

# Duraplank™ Exterior Cladding

smooth,  
woodgrain  
& rusticated  
profiles for  
exterior cladding

**Duraplank™**  
Traditional  
look exterior  
cladding



Build it better with **BGC**

**BGC**

Fibre Cement

# BGC HISTORY & MISSION

BGC Fibre Cement and Plasterboard is a proudly Australian based company that produces fibre cement and plasterboard products for Australia and for export.

BGC is one of Australia's largest builders of houses and commercial buildings in addition to being a manufacturer of building products other than plasterboard and fibre cement such as insulation, windows, bricks, roof tiles, steel fabrication, insulated wall panels, plumbing materials and metal roofing.

We also have a construction material division producing concrete, cement and asphalt in addition to owning several quarries.

BGC's Fibre Cement and Plasterboard division prides itself on being innovative and environmentally focused. Both factories are located in Perth and there are BGC distribution centres across Australia and New Zealand.

BGC has shown leadership in the Australian market by being one of the first manufacturers to obtain GECA certification on the majority of their plasterboard products. We are very proud of the fact that our board meets GECA's requirements by using up to 15% recycled gypsum and 100% recycled paper for the front and back of our plasterboard. We are an active participant in environmental reporting through Energy Efficiency, Waterwise and Emissions reporting programs to keep our environment safe.

The recently released Innova range of fibre cement flooring and façade systems has proven to be a huge success. We have used innovation to ensure these products and systems are lighter and easier to install than our competitors, another example of BGC's commitment to market leadership.

At BGC we have a team of technical experts who can assist with specifications and design solutions for even the most challenging of projects.

Our mission at BGC is simple  
"Build it Better with BGC".



# Duraplank™ Exterior Cladding

smooth, woodgrain  
& rusticated profiles  
for exterior cladding



BGC Duraplank™ is designed and manufactured as a plank which is reminiscent of traditional weatherboards both in appearance and installation methods. BGC Duraplank™ is not subject to decay, rot or white ant damage and is non combustible. The result is a safer, more durable cladding that requires minimum maintenance.

BGC Duraplank™ is available with a smooth finish, woodgrain (Douglas Fir) or rusticated texture for that authentic weatherboard look. Duraplank™ has the strength to withstand the rigours of normal family activities.

#### **Duraplank™:**

- Reminiscent of traditional weatherboards
- Not subject to decay, rot or white ant damage
- Safe and durable
- Available in different finishes
- Achieves BAL 29 as required in AS3959:2009 – Construction of buildings in bushfire prone areas

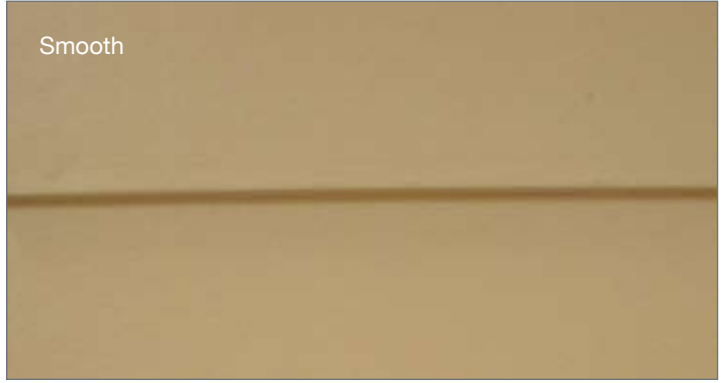
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Rusticated



Smooth



Woodgrain



## Product Description

BGC Duraplank™ is general-purpose fibre cement cladding for exterior applications. It is manufactured as a plank, which is reminiscent of traditional weatherboards both in appearance and installation methods.

Unlike timber weatherboards, Duraplank™ is not subject to timber rot, decay, or white ant damage. It will not support combustion. The result is a safer, more durable cladding that requires minimum maintenance.

Duraplank™ is available with a rusticated, smooth or wood grain (Douglas Fir) texture for that authentic timber weatherboard look. At 7.5 mm thick, Duraplank™ has the strength to withstand the rigours of all normal family activities.

## Energy Efficiency Considerations

Energy efficiency requirements have been introduced into the Building Code of Australia (BCA) for both commercial and residential buildings. Thermal heat transfer into and out of the building envelope will effect the running cost of the building and careful consideration of thermal heat transfer needs to be addressed by the architects, engineers and building designers.

Thermal bridging through steel framing will diminish the total R-Value; thermal conductance, of the wall. Thermal breaks are required for steel framed buildings. Thermal break tapes should have a minimum R-Value of 0.2.

## Product Information

Duraplank™ is manufactured from Portland cement, finely ground silica, cellulose fibres and water. Planks are cured in a high-pressure steam autoclave to create a durable, dimensionally stable product.

Duraplank™ fibre cement products are manufactured to conform to the requirements of AS2908.2 Cellulose-Cement Products and are classified as Type A Category 3 for external use.

## Duraplank™ Size and Mass

| THICKNESS (mm) | MASS KG/m <sup>2</sup> | WIDTH mm & PATTERN     | LENGTH (mm) |
|----------------|------------------------|------------------------|-------------|
| 7.5            | 8.82                   | 205 Rusticated         | 4200        |
|                | 9.89                   | 230 Smooth & Woodgrain | 4200        |
|                | 12.9                   | 300 Smooth & Woodgrain | 4200        |

## Plank Tolerances

- Width +0/-1mm
- Length +0/-2mm
- Thickness +10%/-0%
- Diagonals difference (max) 2mm
- Edge straightness deviation (max) 1mm

## Fire Resistance

BGC Fibre Cement products have been tested in accordance to Australian Standard AS1530.3.

These tests deemed the following Early Fire Hazard Indices:

- Ignitability Index                    0
- Spread of Flame Index            0
- Heat Evolved Index                0
- Smoke Developed Index        0 ~ 1

## Quality Systems

BGC Fibre Cement manufactures Duraplank™ under the rigorous Quality Management System of the International Standard ISO 9002, and is the holder of Licence Agreement number QEC2955/13.

## Handling & Storage

Duraplank™ must be stacked flat, up off the ground and supported on level equally spaced (max 450mm) gluts.

Duraplank™ must be kept dry, preferably by being stored inside a building. When stored outdoors it must be protected from the weather.

Care should be taken to avoid damage to the ends, edges and surfaces.

Duraplank™ must be dry prior to being fixed, or painted. To avoid breakages Duraplank™ must be carried on edge.

## Health and Safety

BGC Duraplank™ is manufactured from cellulose fibre, finely ground sand, Portland cement and additives. As manufactured, the product will not release airborne dust, but during drilling, cutting and sanding operations cellulose fibres, silica and calcium silicate dust may be released.

Breathing in fine silica dust is hazardous and prolonged exposure (usually over several years) may cause bronchitis, silicosis or cancer.

## Avoid Dust Inhalation

When cutting sheets, work in a well-ventilated area and minimise dust generation. If using power tools, wear an approved (P1 or P2) dust mask and safety glasses.

These precautions are not necessary when stacking, unloading or handling fibre cement products.

For further information or a Material Safety Data Sheet contact the nearest BGC Fibre Cement Sales Office.

## Quantities Ready Reckoner

Table 1 is provided to assist in calculating the number of planks required to cover a given wall height.

The number of planks required is derived by:

$$\text{No. of Planks} = \frac{\text{Numbers of Courses} \times \text{Wall Length}}{\text{Plank Length}}$$

For example, a wall that is 2400 mm high x 6 m long clad in 230 mm Duraplank™ with 25 mm overlap, would require 20 planks:

$$\frac{12 \text{ Courses} \times 6 \text{ m Wall Length}}{4.2 \text{ m (Plank Length)}} = 18 \text{ Planks}$$

For triangular areas such as Gable ends, halve the quantities derived for a rectangular wall then add 10% to cover off cuts.

Figure 1 - Plank Course Ready Reckoner

| COURSES | WALL HEIGHT  |              |              |
|---------|--------------|--------------|--------------|
|         | 205mm PLANK  | 230mm PLANK  | 300mm PLANK  |
|         | 25mm OVERLAP | 25mm OVERLAP | 25mm OVERLAP |
| 1       | 205          | 230          | 300          |
| 2       | 385          | 435          | 575          |
| 3       | 565          | 640          | 850          |
| 4       | 745          | 845          | 1125         |
| 5       | 925          | 1050         | 1400         |
| 6       | 1105         | 1255         | 1675         |
| 7       | 1285         | 1460         | 1950         |
| 8       | 1465         | 1665         | 2225         |
| 9       | 1645         | 1870         | 2500         |
| 10      | 1825         | 2075         | 2775         |
| 11      | 2005         | 2280         | 3050         |
| 12      | 2185         | 2485         | 3325         |
| 13      | 2365         | 2690         | 3600         |
| 14      | 2545         | 2895         | 3875         |
| 15      | 2725         | 3100         | 4250         |

## Cutting and Drilling

Duraplank™ may be cut to size on site. If using power tools for cutting, drilling or sanding they must be fitted with appropriate dust collection devices or, alternatively an approved (P1 or P2) dust mask, as well as safety glasses, should be worn.

It is recommended that work be carried out in a well-ventilated location.

The most suitable cutting methods are:

- **Durablade** – 180mm diameter.

This unique cutting blade is ideal for cutting fibre cement. It can be fitted to a 185mm circular saw, ie Makita or similar. Please ensure safe working practices when using.



- **Score and Snap**

Score the sheet face 4 or 5 times with a 'score and snap' knife. Support the scored edge and snap the sheet upward for a clean break.

- **Hand Guillotine**

Cut on the off-cut side of the line to allow for the blade thickness.

- **Notching**

Notches can be made by cutting the two sides of the notch. Score along the back edge then snap upwards to remove the notch.

- **Hand Sawing**

Duraplanks™ should be supported close to the cut. A fine toothed saw and a quick jabbing action gives best results. Mark cut lines on face side of the plank.

- **Drilling**

Use normal high-speed drill bits. Do not use the drill's hammer function. For small round holes, the use of a hole-saw is recommended.

For small rectangular or circular penetrations, drill a series of small holes around the perimeter of the cut out. Tap out the waste piece from the plank face while supporting the underside of the opening to avoid damage. Clean rough edges with a rasp.

## Fasteners

Duraplank™ must be fastened at every stud (or batten for vertical installations).

Fasteners must not be placed closer than 12 mm from the plank edge.

Nails must not be driven closer than 50 mm from the plank end. Nails or fasteners can be located 20 mm minimum from the plank end if the fastener hole is predrilled.

Except for straight joints, planks must be fixed a maximum of 100 mm from the plank end.

## Timber Framing

Duraplank™ is fixed to timber framing using 40 x 2.8 mm galvanised flat head nails. Nails should be driven flush with the sheet face.



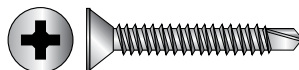
Do not overdrive nails.

Particular care is needed when using nail guns. If variability occurs, the gun should be set to under-drive and the nails tapped home with a hammer.

Nailing should bisect the plank overlap passing through both planks. See Figure 6.

## Lightweight Steel Framing

Duraplank™ is fixed to lightweight steel framing using No.8 x 35 mm galvanised self-embedding head screws. Screws should be driven flush with the sheet face.



Do not overdrive screws.

Screw fasteners should be located 35 mm from the plank edge. See Figure 6.

## Coastal Areas

The durability of galvanised nails and screws used for external cladding in coastal or similar corrosive environments can be as low as 10 years. For this reason BGC recommend the use of Stainless Steel fasteners within 1 km of the coast or other large expanses of salt water.

# Construction Details

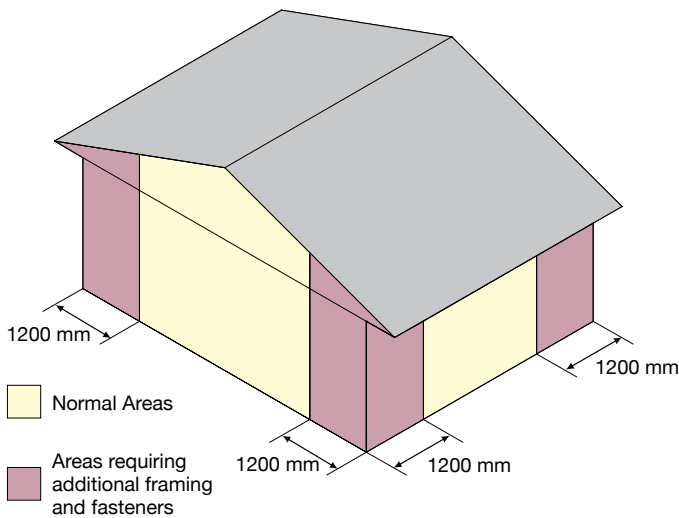
## Framing

In general the layouts presented in this publication will be satisfactory for low-rise (up to two storey) domestic and light commercial buildings in non-cyclonic regions.

Buildings in cyclonic regions, high-rise buildings, large industrial and commercial complexes will generally require a specific design to be undertaken. The relevant design details pertaining to Duraplank™ for various wind classifications, are presented in Figure 1.

Duraplank™ is suitable for installation on either timber or lightweight steel framing.

**Figure 1 - 7.5 mm Duraplank™ Wall and Gable End Cladding**



## Timber Framing

Timber framing must be dry prior to fixing Duraplank™. If planks are fixed to 'wet' framing, problems may occur at a later date due to excessive timber shrinkage.

It is strongly recommended that kiln dried framing is used.

## Light Weight Steel Framing

Duraplank™ may be fixed directly to lightweight steel framing. The steel framing must not exceed 1.6 mm in thickness.

When rigid steel framing is used, it must be battened out with either timber or lightweight steel battens prior to fixing the Duraplanks™.

## Timber Battens

Timber battens must have a minimum thickness of 40 mm to allow adequate nail penetration.

## Steel Battens

Steel battens are typically 50 mm wide on the face x 35 mm deep x 0.75 mm thick

## Framing Centres

| Framing Centres (mm max.) | 300          |      |      |      |      |      |      |
|---------------------------|--------------|------|------|------|------|------|------|
|                           | 400          |      |      |      |      |      |      |
| 450                       |              |      |      |      |      |      |      |
| 600                       |              |      |      |      |      |      |      |
| AS 4055 - 1992            | Non Cyclonic | N1   | N2   | N3   | N4   | N5   | N6   |
|                           | Cyclonic     |      |      | C1   | C2   | C3   | C4   |
| Queensland Standard       | Non Cyclonic | W28N | W33N | W41N | W50N | W60N | W70N |
|                           | Cyclonic     |      |      | W41C | W50C | W60C | W70C |
| Wind Classification       |              |      |      |      |      |      |      |

## General

Figure 2 depicts the general framing requirements for Duraplank™ installed horizontally.

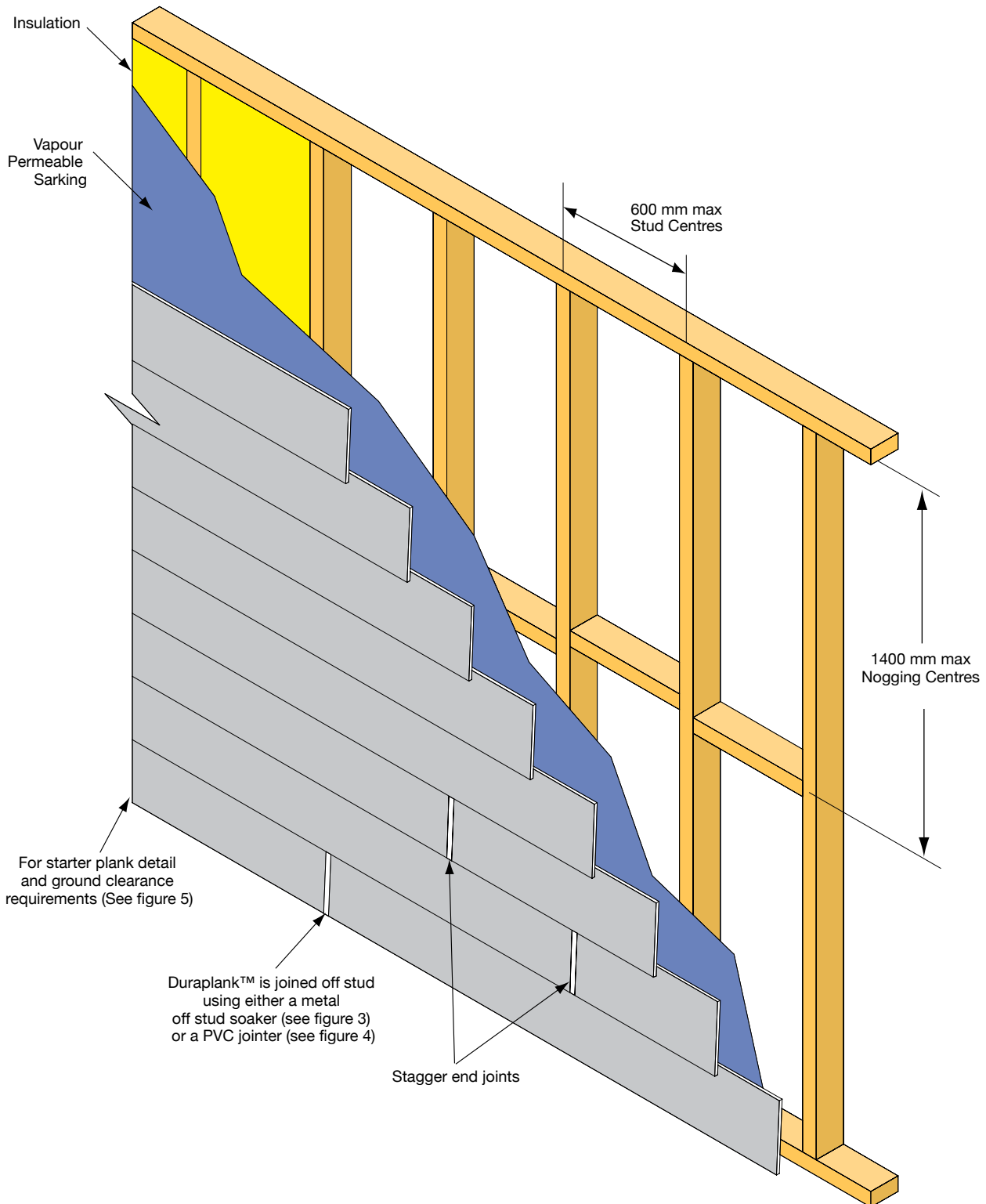
When installing planks vertically, it will be necessary to batten out the framing so that the Duraplank™ is supported at 600 mm maximum centres.

## Sarking

The installation of a vapour permeable perforated sarking between Duraplank™ and the framing is recommended. The building's internal pressure will generally be less than the external air pressure under windy conditions, which will tend to draw water through the planking, flashing and seals if sarking is not used.

Use of a reflective sarking will enhance the insulation properties of the cladding system.

Figure 2 - Duraplank™ Layout Horizontal Fixing



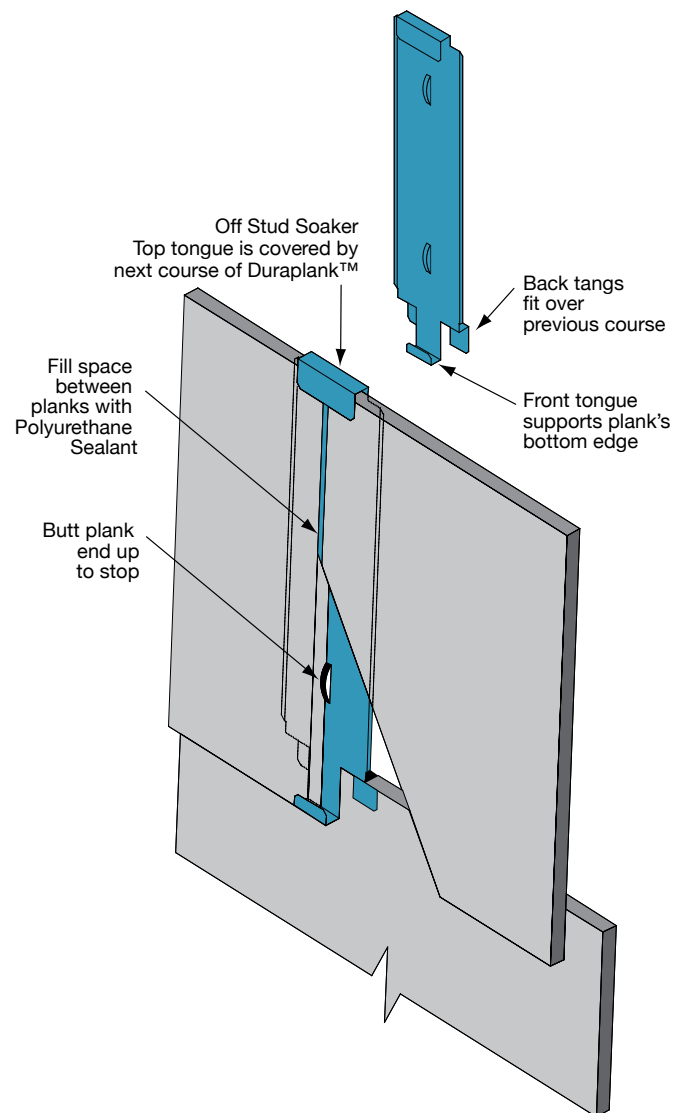


## Installation

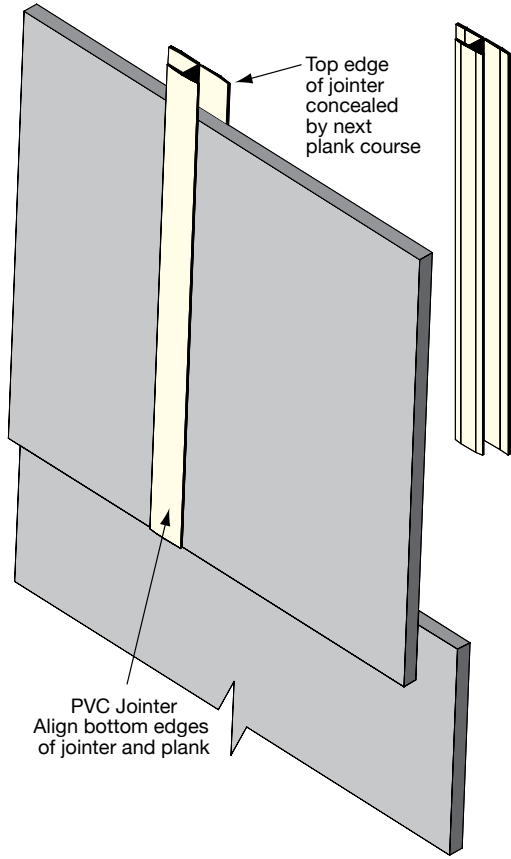
- Calculate the number of planks required using the Plank Course Ready Reckoner as detailed in Table 1, on page 5.
- Fix all flashings to wall openings and external and internal corners. See figure 8 for corner details using timber stop ends.
- Install vapour permeable perforated sarking to manufacturers specifications.
- Fix a starter strip (timber or a strip of plank) to the bottom plate to ensure the first row of planks are packed out to the correct angle. This starter strip is to be continuous around the perimeters of the building and to overhang the foundation by 50mm. See figure 5 for this detail.
- Set a horizontal datum line around the perimeter of the building using a string line or spirit level. Fix guide nails/screws along this line to act as a stop for the correct placement of the first course of planks.
- Duraplank™ is best suited to be joined off the studs using a metal off stud soaker or PVC joiner. See figures 3 and 4 for these details.
- Commence fixing the bottom course of plank from an external corner. Fasten the bottom edge of the plank to each stud through the starter strip. Ensure that the plank is level and flush with the corner. Do not nail home the corner fixing at this time.
- Fit the plank joiner (off stud soaker or PVC joiner) to the end of the plank and continue fixing the bottom course.
- If using preformed aluminium corners, insert these before nailing home the corner fixing. See figure 7 for this detail.
- The plank must overlap a minimum of 25mm, and before fixing the second row of planks calculate the overlap so a near full width of plank will finish at the top of the building. Using a piece of timber or plank, fabricate a lap gauge to ensure that the plank coverage is uniform. See figure 9.

- Commence fixing the second row of planks from an external corner using this lap gauge. Use a shorter length of plank than the bottom course to allow for staged end joints. See figure 2. Continue fixing the Duraplank™ around the building following these methods.
- Fixings must not be driven closer than 50mm from the end of the plank. For fixings between 20 mm - 50 mm from the end, the plank must be predrilled with a 3mm hole.
- When fixing woodgrain Duraplank™, the pattern is repeated every 4th or 5th plank. To achieve a genuine Douglas Fir pattern, avoid starting each course with a new plank and rotate to avoid pattern repeats.

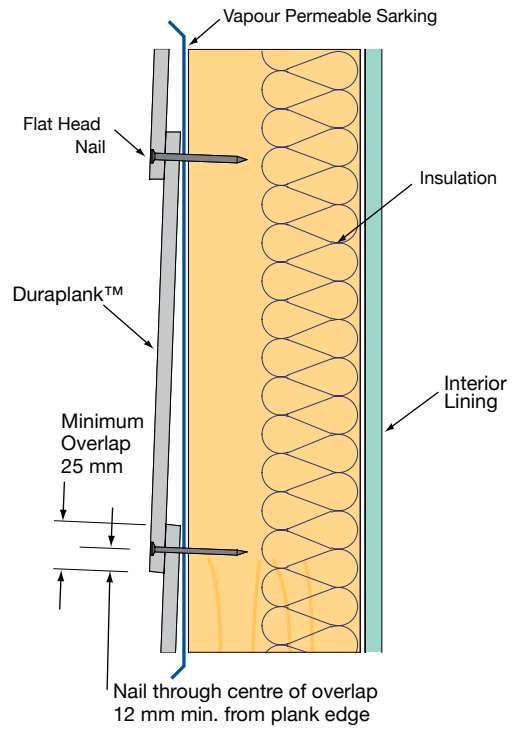
Figure 3 - Plank Joint Using an Off Stud Soaker



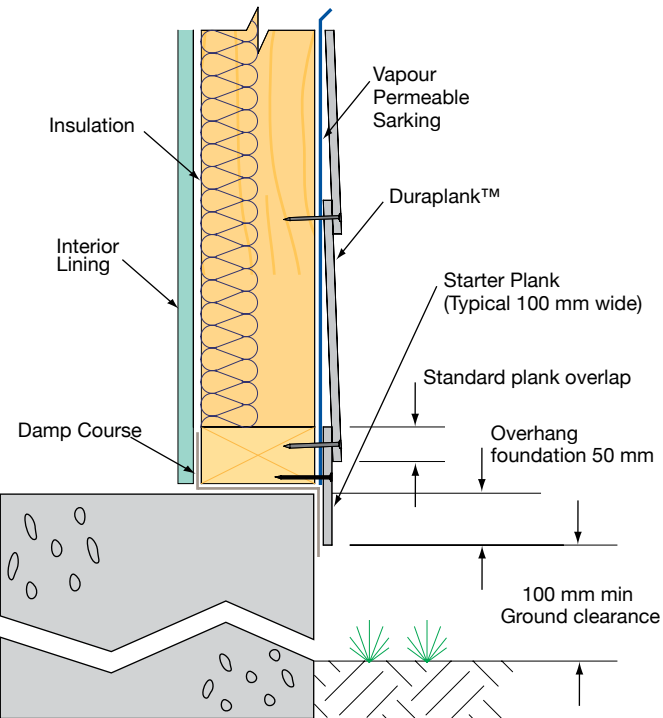
**Figure 4 - Plank Joint Using a PVC Joiner**



**Figure 6 - Fastening Details**



**Figure 5 - Starter Plank and Ground Clearances**



**Figure 7 - Light Weight Steel Framing**

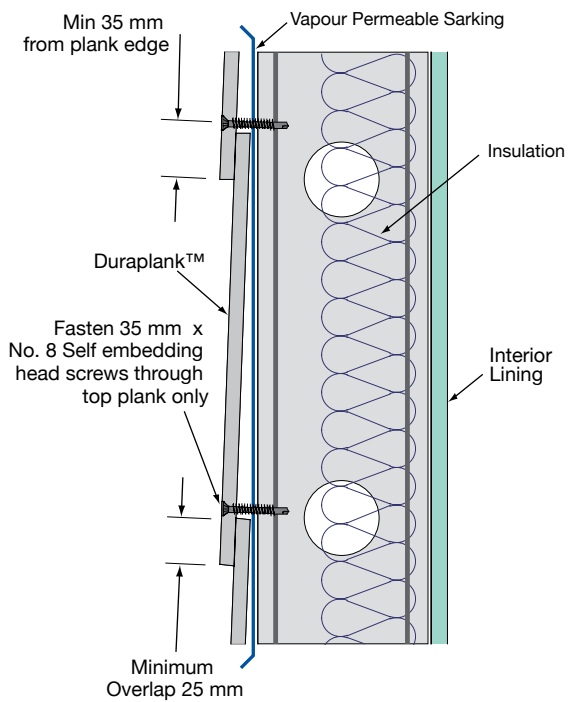
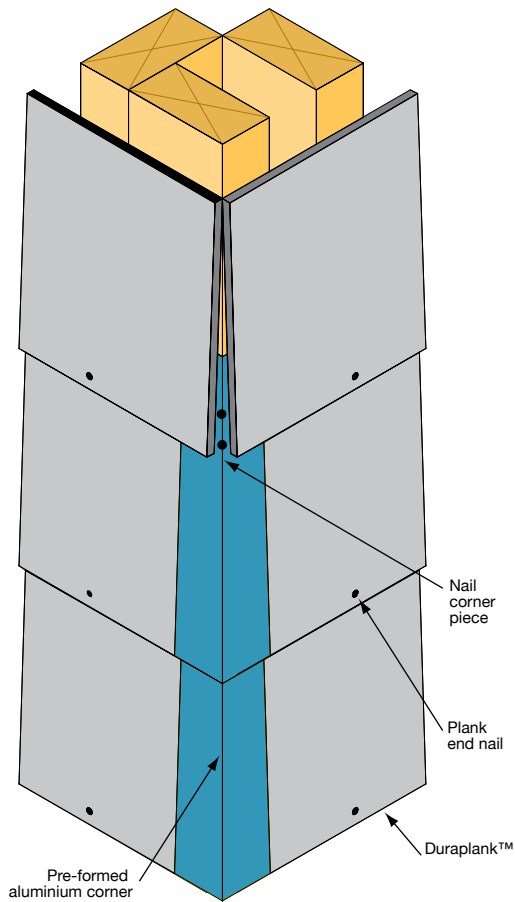


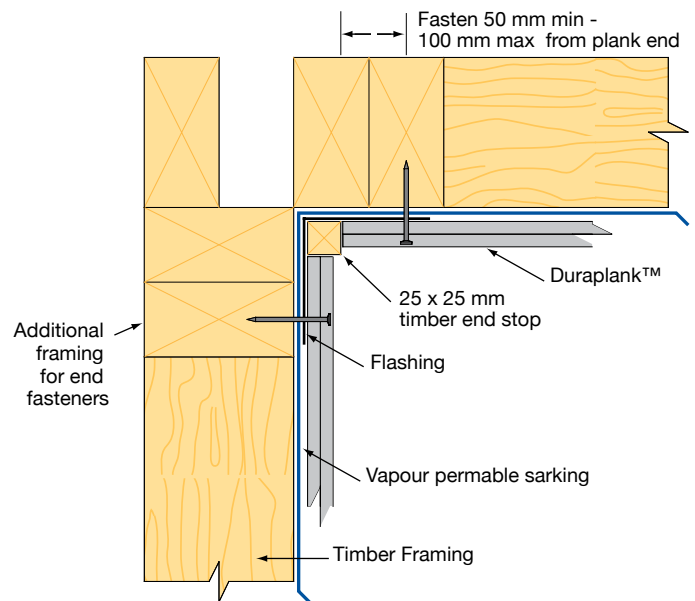
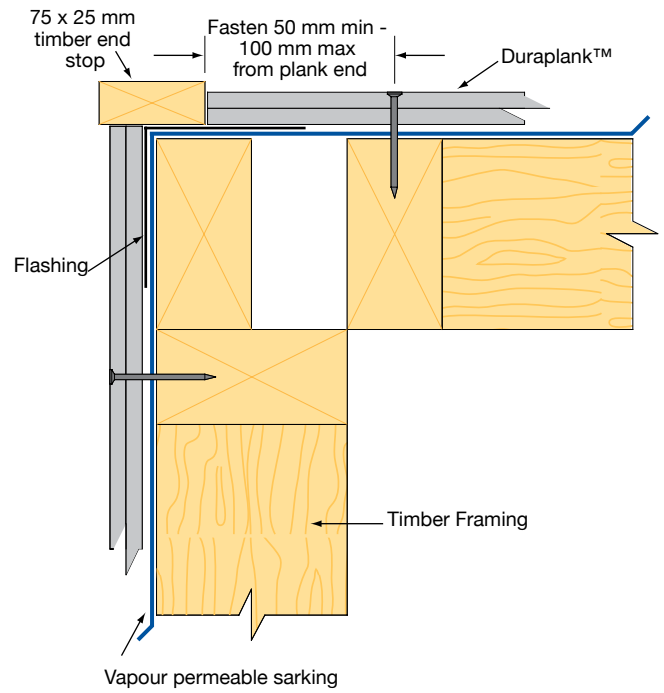
Figure 8 - Pre-formed Aluminium Corners



**Notes:**

- Cut planks flush with the corner of the framing.
- Before nailing the plank end, slide in the pre-formed aluminium corner piece so that the tongues fit behind the plank and the bottom edge is flush with the plank.
- Secure the pre-formed aluminium corner through the hole provided.
- Securely nail the plank ends.
- Plank end nails must not be driven closer than 50 mm from the end of the plank. For nail fixings between 20 mm - 50 mm from the end, pre-drill the plank with a 3 mm hole.
- The sketch depicts an external corner. The method for internal corners is the same except a pre-formed internal corner piece is used.

Figure 9 - Corner Details Using Timber End Stops



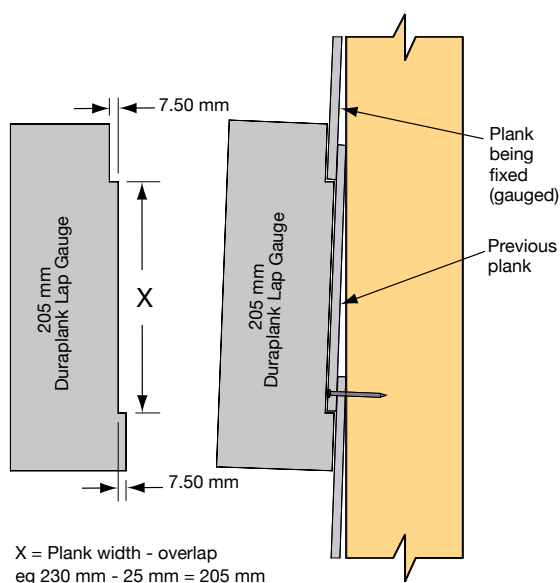
## Installation

### Plank Overlaps

Planks must overlap the previous course by a minimum of 25 mm. Higher overlaps may be used to improve weather proofing (particularly when sarking is not used) or to match the wall height to the plank width. For example a 3.0 m high wall clad with 230 mm plank will require 15 courses but a 30 mm overlap matches the wall height better (3030 mm) than a 25 mm overlap (3100 mm) – see Figure 1 on page 5.

The use of a lap gauge, Figure 9, to control sheet overlap will maintain uniformity.

Figure 10 - Duraplank™ Lap Gauge



### Cutting Around Openings

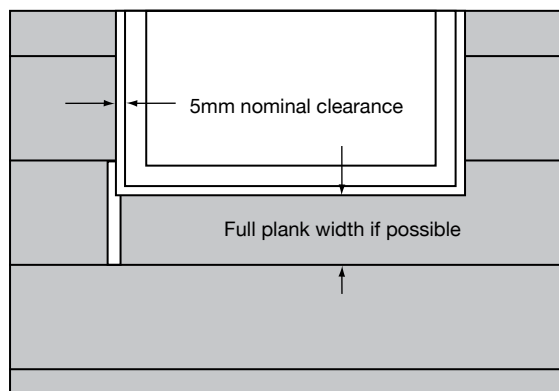
When cutting planks around window or door openings, a 5 mm nominal clearance must be provided at the jamb, head and sill.

Plank courses should be set out so that as near to a full plank width as possible remains under a window, or similar openings. See Figure 10.

A plank joint at one end for small openings and both ends of longer openings will make installation easier and eliminate breakages.

Flashing and mouldings must be installed as appropriate to prevent ingress of water into the framing.

Figure 11 - Window and Door Openings



Where a plank has been reduced in width, provide a soaker or PVC jointer at one end of the window or door opening. Where openings exceed 1800 mm width, provide a jointer above and below the four corners. Metal jointers should be cut to suit.

### Painting

To enhance both the appearance and performance of Duraplank™, BGC recommend that at least two coats of an exterior grade paint be applied. The paint manufacturers recommendation on application and maintenance of the paint system should be followed.



## Maintenance

Duraplank™ when used in accordance with this literature requires no direct maintenance.

To guard against water penetrating the structure and damaging the framework, annual inspections of the cladding system should be carried out. Check flashing, sealant joints and paint work.

Flashing and sealants must continue to perform their design function.

Damaged planks should be replaced as originally installed. Paintwork should be maintained in accordance with the manufacturer's instructions.

## Insulation

Duraplank™ cladding will require insulation to be installed in some regions that have thermal loss regulations.

Insulation should be installed in accordance with the manufacturer's instructions.

Insulation bats must fit snugly between framing members to minimise heat loss.

## Freeze Thaw

Duraplank™ subject to freeze / thaw conditions must be painted.

Duraplank™ should not be used in situations where it will be in direct contact with snow or ice for prolonged periods.

## Warranty

We warrant that our products are free from defects caused by faulty manufacture or materials for a period of 15 years from the date of purchase. If you acquire any defective products, we will repair or replace them, supply equivalent replacement products or refund the purchase price within 30 days of receiving a valid claim subject to product inspection and confirmation of the existence of a defect by BGC. We will bear the cost of any such repair, replacement or refund.

This warranty is given by:

**BGC Fibre Cement Pty Ltd**  
121 Bannister Rd Canning Vale WA 6155  
Phone 08 9334 4900 Fax 08 9334 4749

To claim under this warranty, you must provide proof of purchase as a consumer and make a written claim (including any costs of claiming) to us at the address specified above within 30 days after the defect was reasonably apparent, or if the defect was reasonably apparent prior to installation, the claim must be made prior to installation. You may not claim under this warranty for loss or damage caused by:

- faulty or incorrect installation by non-BGC installers (BGC's installation procedures are at [www.bgc.com.au/FibreCement](http://www.bgc.com.au/FibreCement));
- failure to comply with the Building Code of Australia or any applicable legislation, regulations approvals and standards;
- products not made or supplied by BGC;
- abnormal use of the product; or
- normal wear and tear.

The benefits available under this warranty are in addition to other rights and remedies of the consumer under the law. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## Bushfire Information

AS3959:2009 sets out a series of Bushfire threat levels to buildings described as BAL (Bushfire Attack Levels) as follows: BAL-Low, BAL-12.5, BAL-19, BAL-29, BAL-40 or BAL-FZ (Flamezone).

BGC Duraplank™ can be used as a stand alone product to achieve up to BAL-29 when fixed to frame as per the fixing instructions in this manual.





To contact your nearest BGC stockist, please call:

**Adelaide**  
Telephone  
08 8250 4962

**Brisbane**  
Telephone  
07 3271 1711

**Melbourne**  
Telephone  
03 9392 9444

**Perth**  
Telephone  
08 9334 4900

**Sydney**  
Telephone  
02 9632 2100

**New Zealand**  
Telephone  
0011 64 9264 1457

**Technical Help Line**  
1300 652 242

[bgc.com.au/fibreceement](http://bgc.com.au/fibreceement)

BGC Fibre Cement is a proud Australian owned manufacturer of fibre cement products.

BGC Fibre Cement provides builders, developers and architects with a range of design alternatives and innovative products, such as:

#### Innova™ range of products:

- Duragrid™ Residential and Duragrid™ Light Commercial  
A lightweight facade giving a modern and durable finish.
- Duracom™  
A compressed fibre cement facade system.
- Duragroove™  
A vertically grooved exterior facade panel.
- Durascape™  
A lightweight exterior facade base sheet with a subtle vertical shadow line.
- Nuline™ Plus  
A weatherboard style cladding system.
- Stonesheet™  
A purpose designed substrate for stone tile facades.

#### BGC Fibre Cement range of products:

- Durasheet™  
Ideal for the cladding of gables and lining of eaves. Can also be used on commercial soffits and cladding on non impact areas.
- Duraplank™  
Available in Smooth, Woodgrain and Rusticated finishes, is ideal for exterior cladding of upper storey conversions or ground level extensions.

- Duratex™  
A base sheet used for textured coatings on exterior wall applications.
- Duralattice™  
Square or diamond patterned lattice, suitable for screens, pergolas and fences.
- Compressed sheet  
Used for domestic, commercial sheet for wet areas, flooring, partitions, exterior decking, fascia and facade cladding.
- Duraliner™  
Suitable for eaves and soffits where it will be sheltered from direct weather.
- Duralux™  
Suitable for exterior applications where it will be sheltered from direct weather. And interior liningboard suitable for ceilings and soffits.
- Duraliner™  
An interior liningboard, this is the perfect substrate for tiles and is ideal for wet areas.
- Ceramic Tile Floor Underlay  
An interior substrate for ceramic and slate floor tiles.
- Vinyl and Cork Underlay  
An interior substrate for vinyl floors.



Quality  
ISO 9001

SAI GLOBAL

**Safe working practices** - Please wear a P1 or P2 mask and safety goggles (approved to AS/NZW1337 standards) whilst cutting or installing Duraplank™. Duraplank™ can be safely handled during unloading or stacking without the use of these precautions.

**Cleaning up** - Always wet down your work area when cutting Duraplank™, to ensure that dust is managed. Dispose of any vacuumed dust with care and using containment procedures.