

Preparing A Flat Roof Timber Deck For GRP

If you are a builder, and are in need of a GRP flat roof to meet the architects specification, this guide will help you to prepare the timber deck, ready for a professional GRP roofer to install the covering.

Use OSB Boards Only

The first requirement, is that the top deck (on which the GRP will be laid onto) is 18mm OSB. Do not use any other type of sheet timber. Do not compromise with thinner sheets or ply backed insulation. **The deck must be 18mm OSB.**

T&G Boards Are Preferable

Tongue and groove boards are preferable because they do not require expansion gaps to be left in between each board... although the edges that meet walls will still need expansion gaps (more explained later).

If you are using 8x4' sheets, leave approx 5mm between each board to allow for expansion resulting from changes in climate. Failure to allow for expansion will result in rucking & lifting of the GRP system.

The boards must be completely dry. Otherwise the GRP system will not bond to the timber deck, resulting in bubbles or lifting.

Expansion Joints

1. Leave approx 40mm to all abutments (where boards meet walls). The pre formed GRP trims will easily cover these expansion joints.

If you have an edge on your flat roof that doesn't butt against a wall, cut the board flush with the fascia boards.

2. If using 8x4' OSB sheets, leave 5mm between boards.

Fixing The Boards

Fix the boards with screws or failing that, 31/75 ring shanked

galvanised nails. Preferably with a Paslode gun (or similar) to avoid internal damage to ceiling/plastering. Using nails as an alternative to screws, minimises screw-heads, but isn't as effective and requires more fixings. Fix boards well and space screws approx 12" apart. Fix all corners of the boards.

Keep The Newly Installed Deck Dry

The newly installed 18mm OSB deck must be kept completely dry. We recommend using a visqueen sheet, as opposed to a standard tarpaulin.

When Installing Rigid Board Insulation

If you are installing rigid board insulation, you have two options:

Cold Roof:

Install celotex (or similar) insulation between joists. The new deck will be installed on the joists as usual. Consult your architect regarding adequate ventilation. If installing vents, inform the roofing contractor before obtaining a quote. The detailing around vents is complex and will add to the GRP installation price. This should be ascertained prior to quotation.

Warm Roof:

Lay a deck (and possibly a vapour layer, subject to architects spec) over the joists. You can use any form of decking for this (plywood etc is fine). Lay rigid board insulation over the previously mentioned deck. Your architect may insist that you bond the insulation with an adhesive. The 18mm OSB deck is then fitted over the insulation boards. Screw through into the joists with 175mm screws, fastening the whole deck, insulation and top deck. Use screws that do not show proud on the top deck (18mm OSB deck). The flatter the better.

Other Points Of Consideration

- Many new build extensions (as of 2015) are installed with box gutters and outlets passing through a parapet wall. In this instance, board the box gutter bottom, and the bottom of the outlet with 18mm OSB. There is no need to board box gutter or outlet sides.

- You do not need to board the walls of your flat roof. The pre formed trims ([which can be viewed here](#)) are used to finish edges and wall detail.
- Flashings to walls etc on GRP installations will be pre-formed GRP simulated lead flashings as standard. Please prepare your brickwork in advance by chasing out any brickwork to take the flashings. This will avoid dust on the newly installed GRP surface.
- When installing copings to a wall, the GRP trims will be sufficient to enable you to bed the copings without the need for lead. Please inform the roofing contractor of any parapet walls that will be finished with copings, as additional trims will be required.

Roof Windows

Please prepare the window frames, and do not install the window top until after the GRP system has been applied. GRP installations are performed with liquid & can flick onto windows easily.

The wall [fillet trim](#) is used to seal window frames to the timber deck. This is performed by the roofing contractor.

Critical Measurements For Roof Windows

If you are working with a window that has its own frame/drip, you **MUST** inform the roofing contractor of critical measurements. Failure to do so, may result in the wall fillet trim installation expanding the window frame to a point where the window frame no longer fits.

By Nicky Morris of Barris Roofing Ltd
www.roofingsouthlondon.co.uk