DURAPLANK™
WEATHERBOARD

Build it better with BGC

BGC Fibre Cement

AUSTRALIAN OWNED & MANUFACTURED

BGCINNOVADESIGN.COM.AU

HISTORY & MISSION

BGC FIBRE CEMENT AND PLASTERBOARD IS A PROUD AUSTRALIAN OWNED MANUFACTURER OF FIBRE CEMENT AND PLASTERBOARD PRODUCTS.

BGC has state-of-the-art manufacturing facilities in Perth and distribution centres in all states of Australia and in New Zealand.

Our distribution network ensures that our entire product range is readily available in all states of Australia and in New Zealand.

BGC has a team of technical specialists that can assist with all specification and design information to help ensure that you always **'build it better with BGC'.**

BGC HAS INTERESTS IN

- Residential and commercial building
- Building and construction products
- Contract mining
- Civil engineering construction and maintenance
- Quarrying
- Road transport
- Property ownership and management
- Insurance

Our mission at BGC is simple – we want to ensure that people can always **'build it better with BGC'.**

In keeping with our mission, we are constantly assessing and improving our products to ensure that we always provide cost effective, high quality and easy-to-use products to the market.

CONTENTS

DURAPLANK™
WEATHERBOARD

IN ITS APPEALING LOOKS AND ITS EASY INSTALLATION, THE DESIGN OF BGC DURAPLANK™ EVOKES TRADITIONAL WEATHERBOARDS. DURAPLANK™ WON'T DECAY, ROT OR BECOME DAMAGED BY WHITE ANTS, AND IT'S NON-COMBUSTIBLE.

BEAUTIFULLY ATTRACTIVE – YOU'VE THE OPTION OF A SMOOTH FINISH, A WOODGRAIN OR A RUSTIC TEXTURE FOR AN AUTHENTIC WEATHERBOARD LOOK – DURAPLANK™ ALSO HAS THE STRENGTH TO WITHSTAND THE RIGOURS OF FAMILY LIFE.

DURAPLANK™
// Similar flavour to traditional weatherboards
// No decay, rot or white ant damage
// Safe and durable – needs only minimum maintenance
// Variety of finishes
// Complies with BAL29 as required in AS3959:2009 – Construction of buildings in bushfire prone areas

PRODUCT DESCRIPTION

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 in a rusticated, smooth or woodgrain texture for that authentic timber weatherboard look. At 7.5mm 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 WEIGHT

Thickness mm	Weight kg/lm	Width mm	Width mm & pattern	Length mm
7.5	2.2	205	Rusticated	4200
	2.5	230	Smooth & Woodgrain	
	3.3	300	Smooth & Woodgrain	

Weights are based on Equilibrium Moisture Content.

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 AND 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

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 or go to bcginnovadesign.com.au

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, and 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.

- **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.

- **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.

Large rectangular openings are formed by deeply scoring the perimeter of the opening. Next, form a hole in the centre of the opening (refer method above) then saw cut from the hole to the corners of the opening. Snap out the four triangular segments. Clean rough edges with a rasp. (see method above)

QUANTITIES READY RECKONER

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

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

TABLE 1 //
PLANK COURSE READY RECKONER

No. of planks	Plank size 4200 x 205 Plank overlap 25mm Effective cover per plank 4200 x 180mm or 0.756m²	Plank size 4200 x 230 Plank overlap 25mm Effective cover per plank 4200 x 205mm or 0.861m²	Plank size 4200 x 300 Plank overlap 25mm Effective cover per plank 4200 x 275mm or 1.155m²
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	4150
16	2905	3305	4425
17	3085	3510	4700
18	3265	3715	4975
19	3445	3920	5250
20	3625	4125	5525

FASTENERS

Duraplank™ must be fastened at every stud.

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

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

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

TIMBER FRAMING

Duraplank™ is fixed to timber framing using 40 x 2.8mm Galvanised Flat Head Nails. Nails should be driven flush with the sheet face.

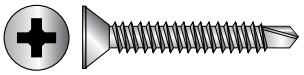
Do not overdrive nails.

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 35mm Galvanised Self-Embedding Head Screws. Screws should be driven flush with the sheet face.



Do not overdrive screws.

Screw fasteners should be located 35mm from the plank edge and through the top plank only. See Figure 7.

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 1km of the coast or other large expanses of salt water.

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.

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

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 1.6mm in thickness.

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

TIMBER BATTENS

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

STEEL BATTENS

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

TABLE 2 //
FRAMING CENTRES

Wind Class	205mm and 230mm wide planks		300mm wide planks	
	Stud spacing within 1200mm of corners (mm)	Stud spacing elsewhere (mm)	Stud spacing within 1200mm of corners (mm)	Stud spacing elsewhere (mm)
N1	600	600	600	600
N2	600	600	600	600
N3	450	450	450	450
N4	450	450	350	450
N5	325	450	240	450
N6	240	300	180	300
C1	450	450	450	450
C2	450	450	350	450
C3	325	450	240	450
C4	240	300	180	300

GENERAL

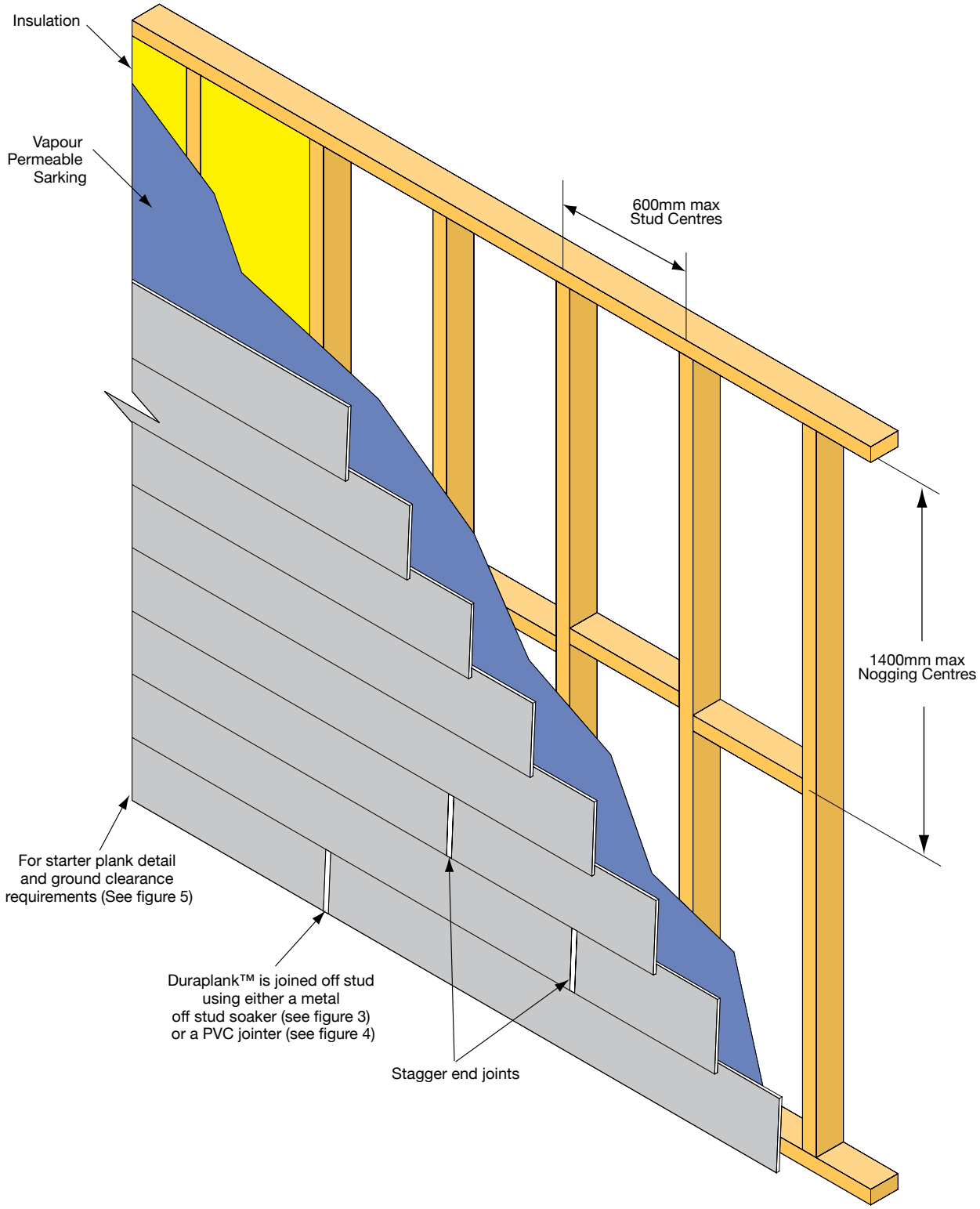
Figure 2 depicts the general framing requirements for Duraplank™ installed horizontally.

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 vapour permeable sarking will enhance the insulation properties of the cladding system.

FIGURE 2 //
DURAPLANK™ LAYOUT HORIZONTAL FIXING



- Calculate the number of planks required using the Plank Course Ready Reckoner as detailed in Table 1.
- Fix all flashings to wall openings and external and internal corners. See figure 9 for corner details using timber stop ends.
- Install vapour permeable 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/ bottom plate 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 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 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 8 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 10.
- 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 stagged 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 20mm – 50mm 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 woodgrain pattern, avoid starting each course with a new plank and rotate to avoid pattern repeats.

FIGURE 3 //
PLANK JOINT USING AN OFF STUD SOAKER

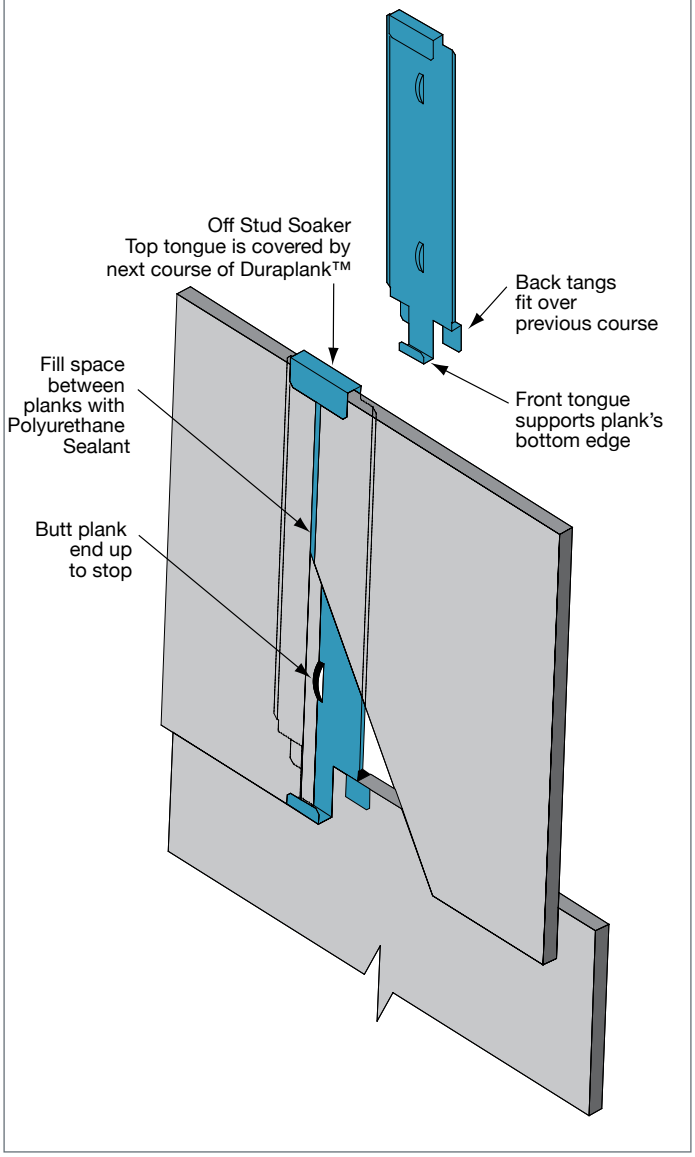


FIGURE 4 //
PLANK JOINT USING A PVC JOINTER

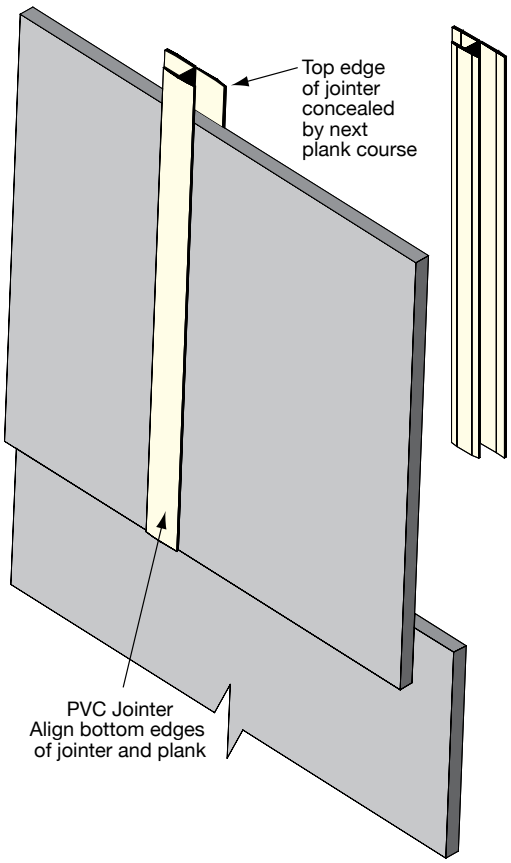


FIGURE 5 //
STARTER PLANK AND GROUND CLEARANCES

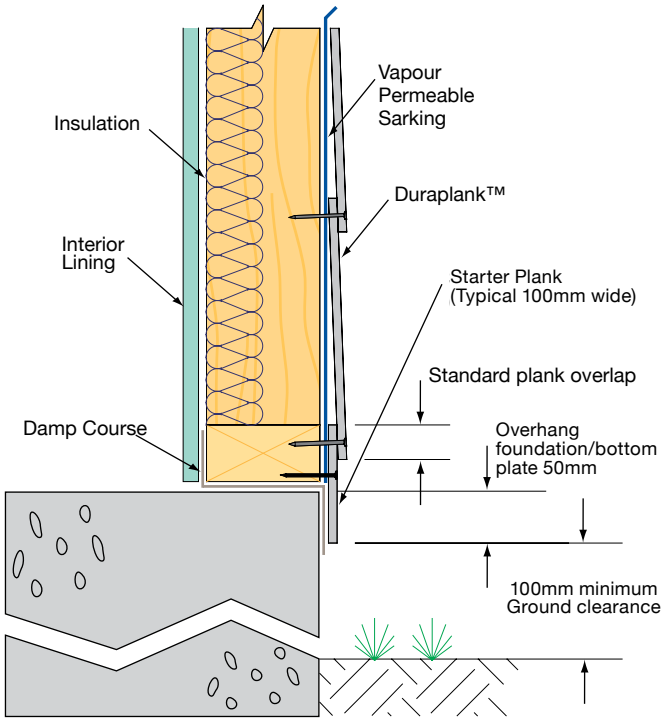


FIGURE 6 //
FASTENING DETAILS

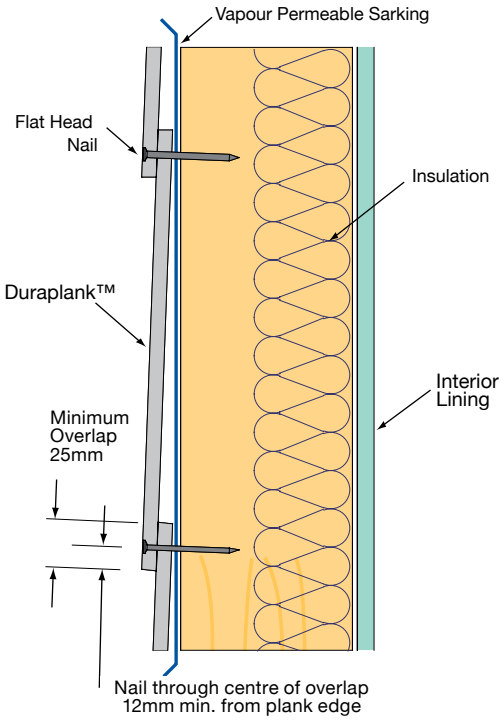


FIGURE 7 //
LIGHT WEIGHT STEEL FRAMING

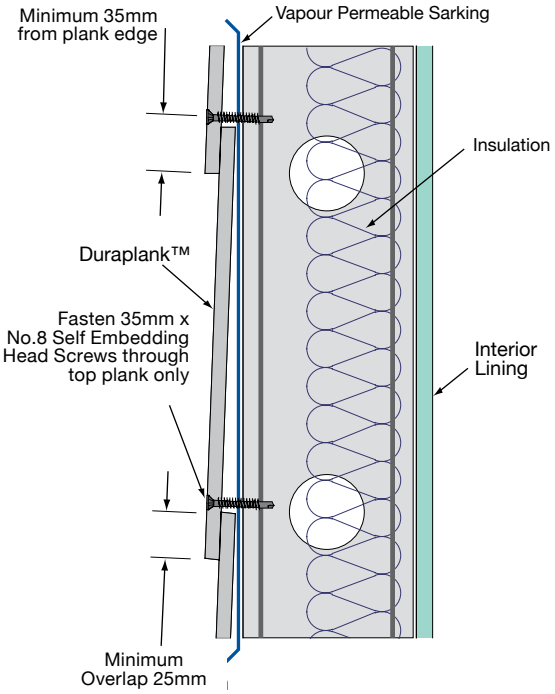
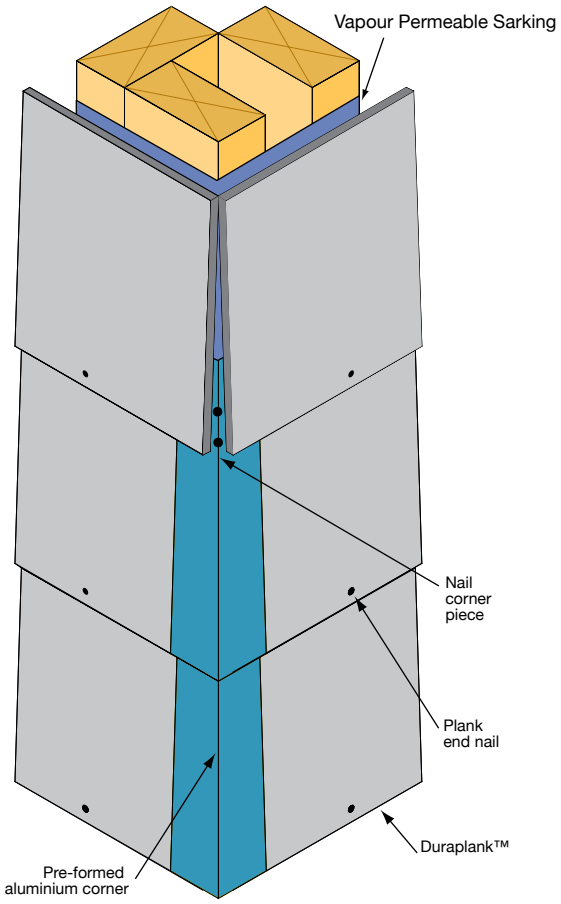


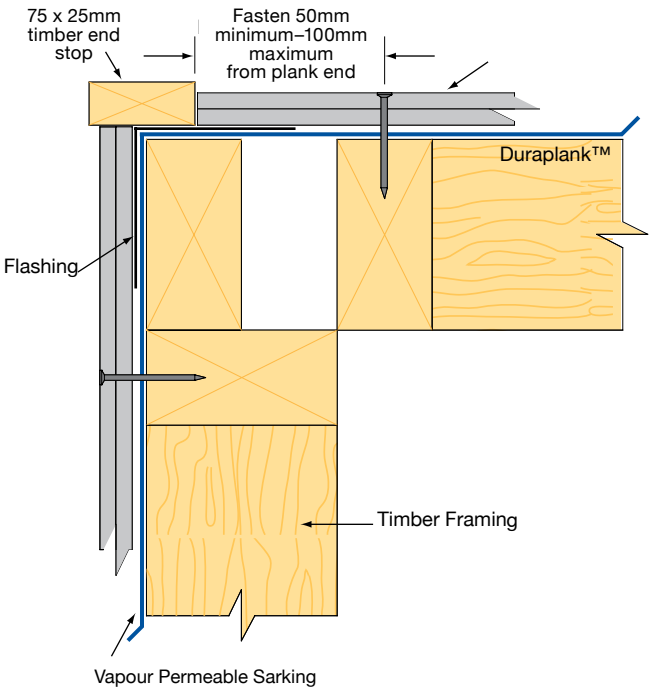
FIGURE 8 //
PRE-FORMED ALUMINIUM CORNERS

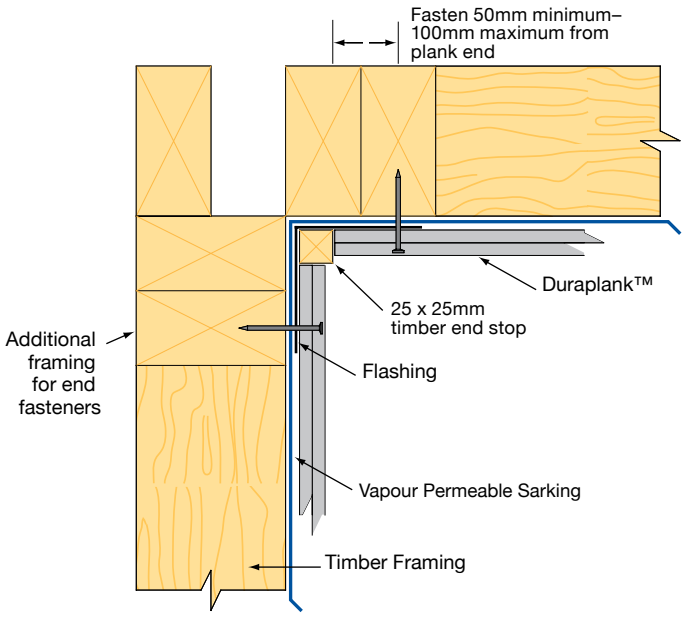


Notes:

- 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 50mm from the end of the plank. For nail fixings between 20mm - 50mm from the end, pre-drill the plank with a 3mm 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



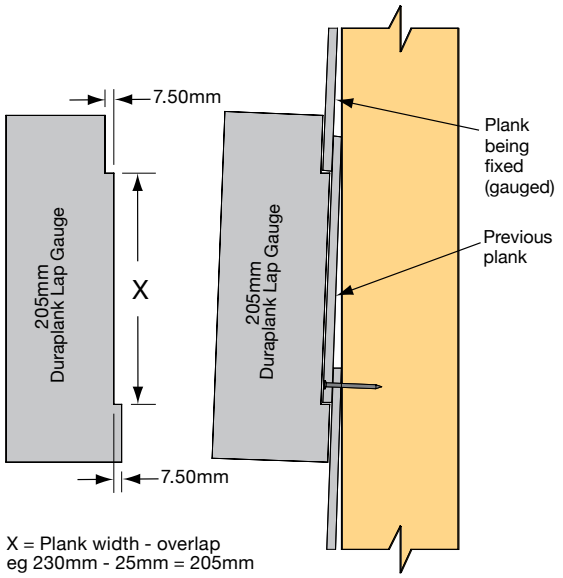


PLANK OVERLAPS

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 3.0m high wall clad with 230mm plank will require 15 courses but a 30mm overlap matches the wall height better (3030mm) than a 25 mm overlap (3100mm) – see Table 1.

The use of a lap gauge, Figure 10, to control sheet overlap will maintain uniformity.

FIGURE 10 //
DURAPLANK™ LAP GAUGE



CUTTING AROUND OPENINGS

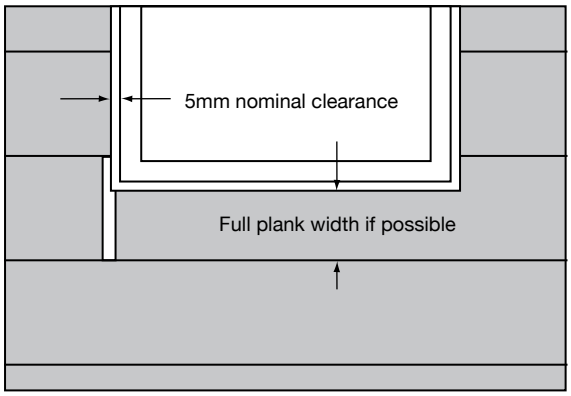
When cutting planks around window or door openings, a 5 mm nominal clearance must be provided at the jamb, head and sill.

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 11.

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 water ingress 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 1800mm width, provide a jointer above and below the four corners. Metal jointers should be cut to suit.

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.

Flashings 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.

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.

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.

THERMAL BREAKS

Thermal breaks are required for steel framed buildings, in walls enclosing habitable and or usable spaces. Careful consideration of thermal heat transfer and the position of thermal breaks need to be addressed by the architects, engineers and building designers.

Balustrades, parapets, and other non-enclosing wall elements may not require thermal bridging, except where the possibility of high thermal heat transfer exists through the steel CFS sections to the main structural steel element of the building.

As part of the BGC Fibre Cement range EPDM Foam Gasket is able to act as a thermal break and is required to prevent moisture ingress at sheet joins. EPDM Foam Gasket can also be used as a Thermal Break Tape and provides an R value of R 0.2 in accordance with the Building Code of Australia.

The EPDM Foam Gasket should be placed on all frame contact faces and at noggins and bottom plates.

Thermal breaks are first installed to all vertical frame members (Studs) then applied horizontally to top and bottom tracks as well as any horizontal noggins.

NOTE: Thermal breaks (BGC EPDM Foam Gasket) is a self-adhesive foam gasket/tape. It is installed over the building wrap (sarking).

Leave a small gap between the vertical gasket to allow any moisture to escape.

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).

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.

DEEMED TO COMPLY

For an up to date and complete list of BGC Products that are 'Deemed to Comply' please refer to www.ntlis.nt.gov.au/deemedtocomply

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.bgcinnovadesign.com.au);
- 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.

NOTES

TO CONTACT
YOUR NEAREST
BGC STOCKIST,
PLEASE CALL:

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CAROLE PARK
QUEENSLAND 4300
TELEPHONE 07 3271 1711
FACSIMILE 07 3271 1733

MELBOURNE
200 MAIDSTONE STREET
ALTONA
VICTORIA 3018
TELEPHONE 03 9392 9444
FACSIMILE 03 9392 9404

PERTH
121 BANNISTER ROAD
CANNING VALE
WESTERN AUSTRALIA 6155
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FACSIMILE 08 9334 4749

SYDNEY
233 MILPERRA ROAD
BANKSTOWN
NEW SOUTH WALES 2200
TELEPHONE 02 9771 9660
FACSIMILE 02 9771 9870

TECHNICAL HELP LINE
1300 652 242

BGC.INNOVADESIGN.COM.AU

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:

EXTERIOR PRODUCTS AND APPLICATIONS
INNOVA RANGE OF PRODUCTS

DURACOM™ / A compressed fibre cement facade system.

DURAFLOOR™ / Is the ultimate flooring product that can be used in both interior and exterior applications.

DURAGRID™ RESIDENTIAL & DURAGRID™ LIGHT COMMERCIAL / A light weight facade giving a modern and durable finish.

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™ / Purpose designed substrate for stone tile facade.

STRATUM™ / Is a trio of plank products, each of which can be used as stand alone products or used together to create a striking exterior cladding solution.

STRATUM™ ERA / A traditional, yet contemporary as it is flat weatherboard.

INTERIOR PRODUCTS AND APPLICATIONS
BGC FIBRE CEMENT RANGE OF PRODUCTS

DURALUX™ PLUS / An interior lining board suitable for ceilings and soffits.

DURALINER™ PLUS / An interior lining board, this is the perfect substrate for tiles and is ideal for wet areas.

CERAMIC TILE UNDERLAY / A substrate for ceramic and slate floor tiles.

VINYL CORK FLOOR COVERINGS / A substrate for vinyl floors.

EXTERIOR PRODUCTS AND APPLICATIONS
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, Duraplank™ 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 / Used for domestic, commercial sheet for wet areas, flooring, partitions, exterior decking, fascia and facade cladding.

DURALUX™ PLUS / Suitable for exterior applications where it will be sheltered from direct weather.

DURALINER™ PLUS / Suitable for exterior applications where it will be sheltered from direct weather.

Certified System
Quality
ISO 9001
SAI GLOBAL

Build it better with **BGC**

BGC Fibre Cement

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.

Design by **The SHAPE Group** www.theshapegroup.com.au