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**Warranty**

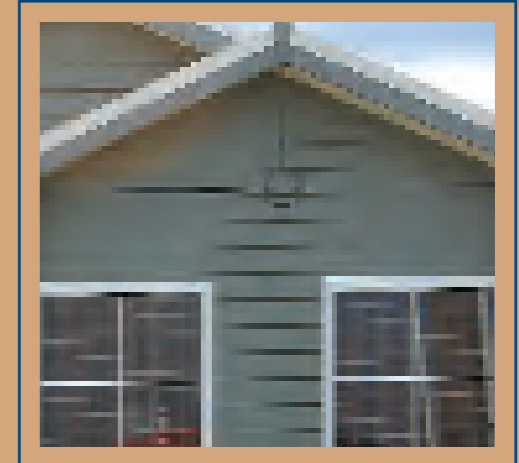
BGC warrants its products to be free from defects caused by faulty manufacture or materials. If any of its products are so defective the Company will at its option, repair or replace them, supply equivalent replacement products or reimburse the purchase price.

This warranty shall not apply to any loss or consequential loss suffered through or resulting from defects caused by faulty manufacture or materials.



Fittings or accessories supplied by third parties is beyond the control of BGC and as such is not warranted by BGC.

**DURAPLANK™**

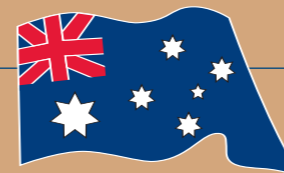
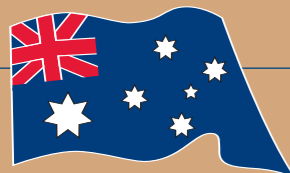


**Woodgrain and Smooth  
for External Cladding**

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## Product Description

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

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

## 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™ Sizes and Mass

Width (mm) & Pattern	Thickness (mm)	Length (mm)	*Approx Weight (kg)
<b>230 Smooth and Woodgrain</b>	7.5	4200	9.7
<b>300 Smooth and Woodgrain</b>	7.5	4200	12.7

\*At equilibrium moisture content of 7%.

## Fire Resistance

BGC Fibre Cement products have been tested in accordance to Australian Standard AS1530.3 – 1989.

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 9002:1994, and is the holder of Licence Agreement number QEC2955/13.

## 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 manufacturers 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.

## BGC Fibre Cement

As a division of the Buckeridge Group of Companies, the BGC Fibre Cement operation is situated in Perth, Western Australia and forms an integral part of the groups impressive manufacturing complex.

The company relentlessly pursues excellence in all its manufacturing processes, which ultimately provides customers with products of superior quality.

Through constant dedication to quality, BGC Fibre Cement has established a reputation for both product and service.

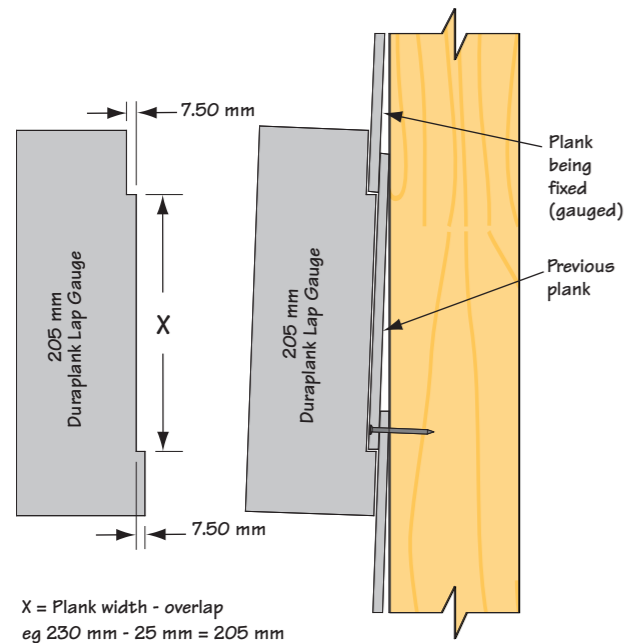
BGC Duraplank™ provides exceptional flexibility durability and strength.

## 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 Table 1 on page 3.

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

**Figure 9 - Duraplank™ Lap Gauge**



A lap gauge can be made from an off-cut of Duraplank™ or from a piece of timber.

## Cutting Around Openings

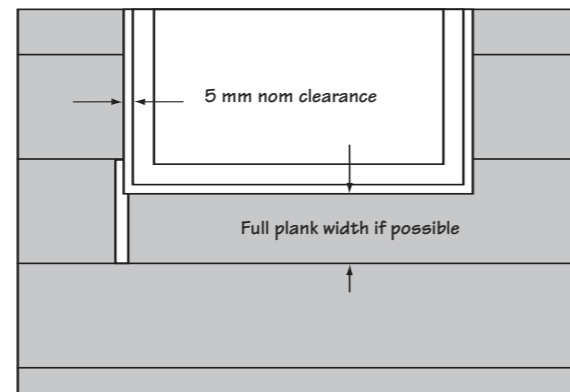
When cutting planks around window or door openings, a 5 mm nominal clearance must be provided at the jamb, head and sill.

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 10 - 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.

## Handling and Storage

Duraplank™ must be stacked flat, up off the ground and supported on level bearers.

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 use the methods recommended in this literature to 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 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 Duraplank™ 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:

$$\frac{12 \text{ Courses} \times 6 \text{ m Wall Length}}{3.6 \text{ m (Plank Length)}} = 20 \text{ Planks}$$

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

**Table 1  
Plank Course Ready Reckoner**

Courses	Wall Height	
	230 mm Plank 25 mm Overlap	300 mm Plank 25 mm Overlap
1	230	300
2	435	575
3	640	850
4	845	1125
5	1050	1400
6	1255	1675
7	1460	1950
8	1665	2225
9	1870	2500
10	2075	2775
11	2280	3050
12	2485	3325
13	2690	3600
14	2895	3875
15	3100	4150

## Cutting and Drilling

Duraplanks™ 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, shall be worn.

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

The most suitable cutting methods are:

- **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.

For renovation projects, where the original cladding is not removed, longer nails (50 x 2.8 mm) will be required.



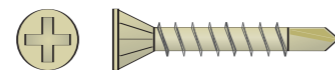
**Do not overdrive nails.**

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 self-embedding head screws. Screws should be driven flush with the sheet face.



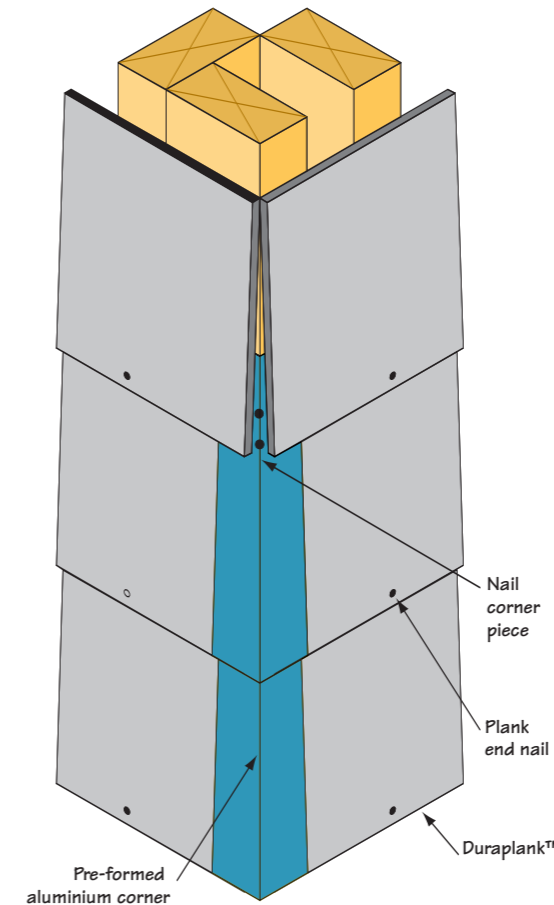
**Do not overdrive screws.**

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.

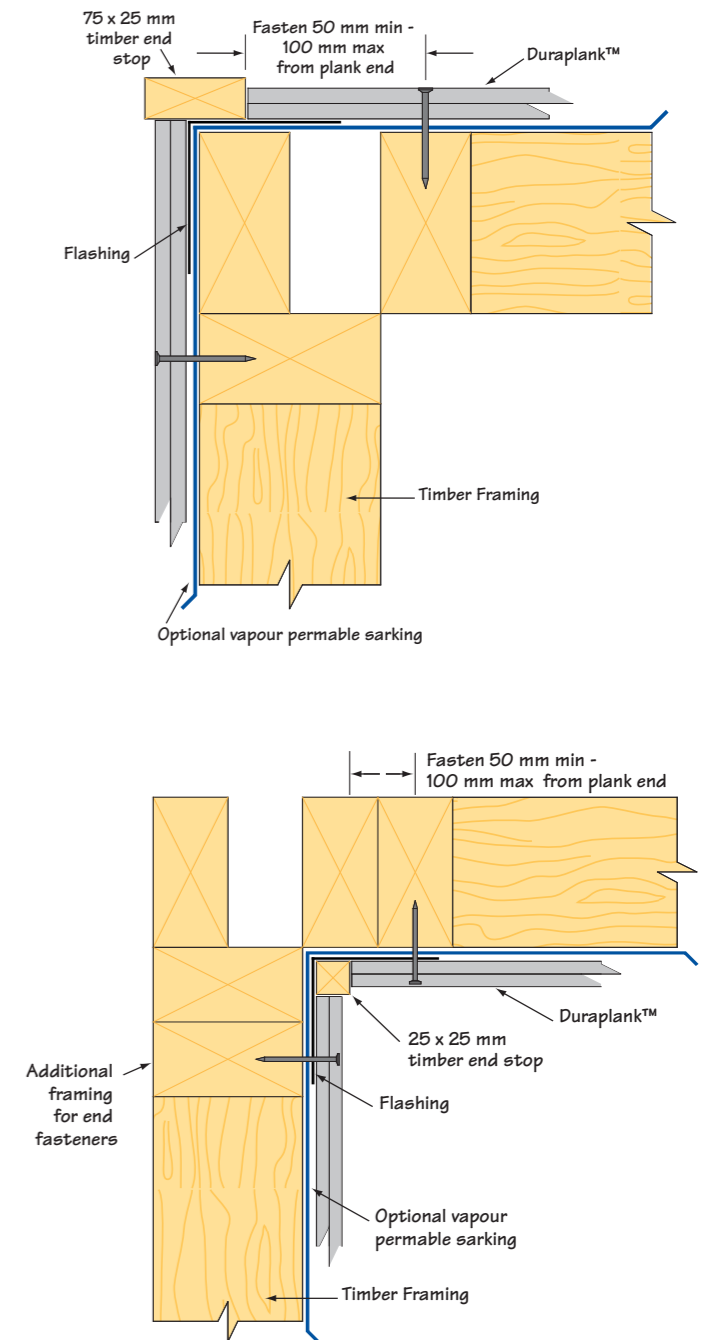
Figure 7 - Pre-formed Aluminium Corners



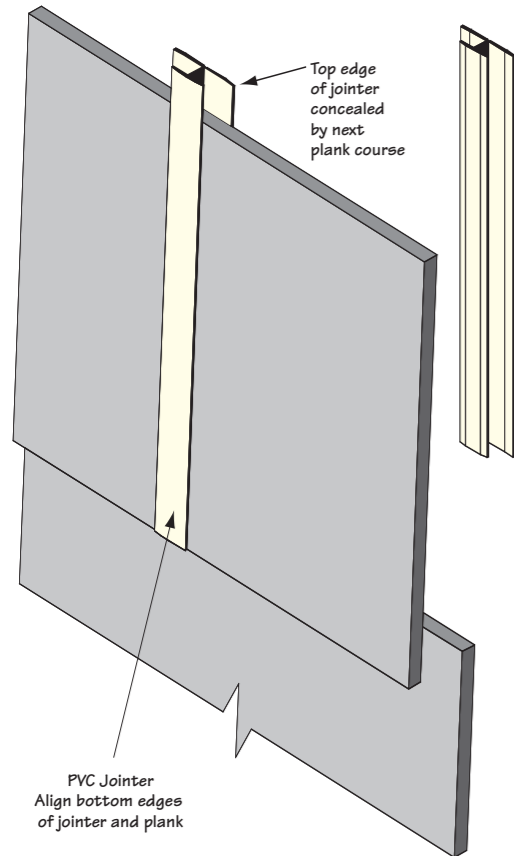
Notes:

- 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 8 - Corner Details Using Timber End Stops

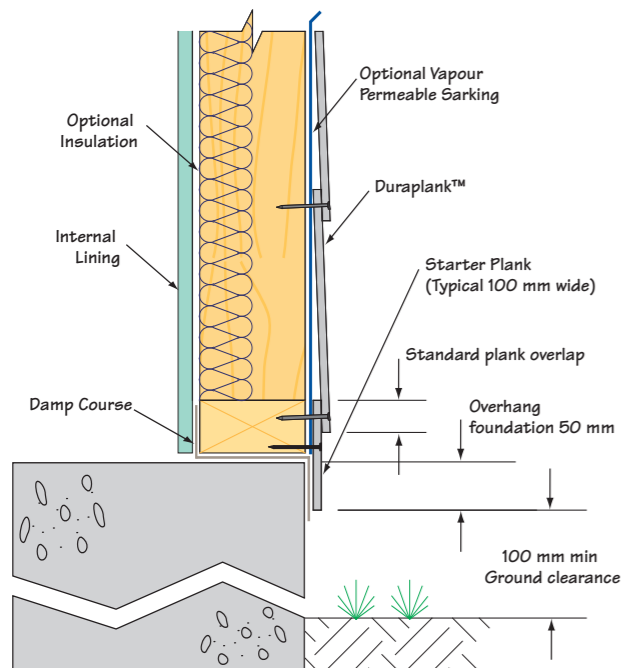


**Figure 4 - Plank Joint Using a PVC Joiner**

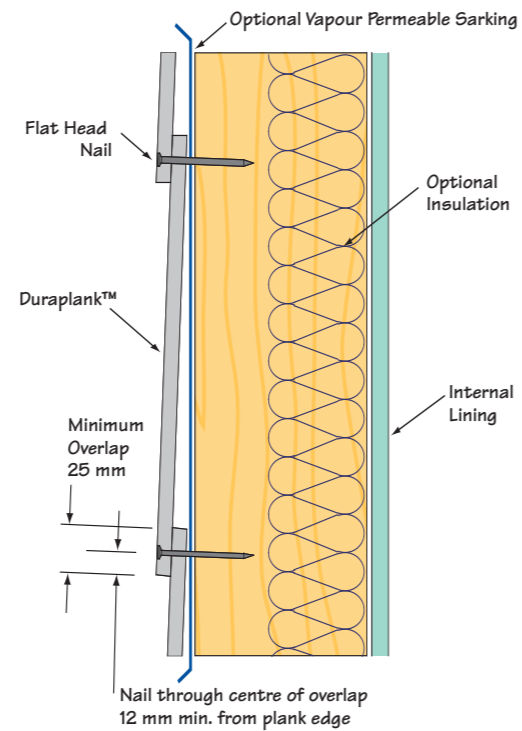


Note:  
The "PVC Joiner" is also designed for off stud jointing.

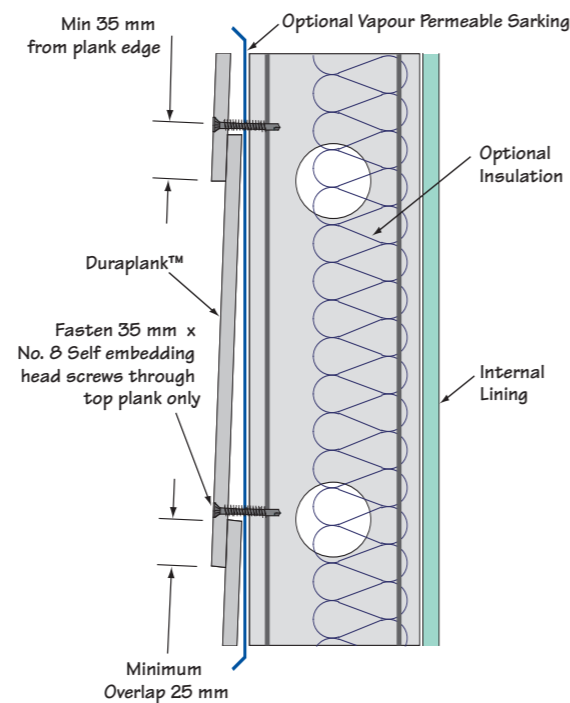
**Figure 5 - Starter Plank and Ground Clearances**



**Figure 6 - Fastening Details  
Timber Framing**



**Light Weight Steel Framing**



## Construction Details

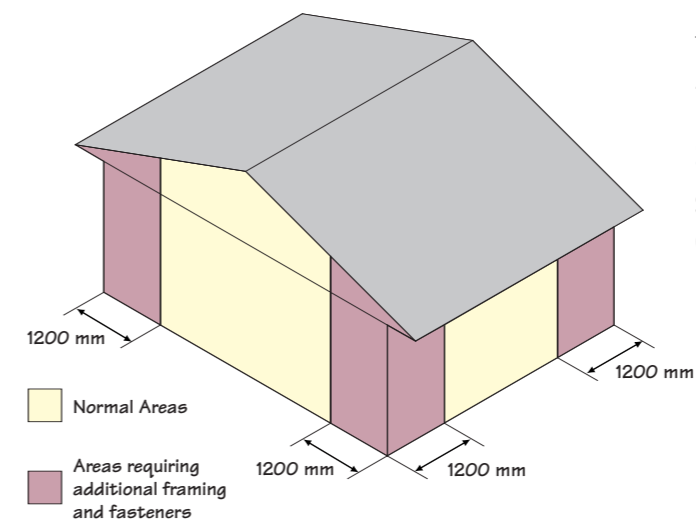
### Framing

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 Duraplanks™. 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 72 mm wide x 23 mm deep x 0.55 mm thick with a minimum fixing face width of 38 mm.

### Framing Centres

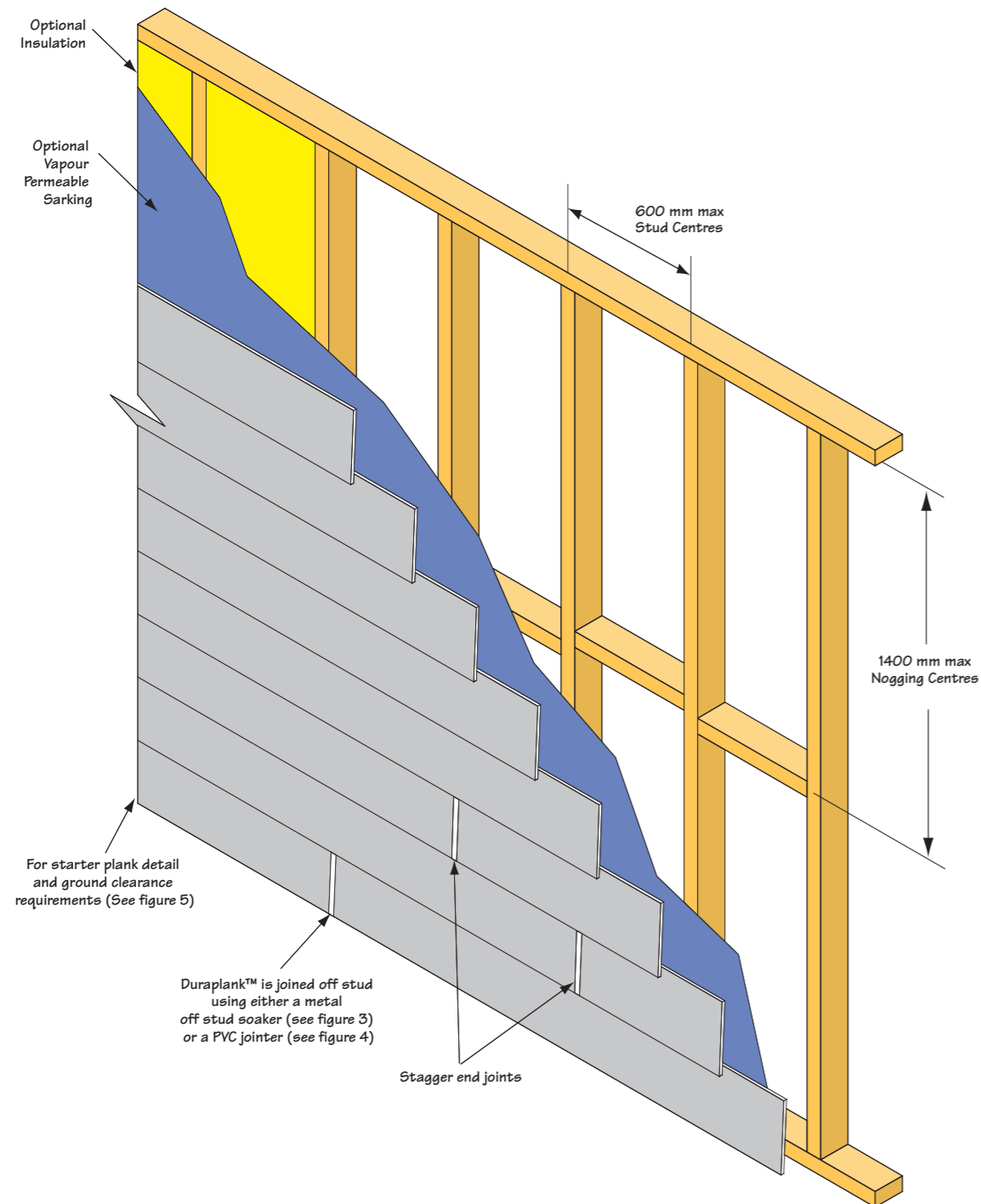
Framing Centres (mm max.)	Wind Classification						
	AS 4055 - 1992	N1	N2	N3	N4	N5	N6
300							
400							
450							
600							
AS 4055 - 1992	Non Cyclonic	N1	N2	N3	N4	N5	N6
	Cyclonic			C1	C2	C3	C4
Queensland Standard	Non Cyclonic	W28N	W33N	W41N	W50N	W60N	W70N
	Cyclonic			W41C	W50C	W60C	W70C

## 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.

**Figure 2 - Duraplank™ Layout Horizontal Fixing**



## Sarking

The installation of a vapour permeable 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.

## Installation

- Calculate the number of Duraplanks™ required using the Plank Course Ready Reckoner as detailed in Table 1, on page 3.
- Fix all flashings to wall openings and external and internal corners. See figure 8 for corner details using timber stop ends.
- Fix a starter strip (timber or a strip of plank) to the bottom plate to ensure the first row of Duraplanks™ 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 Duraplanks™.
- Duraplank™ is best suited to be joined off the studs using a metal off stud soaker or PVC jointer. 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 jointer) 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 staggered end joints. See figure 2. Continue fixing the Duraplank™ around the building following these methods.
- Fixings must be 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**

