

FACADE SLAB INSULATION INSTALLATION GUIDE

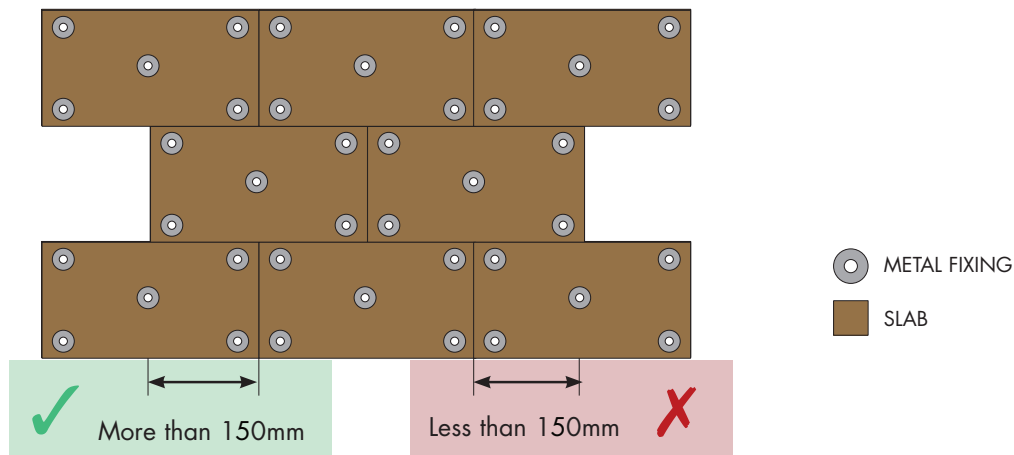
**The definitive guidance on installing
high performance facade insulation.**

PLACEMENT

LAYOUT

Joints between slabs should be staggered by a minimum of 150mm and coincidental joints should be avoided.

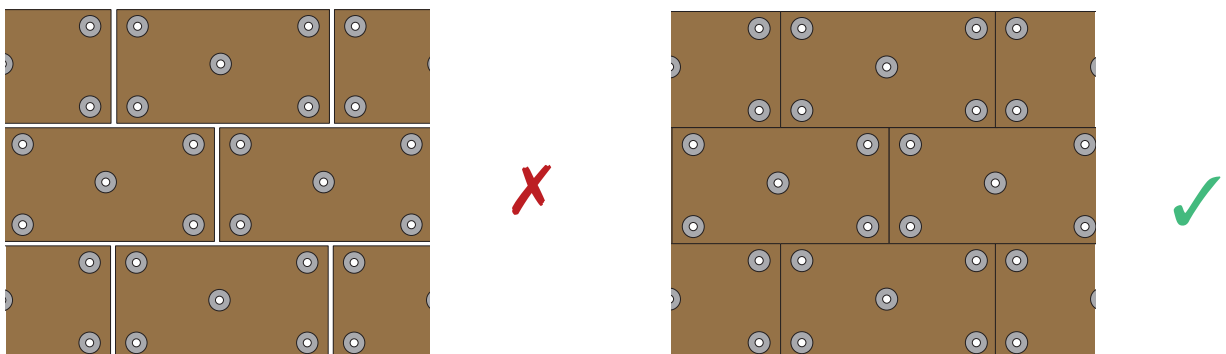
? **To avoid coincidental joints**



SLABS TO BE IN CONTACT WITH EACH OTHER

Facade Slab boards should be installed connected with the substrate and tightly butted together at joints, staggered by a minimum of 150mm.

? **To ensure the insulation performs as thermally specified.**

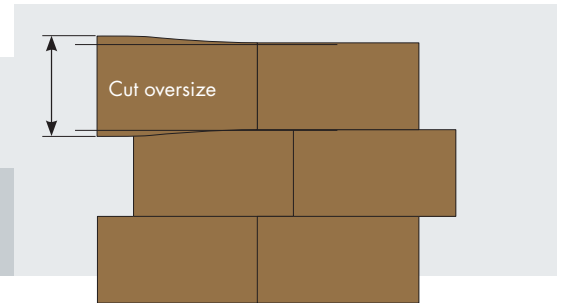


PLACEMENT

COMPRESSION FIT INTO PLACE

Ensure slabs are tightly butted, and if cut, cut slightly oversize and compression fit into place, making sure of a snug fit.

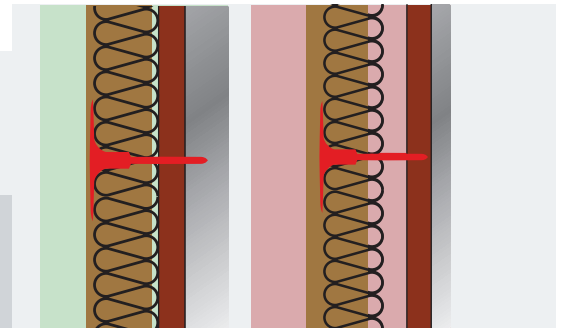
? **To create a tight knit between slabs, to reduce the chance of air gaps and ensure thermal efficiency.**



INTIMATE CONTACT WITH SUBSTRATE

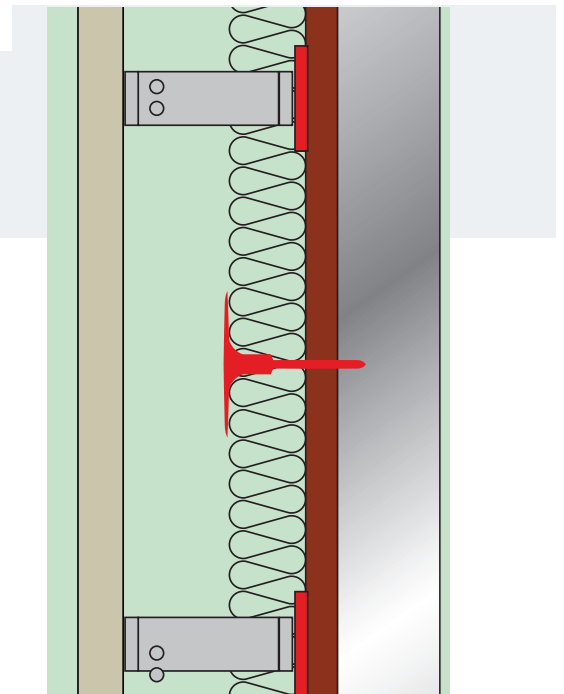
Facade Slab should be in intimate contact with the building substrate as the nature of the insulation material lends itself to accommodate any irregularities in the surface of the substrate.

? **Creating a snug fit between the slabs and the wall reduces the chance for air gaps and ensures thermal efficiency.**



MAINTAIN A VENTILATED CAVITY

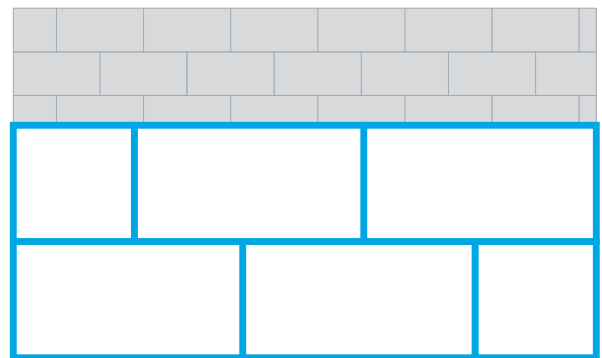
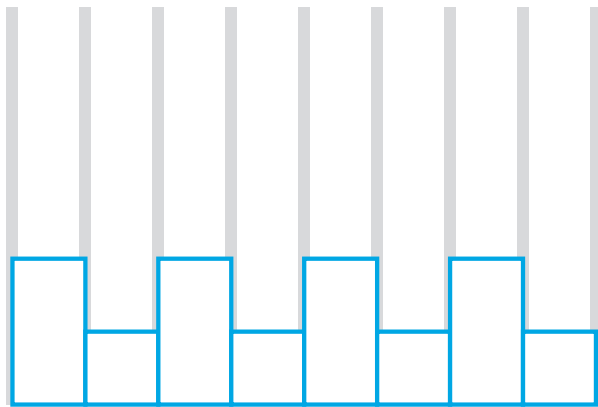
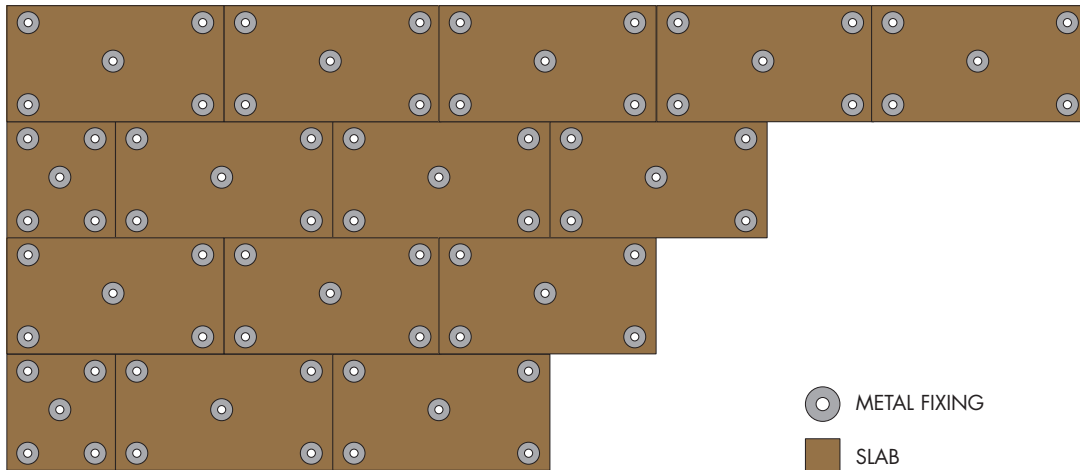
Make sure a ventilated cavity remains between the insulation and the external cladding. Ventilated cavities improve moisture control and prevent building issues associated with humidity.



PLACEMENT

PROCESS

Installation of both Facade Slab boards should be done by starting in one corner and working across the area to finish in the adjacent corner. A singular row of slabs should be installed first to create a straight line from which to butt up against.



KEY:  Substrate or fixing rails
 Facade Slab

FIXINGS

FIXING PATTERN

Facade Slab boards are available in 1200x1000mm slabs and it is recommended that they are fixed into position using five fixings per board. This should be done using one fastener in the centre of the slab and four perimeter fixings at each corner, minimum 50mm from each corner.

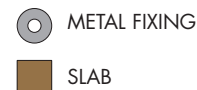
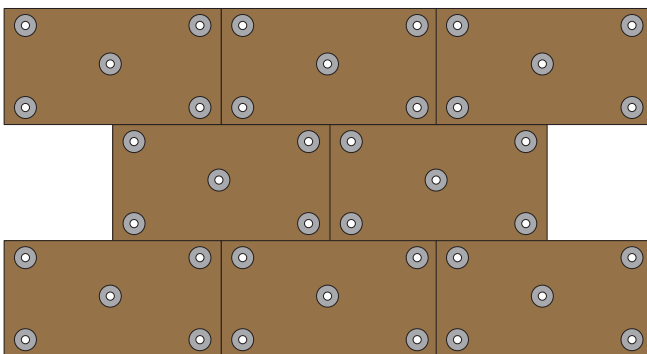
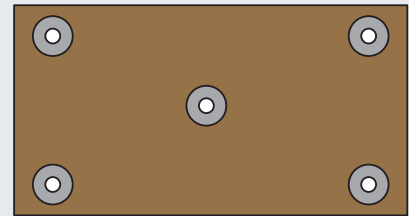
? **Five metal fixings provide suitable support to stop the insulation from sagging over time.**

MECHANICAL FIXINGS

Due to the nature of this application, multiple different fixing types are available. Any fixings approved by the fixing manufacturer may be used to secure Facade Slab boards in position. Due to the variations in specifications of concrete and other substrates, we advise that you seek specialist advice from the fixing manufacturer prior to installation.

Five metal fixing arrangement

Using this method all perimeter, as well as the centre fixing, should be installed using metal expansion anchors and wide washers.



? **Stainless steel washers for fire safety**
Stainless steel washers retain their strength in the event of a fire

Fixing pattern

For fire safety and retention of insulation slab

FIXINGS

FIXINGS TO USE

Exact fixings will depend on the type of substrate. Suitable Fixing Manufacturers include Hilti, Fischer, Rawlplug or Mungo. Fixings should be corrosion resistant and provide adequate performance for the designed life of the building.



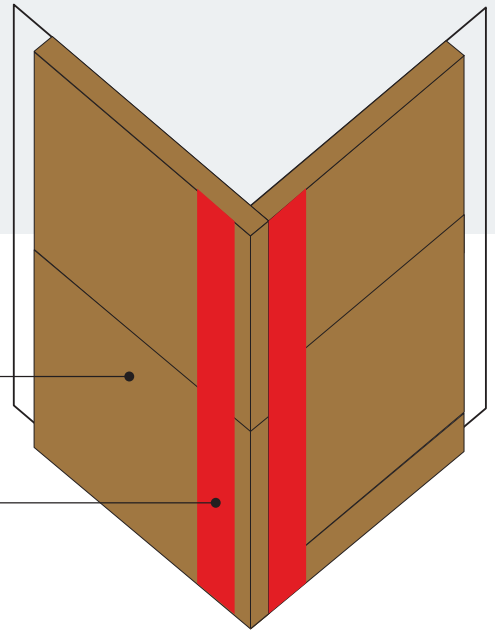
Ensure fixing equipment does not damage the product during the fixing process e.g. drill chucks.

CORNER DETAILS - ADDITIONAL FIXINGS

Facade Slab should be installed using additional fixings around corner details, where fixings are added to each slab corner such that it is fixed firmly to the super structure.

Facade Slab

Zone for additional fixings



WASHER MINIMUM DIAMETER OF 70MM

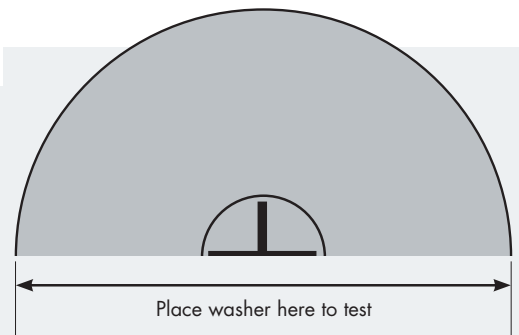
When installing the fixings to retain the insulation, a washer with a minimum diameter of 70mm must be used, to ensure optimum strength of fixing between Facade Slab and substrate.



Washers 70mm or ABOVE



Washers BELOW 70mm

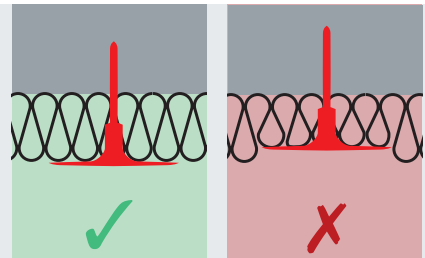


DON'T OVERTIGHTEN MECHANICAL FIXINGS

Ensure that mechanical fixings are not over tightened, surface compression of the product is not recommended.



This compromises the thermal performance and can impact the integrity of the board or facing.

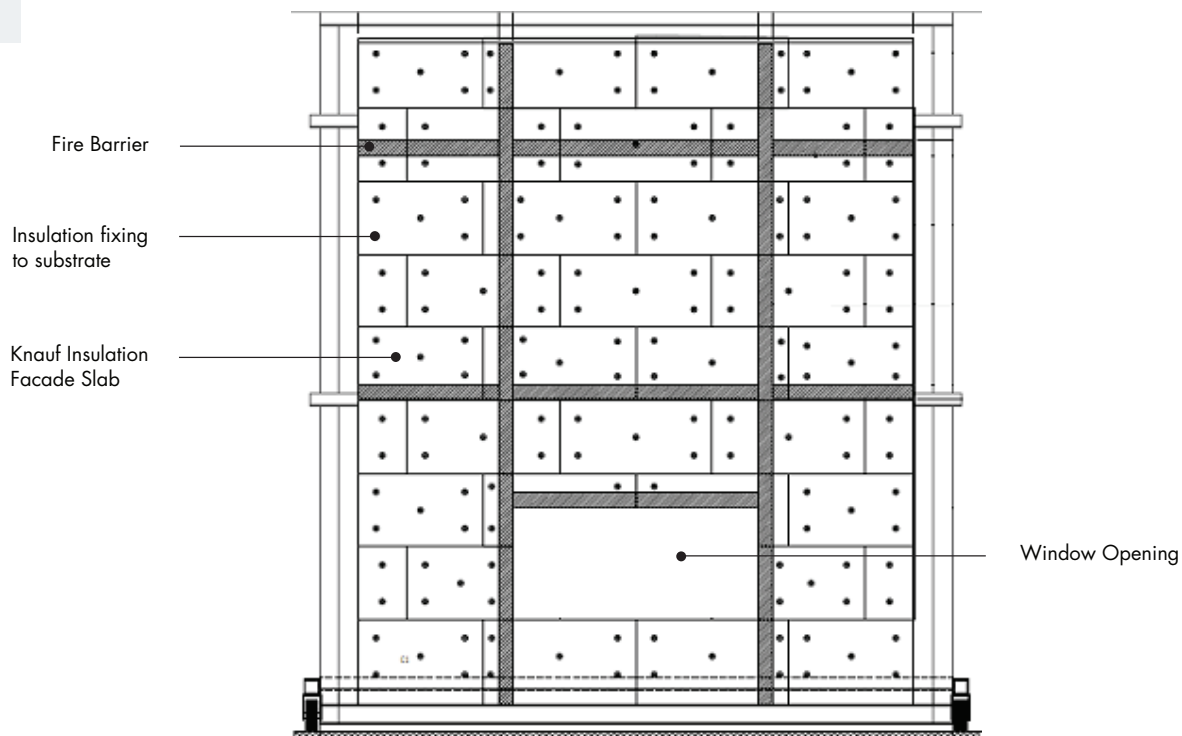
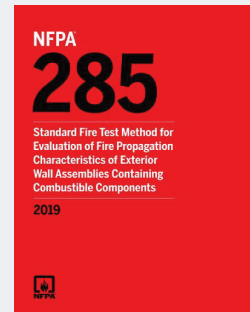


TESTED SYSTEMS

WHERE FACADE SLAB HAS BEEN INCLUDED IN COMPLETE SYSTEM TEST

Knauf Insulation has extensively tested facade assemblies with cladding system manufacturers, where Facade Slab has been specified to provide thermal and acoustic performance. As mandated by Civil Defense, the system including fixings, fire barriers, insulation and cladding panels should be tested in accordance with NFPA 285 or BS 8414 and the installed system at the job site should not deviate from the approval. Consult our Technical Support Team for more information.

Knauf Insulation Facade Slab can be combined with aluminium composite panels, cement boards, stone tiles or curtain wall systems, providing the unique advantage of being able to provide high thermal and acoustic performance at lower densities while retaining the non-combustible and fire resistance properties.



CUTTING

CUT NEATLY AROUND PENETRATIONS AND CONSTRUCTION DETAILS - CUT OVERSIZE BY 5MM

Cut neatly around penetrations and construction details using a sharp bladed knife or insulation saw. When cutting around penetrations, cut oversize by 5mm to allow some local compression of the slab around the feature to ensure a snug fit.



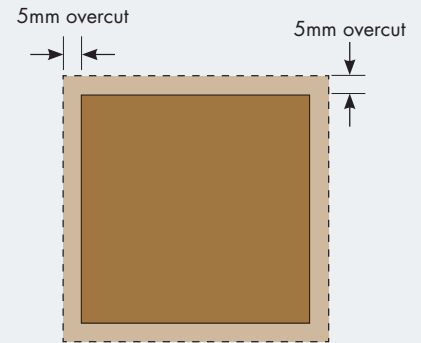
To maximise thermal performance.



Leave 5mm overcut



Cut directly up to penetrations



CUT NEATLY WITH A SHARP INSULATION SAW/KNIFE

Cut neatly with a fine serrated saw or a large bladed knife.



Gives a factory quality cut and prevents tearing



Use insulation saw or knife



Cut using bladed saw



AREAS THAT CANNOT ACCEPT A FULL SLAB SHOULD BE FILLED WITH A SLAB SECTION

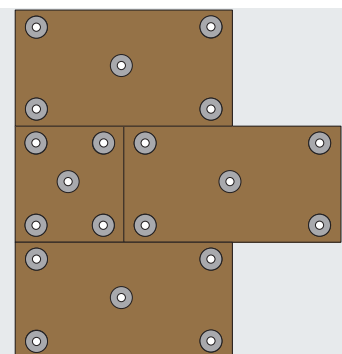
Areas of insulation that do not require a full slab (apart from corners, where a full slab should be installed) can be filled using a slab section where the section is cut slightly oversize to give a tight fit and fixed at 600mm intervals in the centre of the section.



Slab cut and snug fit



Loose fit for cut slab section



 METAL FIXING

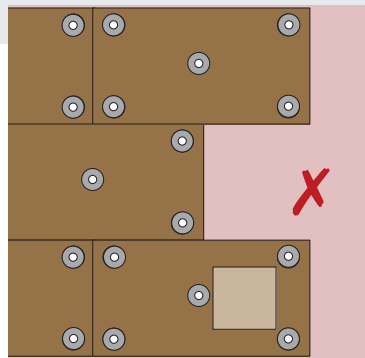
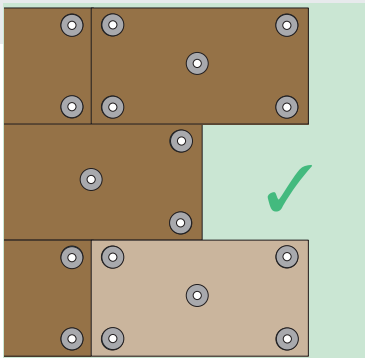
 SLAB

MAINTENANCE

REPAIRS

In the event of small repairs being needed on site, we recommend the replacement of full slabs wherever possible.

✓ Full slab replacement after damage ✗ Small patched repair



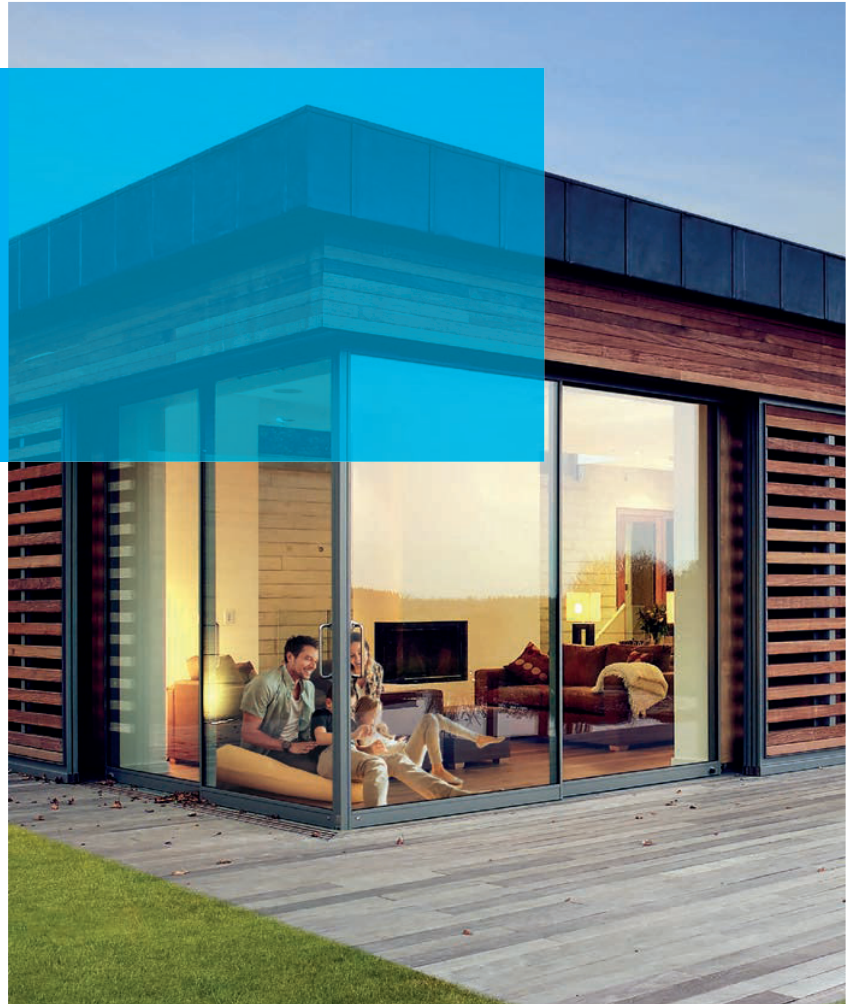
BEST PRACTICES

Facade Slab boards are supplied in polythene packs or shrink wrapped pallets which are designed for short term protection only. For longer term protection on site the product should either be stored indoors or under cover and off the ground. The boards should not be left permanently exposed to the elements.

Wherever possible Facade Slab should be covered with the cladding as work proceeds on the basis of an advancing front.



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