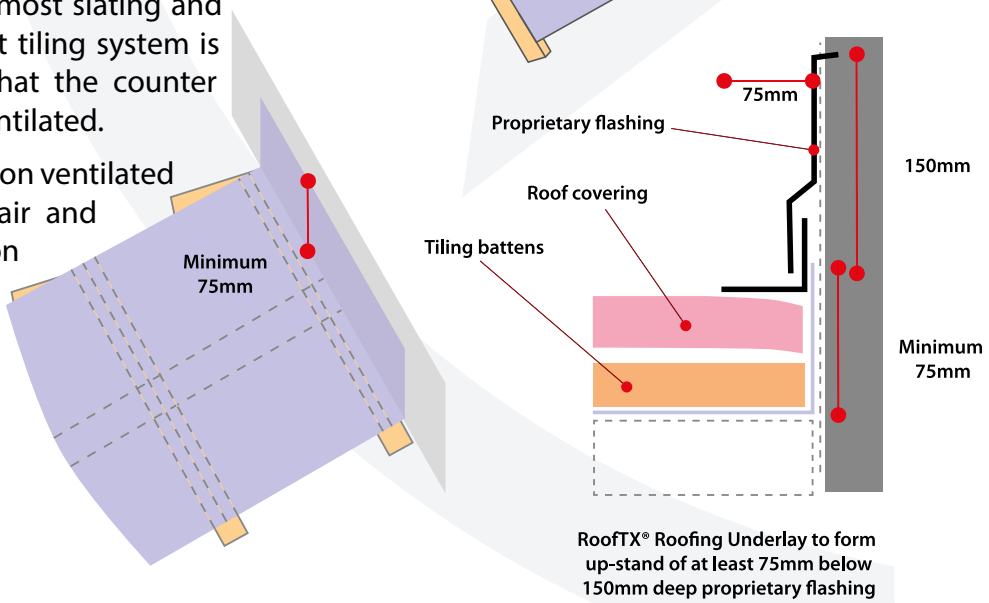


Figure 4 - Abutment Detail

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identified on the roll insert.*

* Not applicable to RoofTX® Extra.

Health and Safety

Care should be taken in handling materials at height. In particular ensure that manual handling regulations are not exceeded. Sufficient edge protection, netting, appropriate scaffolding and hoisting are necessary to ensure the safe application of roofing underlays. Before work commences a method statement and risk assessment should be prepared.

Standards and Guidance

It is important to note that BS5250 requires that low resistance (LR) underlays be supported by third party certification, e.g. BBA, IAB, where they are to be used within an unventilated cold pitched roof.

BS 5534, British Standard Code of Practice for slating and tiling for pitched roofs and vertical cladding provides guidance and recommendations for the appropriate detailing and installation of underlays and roofing components, which should be followed when installing Don & Low products.

The British Board of Agrément has issued an Information Bulletin (No 2) relating to good site practice when using permeable roof tile underlays. This highlights:

- An underlay is not a total waterproof barrier and, if used as a temporary waterproof covering, some rain penetration may occur.
- In certain conditions, particularly if there is persistent heavy rainfall combined with subsequent severe freeze/thaw conditions, an underlay should not be exposed for more than a few days.

A full copy of this BBA Information Bulletin No 2 – Permeable Roof Tile Underlay Guide to Good Site Practice is available from the Don & Low website Download section Installation instructions

For CE Accompanying Technical Document please contact your Distributor or visit www.donlow.co.uk. For information relating to these products in other languages please visit the Don & Low website www.donlow.co.uk

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