

SupercreteTM

Sustainable Cost Effective Construction & Coating Systems



Engineered Retrofit Cladding Solutions



SupercoatTM

100% NZ
Owned & Operated

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2.4 Retrofitting

2.4.1 Introduction

Retrofitting, or the re-cladding of existing buildings, is a simple way of improving the exterior appearance of a building, while also improving its thermal and acoustic performance. In some cases it is not even necessary to remove the old cladding (e.g. rusticated weatherboard). If installation of insulation into a wall framing space is also carried out at the same time as re-cladding, this can be done via holes cut into the existing cladding, prior to fixing the building paper/wall wrap over the existing cladding (if no building paper/wall wrap exists then fix building paper/wall wrap over existing cladding). All buildings must have building paper/wall wrap applied prior to the battens being installed.

The panels may be supported by either the normal 23.5 or 35mm battens or by our 60, 100 or 120mm tophat battens to replicate the depth of the cladding system being replaced.

When using the normal 23.5 and 35mm battens the details contained in the previous sections of this document can generally be used. They can also be used in conjunction with the 60, 100 and 120mm tophat battens with modification to allow for the larger cavity.

2.4.2 Scope of Building Types for Retrofitting

Any timber or metal stud frame building that has a building consent can be re-clad with Supercrete™ 50 or 75mm Panel Systems. The building needs to be assessed by the Building Consent Authority as to its suitability to support a medium weight cladding. The existing framing may have to be modified to meet the requirements of the BCA.

Some older buildings may have framing installed to earlier versions of the building standards whose details differ from the current Building Code requirements.

Details such as lesser or no timber treatment and building paper not returned back into the openings will not affect the performance of our systems.

However, older structures will often require additional framing to bring them up to the current levels of bracing capacity for medium weight claddings.

Table 6. 60, 100 and 120mm Tophat batten Spacing for Supercrete™ Panel Cladding Systems (for Panels with Base Support only)

Panel Height	Wind Zone	Numbers of Battens per panel	Maximum Batten Spacing (mm)
Up to 2400mm	Low	3	1050
	Medium	4	700
	High	4	700
	Very High	5	525
	Extra High	6	420
>2400 - ≤2700	Low	3	1200
	Medium	4	800
	High	5	600
	Very High	6	480
	Extra High	7	400
>2700 - ≤3000	Low	4	900
	Medium	4	900
	High	5	675
	Very High	6	540
	Extra High	7	450

NOTES:

- (1) This table is for 60, 100 and 120mm tophats only
- (2) The table above can be applied to both 50mm Supercrete™ Panels and 75mm Supercrete™ Panels with base support
- (3) This table does not apply to panels without base support
- (4) Wind Zones are as specified in NZS 3604:2011
- (5) It is assumed the battens are to be fixed to timber or metal studs at 600mm centres

- (6) The first and last battens are 150mm from the ends of the Supercrete™ Panel
- (7) The battens have been considered to span over a minimum of 2 continuous spans
- (8) There is no restriction for Seismic Zone 1. Low wind and Medium Wind shall not be used in Seismic Zones 2 and 3. Extra High Wind shall not be used in Seismic Zone 4
- (9) When used in retrofitting of Supercrete™ Panel Cladding in place of existing veneer cladding the existing building frame is to be verified as complying with the NZ Building Code and, where applicable, NZS 3604:2011

2.4.3 Base Support for Retrofit Cladding

2.4.3.1 Standard 23.5mm Battens

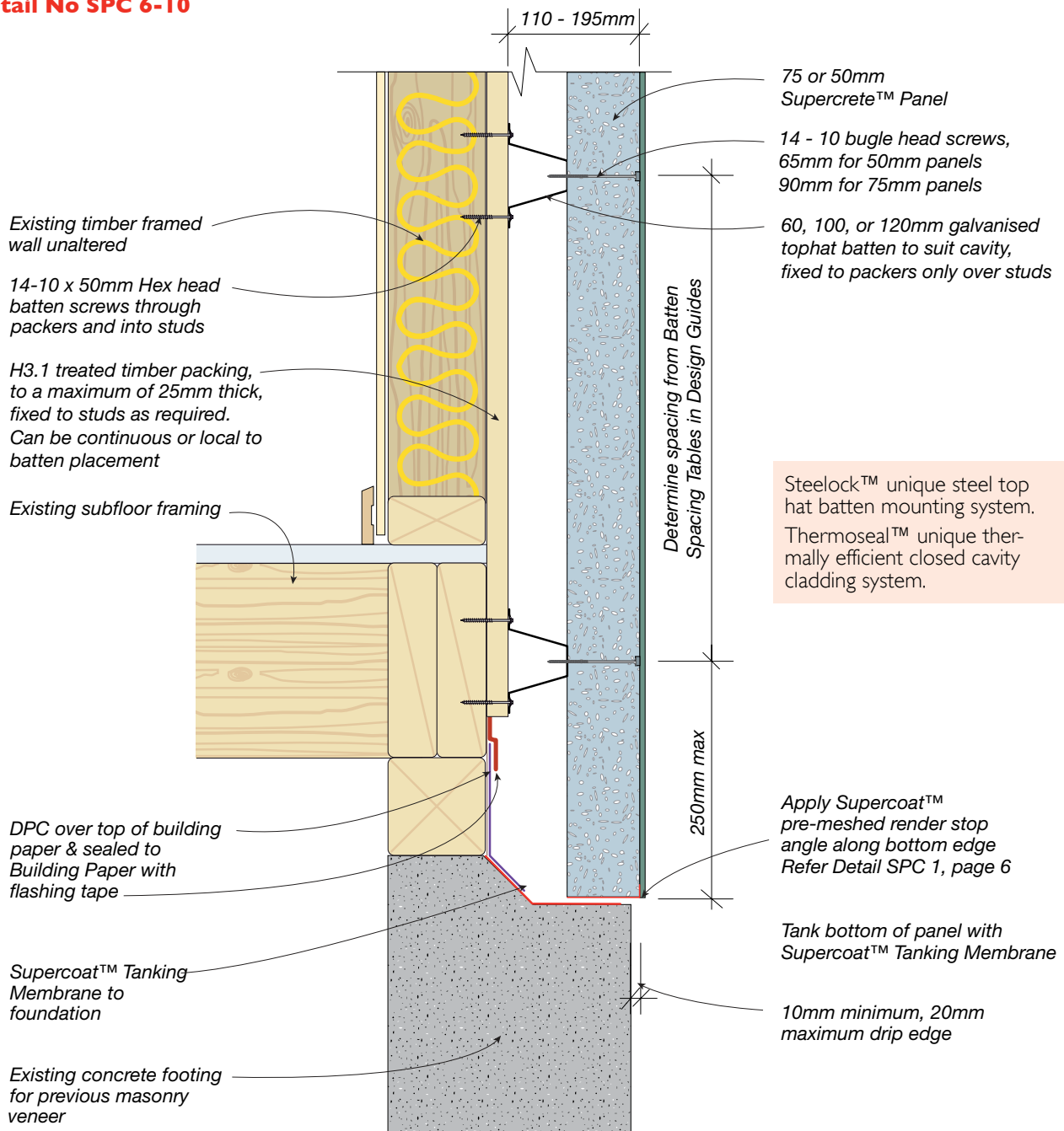
Often there will be an existing rebate in the foundation or perimeter foundation wall for the previous cladding. This may be used for the new cladding and lined with Supercoat™ Tanking Membrane and DPC as for the standard rebated foundation detail. Where there is no rebate the cavity is to be closed off at the bottom by a closure angle and the batten spacing adjusted by the Supercrete™ Distributor to suit the panels without base support.

2.4.3.2 60, 100 & 120mm Tophat Battens

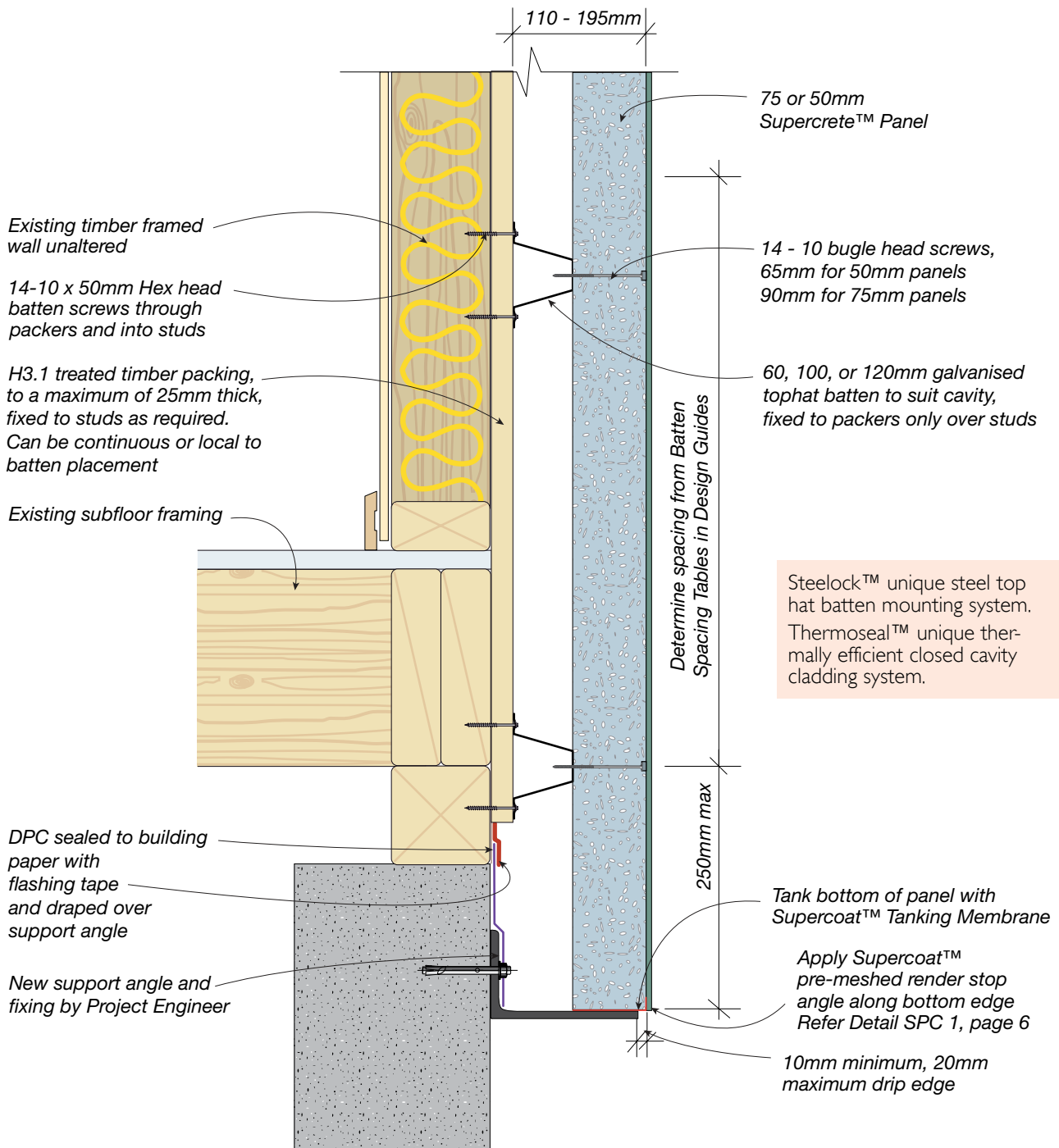
When using these types of battens the bottom of the panel must be supported to take the weight of the panel. This can be either by the existing rebate in the foundation or by a galvanised angle sized by the project engineer.

Refer Details **SPC 6-10** below or **SPC 6-11** on page 58.

Tophat Batten Retrofit Rebated Foundation Detail No SPC 6-10



Tophat Batten Retrofit Foundation with Support Angle
Detail No SPC 6-1 I



2.4.4 Openings in existing buildings

Depending on the original cladding, the face of the joinery may not cover the new cavity sufficiently to close the cavity and give a good landing on the panel to effect a seal between the joinery and the panel. To enable a good seal to be created and to remove the need to alter or replace the windows or doors, a return segment of Supercrete™ panel can be installed around the opening.

If the existing window or door joinery will not be at least 15mm past the back face of the panel when it is installed, then it will be necessary to put a Supercrete™ Panel return around the openings to close off the cavity space and provide a surface sufficient to seal the window and door joinery to.

This is most easily done by stopping the battens and panels 60mm short of the window outer flanges and then gluing Supercrete™ 50 segment on the edges of the panel. If it is more convenient, Supercrete 75mm panel can be used and the battens stopped 85mm short.

These segments can be made by cutting standard panel into strips that, when installed, will extend from the front face of the cladding surface back to a minimum of 10mm from the face of the timber framing thus closing off the batten space. See Detail SPC 4-6, below.

2.4.5 Horizontal Control Joints

Where one frame is located above another (such as an upper level wall frame over a ground floor frame) there is created a plane of differential movement between the two frames. To express this movement a flexible, horizontal control joint is installed along the line separating the two frames.

When using the 60, 100 and 120mm Tophat battens the upper panels need to be supported independent of the lower panels since the control joint does not have the strength to transfer the upper panel weights to the lower panels. Refer Detail **SPC 6-12** on page 60.



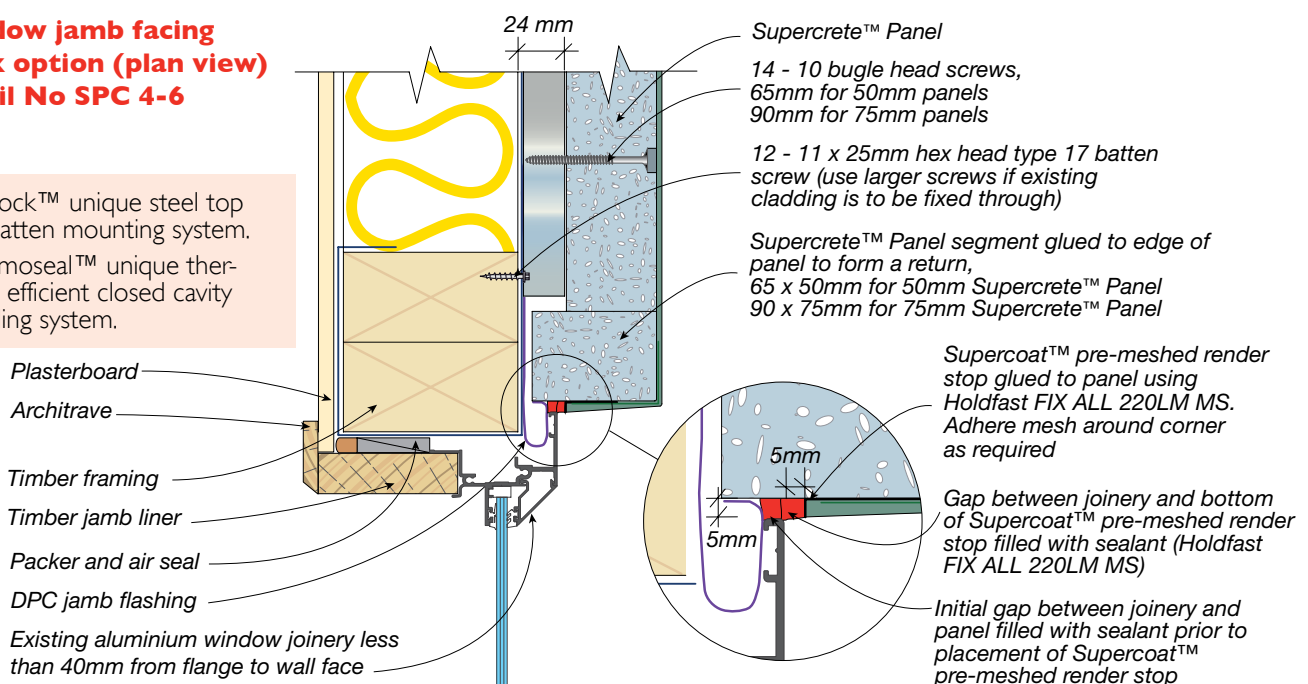
Before...



And after retrofitting.

Window jamb facing block option (plan view) Detail No SPC 4-6

Steelock™ unique steel top hat batten mounting system.
Thermoseal™ unique thermally efficient closed cavity cladding system.



NOTE: This option can be used where deeper reveals are required or for a retrofit where the existing windows do not extend sufficiently past the framing to cover the batten space.

Tophat Batten Retrofit Mid-floor Control Joints

Detail No SPC 6-12

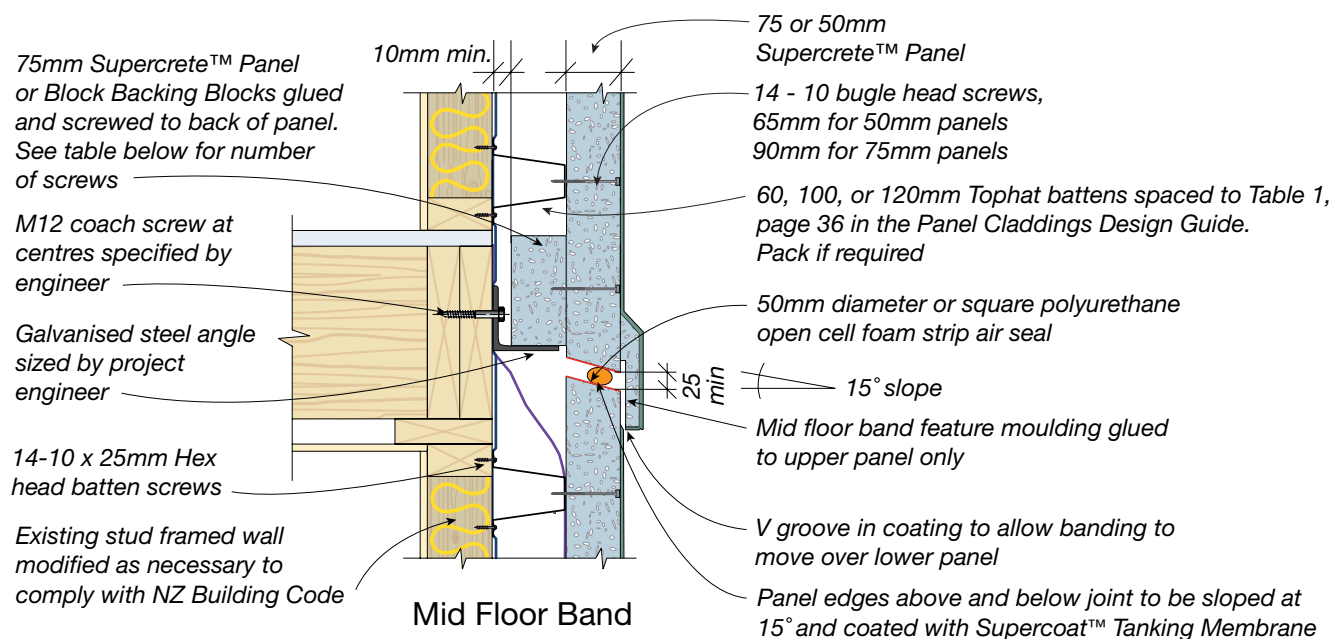
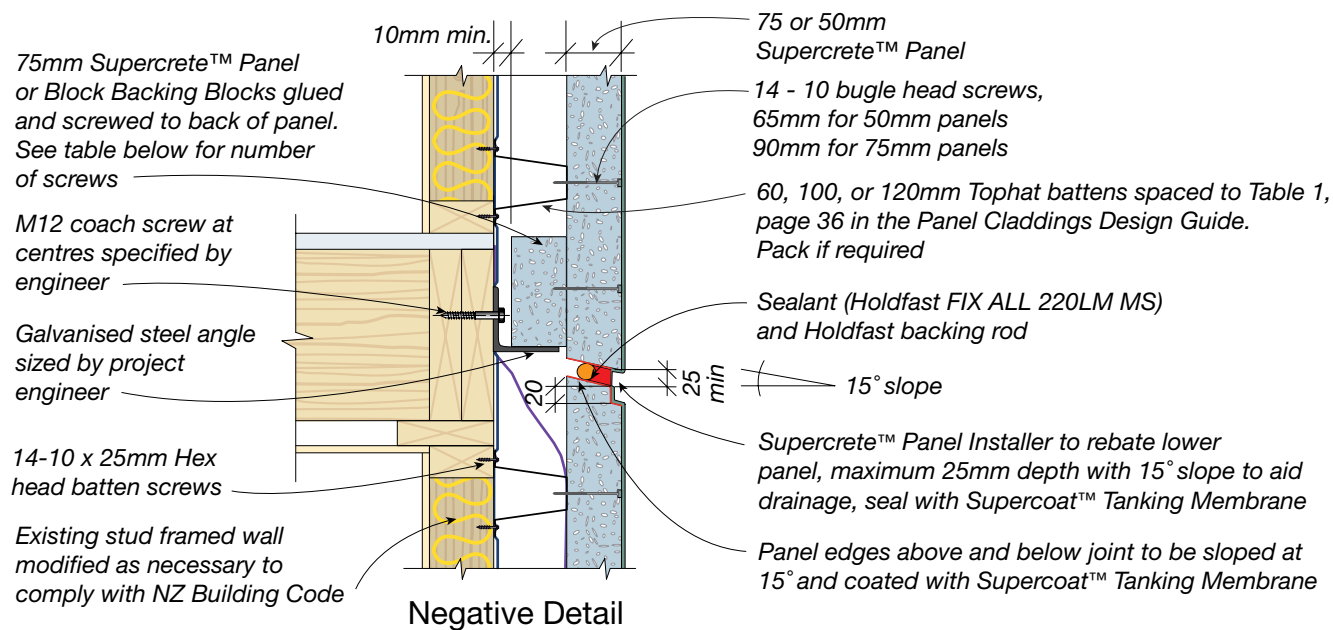


Table 7. Number of screws per panel for backing block

Length of upper panel	50mm Panel	75mm Panel
2200	2	N/A
2400	2	3
2700	N/A	4
3000	N/A	4

Steelock™ unique steel top hat batten mounting system.

Thermoseal™ unique thermally efficient closed cavity cladding system.

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