

DYNEX
PALLISIDE®

Weatherboards

TECHNICAL GUIDE



We would like to hear from you.

Dynex Extrusions, the manufacturers of Palliside® weatherboards, value feedback and correspondence that helps to ensure that the product literature is accurate and kept up to date.

If you believe there is an area we have overlooked or have any suggestions that will assist others in working with and installing Palliside® please let us know.

To contact us, please refer to the bottom of this document or palliside.co.nz.





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1.0 Product Overview

Palliside® weatherboards are designed as a durable engineered alternative to timber weatherboards. The system creates a weathertight, protective cladding system for residential and light commercial type buildings where domestic construction techniques are used.

The system consists of horizontally fixed, pre-finished weatherboards with an inter-locking weather seal between boards, installed over timber or steel framing, with flashings, trims, and accessories to complete.

Palliside® weatherboards are made in New Zealand from foamed uPVC, with a durable co-extruded ultraviolet protected uPVC exterior layer, and is defined as a light weight wall cladding in accordance with NZS 3604 and NASH Standard Part Two.

The Palliside® system is designed and manufactured in New Zealand, specifically for the rigours of this country's unique climate, and includes a range of finishing styles.



Profiles



Traditional



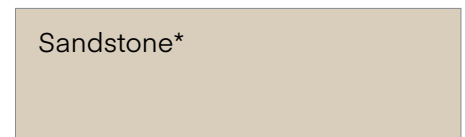
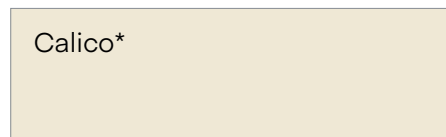
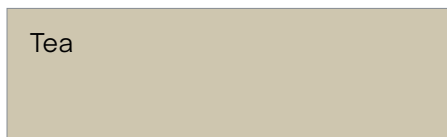
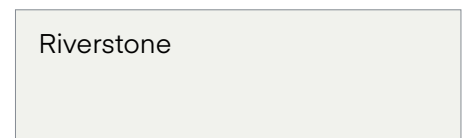
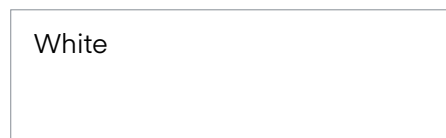
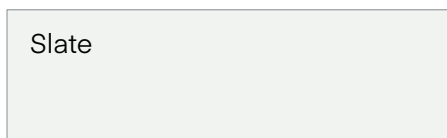
Rusticated Smooth



Rusticated Woodgrain

Colours

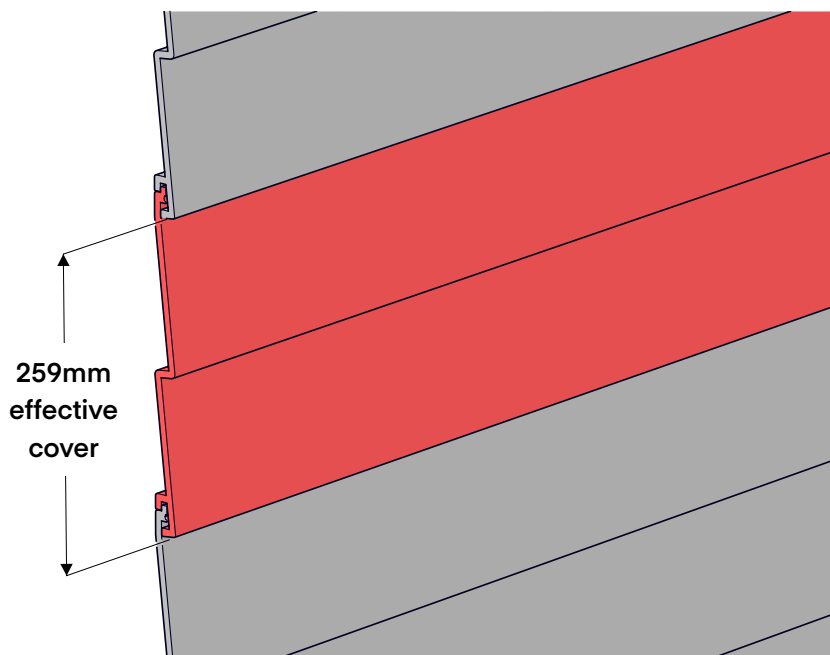
The following colours are available in all weatherboard choices (Traditional, Rusticated Smooth, and Rusticated Woodgrain).



*Made to order - lead times apply.

Weatherboard Specification

Palliside® weatherboards have an effective cover of 259mm and are supplied in 6.3m lengths. The weatherboards are nominally 6mm thick, with an effective overall profile thickness of 21mm (Traditional profile) and 18mm (Rusticated profile). The weatherboards have a nominal weight of 9.12kg per 6.3m weatherboard (5.58kg/m²) or 1.45kg per lineal metre.



2.0 Scope of Use

Timber Framing

The Palliside® cladding system has been appraised as an external wall cladding for timber- framed buildings within the following scope:

- › **The scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 for timber-framed buildings; and,**
- › **With a risk score of 0-12 (direct fixed) or 0-20 (cavity fixed), calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,**
- › **Situated in NZS 3604 Wind Zones up to, and including, Very High (direct fixed) and Extra High (cavity fixed).**

Steel Framing

The Palliside® cladding system has been appraised as an external wall cladding for steel-framed buildings within the following scope:

- › **The scope limitations of NASH Building Envelope Solutions Paragraph 1.1 for steel-framed buildings; and,**
- › **With a risk score of 0-12 (direct fixed) or 0-20 (cavity fixed), calculated in accordance with NASH Building Envelope Solutions; and,**
- › **Situated in NASH Standard Part Two Wind Zones up to, and including, Very High (direct fixed) and Extra High (cavity fixed).**

Specific Design

The Palliside® cladding system is also appraised for weathertightness and structural wind loading when used as an external wall cladding system for buildings within the following scope:

- › **The scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 for timber-framed buildings or NZBC Acceptable Solution E2/AS4, NASH Building Envelope Solutions Paragraph 1.1 for steel-framed buildings; and,**
- › **Constructed with framing subject to specific engineering design; and,**
- › **Situated in specific design wind pressures up to a maximum design differential ultimate limit state (ULS) of 2.5 kPa.**

General

The Palliside® cladding system must only be installed horizontally on vertical, flat surfaces.

The Palliside® cladding system is appraised for use with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills.

All Palliside® components have been specially designed for use within the overall Palliside® weatherboard system and they must not be used for purposes outside this scope or design. While it may be possible to use Palliside® weatherboards and accessories for other applications not covered within this Technical Guide, written permission must be sought by Dynex Extrusions Ltd. Refer to contact details later in this document.

3.0 Compliance

The Palliside® cladding system has undergone independent structural, durability and weathertightness testing to meet the requirements of the New Zealand Building Code (NZBC) as an Alternative Solution.

The Palliside® cladding system if designed, used, installed and maintained in accordance with this document, will meet the following provisions of the NZBC:

- › **Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. The Palliside® cladding system meets the requirements for loads arising from self-weight, earthquake, wind, impact and creep [i.e. B1.3.3 (a), (f), (h), (j) and (q)]. See Paragraphs 9.1-9.3.
- › **Clause B2 DURABILITY:** Performance B2.3.1 (b), 15 years and B2.3.2. The Palliside® cladding system meets these requirements. See Paragraphs 10.1-10.3.
- › **Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. The Palliside® cladding system meets this requirement. See Paragraphs 14.1-14.5.
- › **Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. The Palliside® cladding system meets this requirement.

The Palliside® cladding system is covered by the following BRANZ appraisals:



BRANZ Appraised

Appraisal No. 490 [2021]

Palliside® Weatherboards
installed **direct to the frame**



BRANZ Appraised

Appraisal No. 491 [2021]

Palliside® Weatherboards
installed over a **drained cavity**



4.0 Design

4.1 Responsibilities

It is the responsibility of the Architect/Designer:

- › To recommend an appropriate solution for any flashing detail relevant to the project and,
- › To include standard Palliside® CAD details on the consented plan drawings and,
- › To provide robust detailing of any area not addressed by published Palliside® literature and,
- › To ensure that Palliside® is specified in accordance with its design and scope of use.

It is the responsibility of the Builder/Product Installer:

- › To ensure that Palliside® is installed in accordance with the consented plan and,
- › To make sure that Palliside® is made weathertight using appropriate Palliside® components and,
- › To only install Palliside® in accordance with the published CAD details and installation literature.

Where applicable, all customised flashings must be designed, made and installed in accordance with this document and/or consistent with those shown in NZBC Acceptable Solution E2/AS1.

All Palliside® components have been specially designed for use within the overall Palliside® cladding system and they must not be used for purposes outside this scope or design.

4.2 Site

The site on which the building (to be clad in Palliside®) is situated must comply with the requirements of NZBC Acceptable Solution E1/AS1.

Foundation design, in all cases, must be either timber or concrete pile, or concrete slab in accordance with NZS 3604.

4.3 Clearances

Minimum ground clearances specified in Table 18 of NZBC Acceptable Solution E2/AS1 must be observed when setting out Palliside® weatherboards. Weatherboards must be kept clear of paved surfaces by a minimum of 100mm and unpaved by a minimum of 175mm. The setting out must also take into consideration the chosen starting accessory ensuring that the base of the board has a minimum overhang of at least 50mm below the bottom plate.

When installing Palliside® direct fixed to the frame on a concrete slab the setting out of framing at ground floor level needs to be offset horizontally by a minimum of 6mm to prevent capillary action (direct fix install only, refer CAD detail DF05).

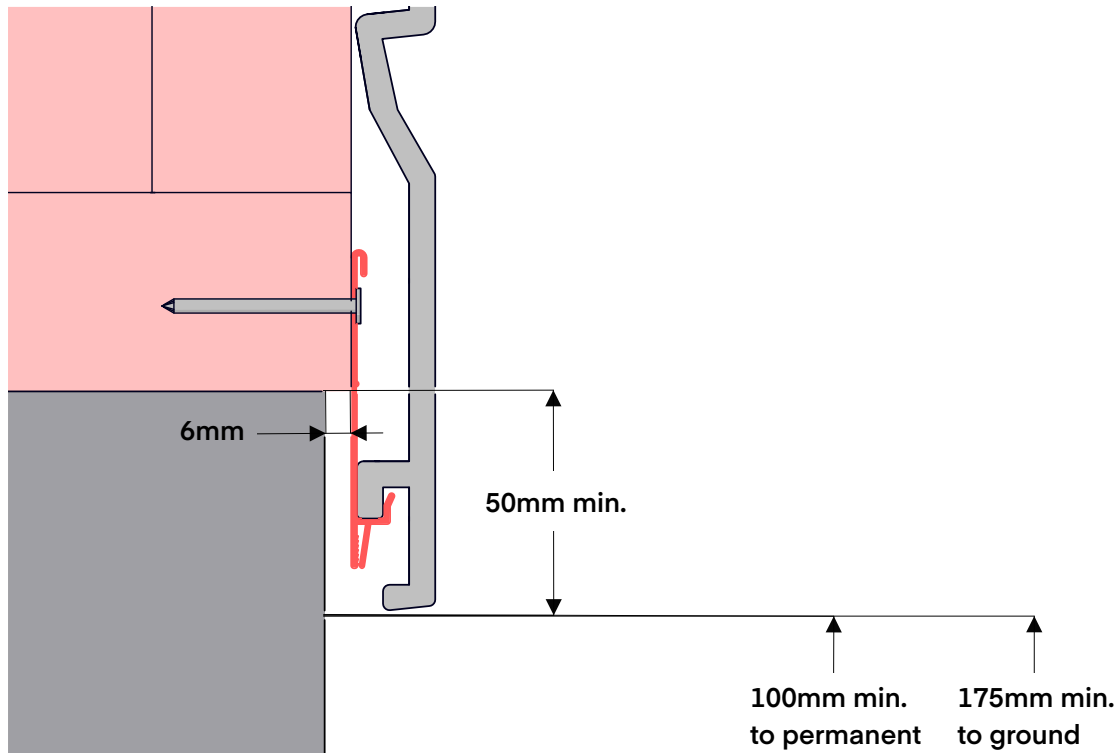


Figure A – Direct Fixed Starting Out Clearances (concrete pad, rusticated profile shown)

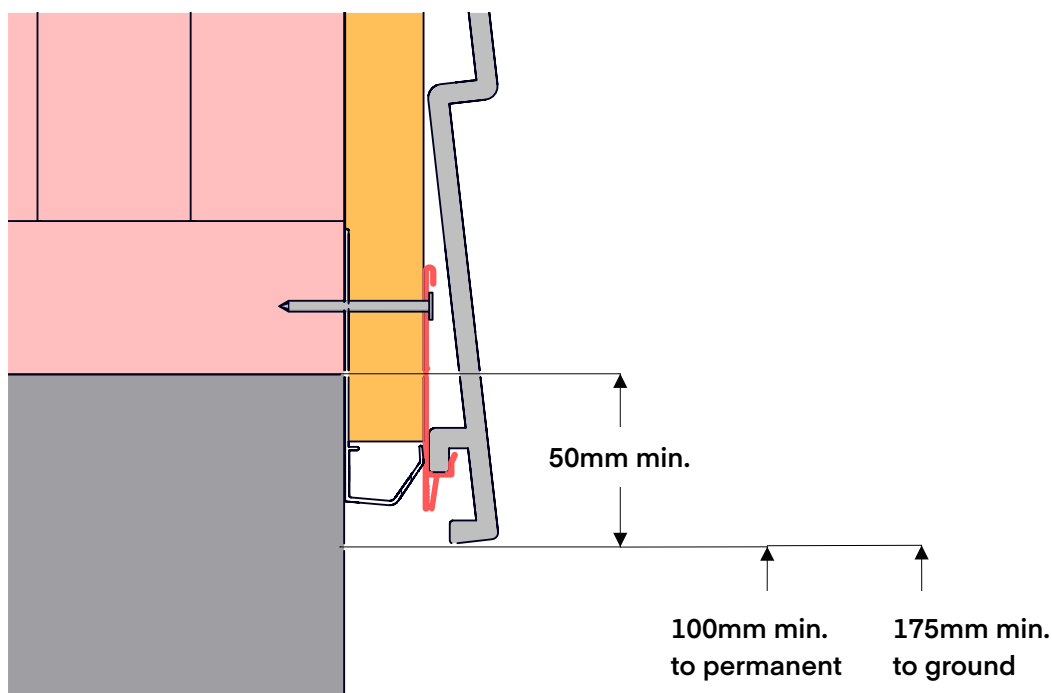


Figure B – Drained Cavity Starting Out Clearances (concrete pad, traditional profile shown)

4.4 Framing

Palliside® may be installed utilising one of the following methods:

- › Fixed directly to timber frame.
- › Fixed to timber frame over a drained cavity.
- › Fixed to steel framing with the allowance for a thermal break between the framing and the Palliside®.
- › Fixed over battens on concrete or masonry walls.

Timber Framing

Timber wall framing behind the Palliside® cladding system must be treated as required by NZBC Acceptable Solution B2/AS1.

Timber framing must comply with NZS 3604 for buildings or parts of buildings within the scope limitations of NZS 3604. Buildings or parts of buildings outside the scope of NZS 3604 must be to a specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604. Studs must be at maximum 600 mm centres in Low, Medium, High and Very High Wind Zones, and maximum 400 mm centres in the Extra High Wind Zone (cavity fixed) and specific design wind pressures up to and including design differential 2.5 kPa ULS. In all cases, dwangs must be fitted flush between the studs at maximum 800 mm centres.

Timber framing must have a maximum moisture content of 18% at the time of the cladding application.

Steel Framing

Steel framing must comply with NASH Standard Part Two for buildings or parts of buildings within the scope limitations of NASH Standard Part Two. Buildings or parts of buildings outside the scope of NASH Standard Part Two must be to a specific design. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NASH Standard Part Two.

The minimum framing specification is 'C' section studs and nogs of overall section size of 75 mm web and 32 mm flange. Steel thickness must be minimum 0.75 mm.

Studs must be at maximum 600 mm centres in Low, Medium, High and Very High Wind Zones, and maximum 400 mm centres in the Extra High Wind Zone (cavity fixed) and specific design wind pressures up to and including design differential 2.5 kPa ULS. In all cases, dwangs must be fitted flush between the studs at maximum 800 mm centres.

4.5 Establishing Weathertightness Risk

As with all exterior claddings a risk assessment of the proposed design needs to be carried out in accordance with Tables 1 and 2 of NZBC Acceptable Solution E2/AS1.

Once the risk score for each elevation has been defined, the decision can be made whether to install Palliside® direct to the frame or over a drained cavity.

- › **For elevations with a score calculated at between 0 and 12 points the Palliside® cladding system can either be installed direct to the frame or over a drained cavity.**
- › **For elevations with a score calculated between 13 and 20 points the Palliside® cladding system must be installed over a drained cavity.**

Jointing Limitation

When installing Palliside® direct to the frame the Palliside® moulded flat soaker is only suitable for installations up to 6 points. For elevations calculated between 7 and 12 points the Palliside® 2-part flat jointer must be used as the jointing option (with the base of this jointing option fixed on the stud before cladding of weatherboards commences).

When installed over a drained cavity the Palliside® moulded flat soaker is suitable for all elevation scores up to 20 points.

4.6 Bracing

The Palliside® cladding system does not have any bracing qualities and cannot be used as a substitute for bracing panels.

4.7 Impact Resistance

The Palliside® cladding system has been tested to and meets the impact requirements of AS 2921 Appendix B for soft body impacts (impacts likely to be encountered in normal residential use). The likelihood of impact damage to the cladding when used in light commercial situations should be considered at the design stage, and appropriate protection such as the installation of bollards and barriers provided for vulnerable areas.

4.8 Wind Zones

The Palliside® cladding system is suitable for use on buildings situated in all Wind Zones of NZS 3604 up to, and including, Very High (direct fixed) and Extra High (cavity fixed) where buildings are designed to meet the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 1.1, or NASH Building Envelope Solutions, Paragraph 3.2, or up to design differential 2.5 kPa ULS wind pressure when the buildings are specifically designed.

All external walls of buildings must have barriers to airflow in the form of interior linings with all joints stopped for wind zones up to and including Very High, and rigid underlays for buildings in the Extra High wind zone and specifically designed buildings up to 2.5kPa design differential ULS wind pressure.

Unlined gables and walls must incorporate a rigid sheathing or an air barrier which meets the requirements of NZBC Acceptable Solution E2/AS1, Table 23. For attached garages, wall underlays must be selected in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.3.4. Where rigid underlays are used, the Palliside® fixing lengths must be increased by a minimum of the thickness of the underlay.

4.9 Durability

Palliside® is manufactured from uPVC which is impervious to moisture. Accordingly, it will not rot or corrode and Palliside® is resistant to attack from termites and vermin.

Serviceable Life

The Palliside® cladding system installations are expected to have a serviceable life equal to that of other weatherboard cladding systems when they are correctly maintained in accordance with this technical guide and supporting product literature.

On exposure to the environment, Palliside® will gradually lose gloss and coloured Palliside® will gradually fade.

Microclimatic conditions, including geothermal hot spots, industrial contamination and corrosive atmospheres, and contamination from agricultural chemicals or fertilisers can convert mildly corrosive atmosphere into aggressive environments for fasteners. The fixing of the Palliside® cladding system in areas subject to microclimatic conditions requires specific design in accordance with NZS 3604, Paragraph 4.2.4, and is outside the scope of this technical guide.

4.10 Thermal Resistance

Palliside® has a thermal resistance of 0.18m² oC/W. As such, installations using the Palliside® cladding system require additional insulation to comply with the requirements of NZBC Clause H1 Energy Efficiency. As with all claddings, the thermal resistance value is reduced by 45% when installing over a 20mm cavity.

4.11 Fire Rating

The Palliside® cladding system has been tested for a peak heat release and total heat released rating. The testing was carried out according to the test procedure described in AS/NZS 3837:1998 'Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter'. The Palliside® cladding system achieves a performance level B classification in accordance with the New Zealand Building Code Acceptable Solutions C/AS1 Table 5.3.1.1 'Required fire performance of cladding materials in external wall cladding systems'.

The Palliside® Cavity Cladding System therefore must be installed at least 1.0m away from the relevant boundary, where the angle between the wall and the boundary is less than 90°.

4.12 Multi-Unit and Terraced Housing

Dynex Extrusions Ltd are currently developing Palliside® fire rated wall systems to assist in installing the Palliside® cladding system on walls at any distance from relevant boundaries that will meet performance requirements, and system details are being developed which will be available to assist in material selection in 2025.

The Palliside® cladding system is both resilient and slimmer than other traditional walling materials. These thinner walls have advantages in multi-residential, units, motels and other similar projects where maximum floor area utilisation is paramount. With the endless possibilities for the Palliside® cladding system, Dynex are committed to achieving design for fire safety. For more information on Medium Density applications, please contact Dynex Extrusions Ltd.

4.13 Prevention of Fire Occurring

Separation or protection must be provided to the Palliside® cladding system from heat sources such as fireplaces, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 and C/AS2, and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

4.14 External Moisture

The Palliside® cladding system, when installed in accordance with published technical literature, prevents the penetration of moisture that could cause undue dampness or damage to building elements. Weather sealing details are based on the design principle of having a first and second line of defence against moisture entry for all joints, penetrations and junctions. The ingress of moisture must be excluded by detailing joinery and wall interfaces as shown in the published technical Literature.

Weather-tightness details that are developed by the designer are outside the scope of this technical literature and are the responsibility of the designer for compliance with the NZBC.

The Palliside® cladding system allows excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet code compliance with NZBC Clause E2.3.6.

The use of the Palliside® cladding system where there is a designed cavity drainage path for moisture that penetrates the cladding, does not reduce the requirement for junctions, penetrations etc. to remain weather resistant and any cavities must be sealed off from the roof and sub-floor space to meet code compliance with NZBC Clause E2.3.5.

Inter-Storey Junctions (over 7m or 2 storeys)

When installing the Palliside® cladding system over a drained cavity and the wall to be clad is greater than 7 metres or 2 storeys in height, a horizontal inter-storey drainage flashing is required in accordance with requirements of NZBC Acceptable Solution E2/AS1 paragraph 9.1.9.4 b) or ASH Building Envelope Solutions, Paragraph 9.9.4 b). (refer CAD detail DC42).

Junctions With Other Systems

Where the Palliside® cladding system abuts other cladding systems, designers must detail the junction to meet their own requirements and the performance requirements of the NZBC. Published technical literature provides some guidance, but details not included are outside the scope of this technical guide.

4.15 Internal Moisture

The Palliside® cladding system is not a barrier to the passage of water vapour, and when installed in accordance with published technical literature, will not create or increase the risk of moisture damage resulting from condensation.

Where the Palliside® cladding system is installed over a steel frame, an expanded polystyrene thermal break must be installed over each steel member under the wall underlay to provide a thermal break in accordance with the requirements of NZBC Acceptable Solution E3/AS1, Paragraph 1.1.4 d). The cavity battens (cavity fixed) and the rest of the Palliside® cladding system is then installed over the top of the wall underlay in accordance with the technical literature.

4.16 Joining Weatherboards

It is worthwhile considering the placement of weatherboard joins at the design stage in order to minimise the number along each wall, e.g. strategic placement of the Palliside® 2-part jointing option, so that it can be covered by a downpipe. The 2-part jointing option is required to be installed to a stud while the flat soaker option is able to be installed between studs.

While Palliside® weatherboards are manufactured to a standard 6.3m length, longer boards can be made to order (up to 8.0m) to aid in minimising the number of jointers required per elevation.

For walls where a course of weatherboards is going to extend beyond 20m in a run unbroken by a corner or window, we recommend that the designer/architect contact Dynex during the design stage to discuss jointing and fixing options in more detail.

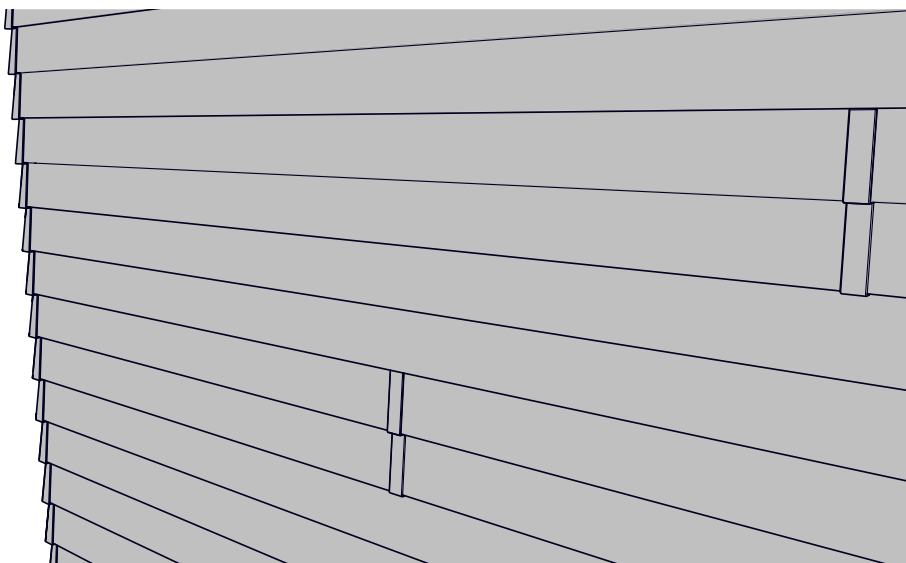


Figure C – Consideration of flat soaker jointer position away from main areas (traditional profile shown)

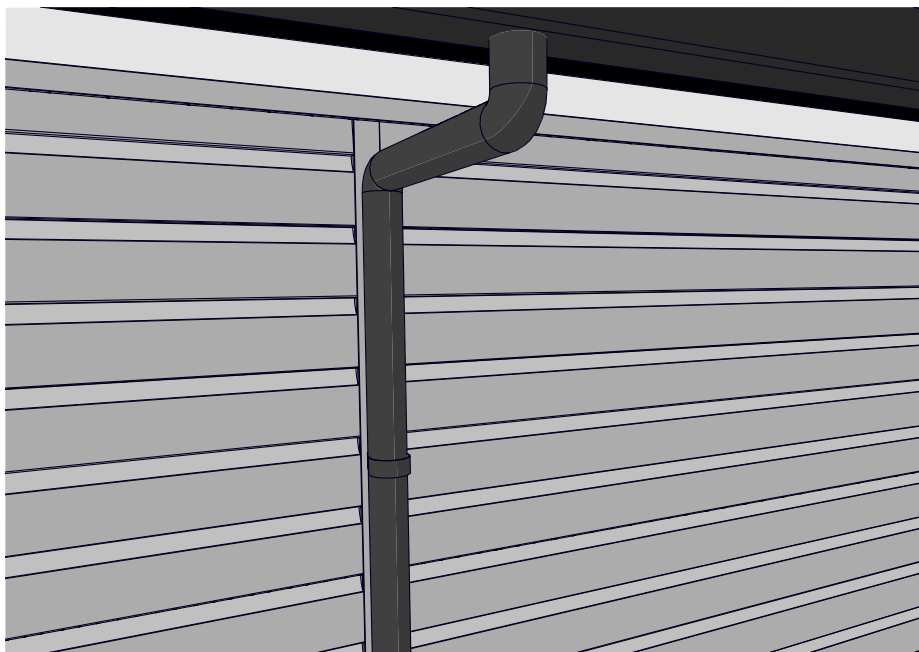


Figure D – Consideration of 2-part jointer position obscured by a downpipe (rusticated profile shown)

4.17 Joinery

The Palliside® cladding system relies on the joinery meeting the requirements of NZS 4211 for the relevant Wind Zone or design wind pressure.

Joinery Allowances

Ensure your selected aluminium joinery provider/fabricator is aware of the depth of the Palliside® jamb detail. While there is a difference between the depth of the traditional and rusticated profiles, the Palliside® jamb flashing base is suitable for use with either profile and has a depth of 26mm. This is important for window fabrication to ensure the window is set out correctly.

Depth to allow for aluminium joinery fabrication			
Palliside® Profile	Depth of Profile	Fabricator to Allow	
		Direct Fixed	Cavity Fixed
Traditional	21.0mm	26mm	46mm
Rusticated	17.8mm	26mm	46mm

Figure E – Joinery Fabrication Allowances

These allowances are in addition to depth of framing, internal lining, and applicable rigid air barriers and assume the use of standard 20mm cavity battens and the use of the Palliside® cladding system jamb flash base.

We also suggest allowing for an additional 1mm-2mm above the dimensions shown in this table to allow for thickness of flashing tapes around the window opening.

Head flashing

The Palliside® cladding system utilises a conventional head flashing layout (a standard aluminium type head flashing). If joinery is close together, it may be difficult to fit the cut board around the head flashing, and the use of additional joiners (flat soakers) at this height may become necessary.

Sill Pans

When installing the Palliside® cladding system in a direct fix configuration a flat sill pan must be provided. This needs to meet the requirements of NZBC Acceptable Solutions B2/AS1 and E2/AS1, refer to Palliside® Window Sill Layout (CAD Detail DF04).

5. Sustainability

Dynex, manufacturers of the Palliside® cladding system, and part of the Aliaxis group of companies, is committed to doing our part to minimize the construction industries big impact on the environment, and put sustainability at the forefront of everything we do.

Material

While short-term single-use plastics are acknowledged as detrimental to the environment, Palliside® is the opposite. It is designed to last a long time, requires very little maintenance, and no painting, minimising its long-term effect on the environment.

Recyclability

Palliside® is fully recyclable. Dynex is setting up a significant scheme to ensure as much of the offcut waste created during the building process is recycled as possible, to minimise the waste that goes to landfill. As part of Aliaxis, Dynex will leverage the major multi-million dollar investment in the joint venture recycling plant with Waste Management.

Certification

Palliside® is one of the first cladding types in NZ to acquire an Environmental Product Declaration. We know this is critical in helping specifiers understand the impact their product choices will make on the environment. This is alongside our ISO 14001 accreditation and can be found [here](#).

Renewable Energy

The Aliaxis group is working with Meridian Energy and their 100% Renewable Energy programme. This will ensure all energy usage is sourced from renewable energy sources like Hydro, Solar and Wind from 2025.

6. Details

A wide range of specific two-dimensional details are available for designing with the Palliside® cladding system for both direct fix and drained cavity construction. These details are accessible from the Palliside® website.

Relevant Palliside® cladding system details must be included within consented plans. In many cases, the details show an indicative method of how to meet the requirements of NZBC Acceptable Solution E2/AS1. Alternative methods of installation may be possible, providing that they demonstrate the use of robust weathertightness principles. The inclusion of these details in a plan does not exempt the installer from familiarising themselves with other relevant published Palliside® literature.

Palliside CAD Details

System Detail	Direct Fixed	Cavity Fixed	System Detail	Direct Fixed	Cavity Fixed
Window Head (recommended)	DF01	DC01	Palliside-Brick Sill Junction	DF29	DC29
Window Sill	DF02	DC02	Palliside-Brick Vertical Junction	DF30	DC30
Window Jamb	DF03	DC03	Palliside Above Joinery Between Brick	n/a	DC31
Sill Layout	DF04	DC04	90° Boxed Timber Corner	DF32	DC32
Starter Strip	DF05	DC05	Timber Facing Window Head	DF33	DC33
90° External Corner Soaker	DF06	DC06	Timber Facing Window Head	DF34	DC34
90° 2-Part External Corner Box	DF07	DC07	Timber Facing Window Jamb	DF35	DC35
90° 2-Part Internal Corner Box	DF08	DC08	Palliside Wall/Fascia Junction	n/a	DC36
Flat Soaker Joint	DF09	DC09	135° 2-Part boxed Corner	DF37	DC37
2-Part Boxed Joint	DF10	DC10	Alt. Cavity Head Flashing Detail	n/a	DC38
Finish at Soffit	DF11	DC11	Cavity Batten Layout	n/a	DC39
Parapet/Enclosed Balustrade	n/a	DC12	Window Head Layout	DF40	DC40
Meter Box Head	DF13	DC13	Enclosed Deck Starter Layout	DF41	DC41
Meter Box Jamb	DF14	DC14	Inter-storey Drainage Joint	n/a	DC42
Meter Box Base	DF15	DC15	Timber Floor Layout	DF43	DC43
Non-Cantilevered Deck Junctn.	DF16	DC16	Door Sill Layout	DF44	DC44
Apron Flashing Raked	DF17	DC17	Garage Door Jamb	DF45	DC45
Apron Flashing Horizontal	DF18	DC18	Garage Door Head	DF46	DC46
Gutter Wall Apron	DF19	DC19	Palliside Rake Finish - Traditional	DF47	DC47
Pipe Penetration	DF20	DC20	Palliside-Profiled Metal - External Cnr	n/a	DC48
Wall Fascia Junction	DF21	DC21	Palliside-Profiled Metal - Internal Cnr	n/a	DC49
Reverse Raking Soffit	DF22	DC22	Palliside-Profiled Metal - Vertical Joint	n/a	DC50
Parapet/Enclosed Balustrade	n/a	DC23	Palliside-Plaster - External Corner	n/a	DC51
Parapet/Wall Junction	n/a	DC24	Palliside-Plaster - Internal Corner	n/a	DC52
Non-standard Corner	DF25	DC25	Palliside-Plaster - Vertical Joint	n/a	DC53
Palliside-Brick External Corner	DF26	DC26	Palliside-Plywood - External Corner	n/a	DC54
Palliside-Brick Internal Corner	DF27	DC27	Palliside-Plywood - Internal Corner	n/a	DC55
Palliside-Brick Inter-storey	DF28	DC28	Palliside-Plywood - Vertical Joint	n/a	DC56

Figure F – Published Palliside® CAD details

Drawings are diagrammatic and are not intended to be scaled. For exact dimensions of any of the Palliside® cladding system componentry please contact Dynex.

7.0 Warranty

If the Palliside® cladding system is used and installed according to published recommendations, it is guaranteed to be free from defects in material and workmanship for a period of 25-Years from the date of purchase.

For full warranty information, visit the Palliside® website.

Maintenance

Regular maintenance is essential for the Palliside® cladding system to continue to meet the NZBC durability performance provision and to maximise its serviceable life.

For full Maintenance information, visit the Palliside® website.

Replacing Damaged Weatherboards

Depending on the situation, damaged Palliside® weatherboards can be repaired or replaced by a skilled tradesman. For further details and suggested procedure on how to repair or replace Palliside® weatherboards, contact Dynex, or visit the Palliside® website.

Painting and Colour Matching

Custom trims or packers, used during installation, can be painted to match Palliside® colours. Refer to the colour matching table below.

If required, the Palliside® weatherboards and trims, although pre-finished, can be painted. The paint colour chosen must have a TSR value (total solar reflectance) equal to or greater than 62%. A colour's LRV (light reflectance value) should not be used to determine suitability even if the colour has the same LRV value of an existing Palliside® colour. For further clarification on the suitability of a colour please contact Dynex.

While the following instructions are given as a guide, we would always recommend seeking advice from a qualified painter and/or paint supplier before undertaking such work.

To prepare the surface prior to painting, either use soapy water or a sprayed-on hypochlorite cleaner such as '30 Seconds' followed by washing down with water. This removes any filmy residue that can prevent the paint from adhering to the boards as well as removing built up residue on weatherboards that have been installed some time ago. Ensure that any cleaning agent is thoroughly rinsed off and the surface has dried before paint application begins. Apply two coats of the desired colour using 100% acrylic paint.

Palliside Colour	Taubmans/Wattyl (formula Ref)	Dulux (Vivid White 1L) (formula Ref)	Resene (formula Ref)	Powdercoat Colour
Calico	Palliside Calico (59803)	Calico (EE16 M1)	Palliside Calico (MPAL13)	Off White 08/06 (915 58804)
Riverstone	Palliside Riverstone (59805)	Riverstone (EE7 G1 LL1 M5)	Palliside Riverstone (MPAL10)	O'Keefe Grey 05/07 (915 58721)
Sandstone	Palliside Sandstone (59804)	Sandstone (EE11 LL7 M4)	Palliside Sandstone (MPAL11)	Rivergum Beige (Interpon D1010, GD185A)
Slate	Palliside Slate (59806)	Slate (EE4 LL1 M7)	Palliside Slate (MPAL12)	Silver Quill 02/06 (288 58728)
Tea	Traditional Tea (29769)	Half Tea (tinting EE8 G1 M3 - 1)	Palliside Tea (MPAL6)	Light Grey Gloss (ML029A)
White	White	White	Palliside White (MPAL5)	Appliance White 07/05 (915 58853)

Figure G – Palliside® colour match formulas

8. Installation Requirements

All building work must be carried out in accordance with the Palliside® cladding system technical literature by competent and experienced tradespersons conversant with the Palliside® system. Where the work involves Restricted Building Work (RBW) this must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant License class.

Palliside® can be handled and worked like timber with no requirement for special tools, though unlike timber once it's up it requires only an occasional wash down to maintain its smart looks.

See application specific installation guides for full Health & Safety, handling and detailed Palliside® cladding system installation instructions.

Scaffolding

Palliside® must be installed from the base up. For applications where the wall cannot be accessed from ground level such as 2-storey applications, a freestanding scaffold is required. Scaffolding can be removed quickly once the weatherboards (including trims) have been installed, as there is no need for painting, staining or plastering.

8.1 Thermal Expansion

Palliside® has a thermal expansion coefficient of 3×10^{-5} per °C. The recommendations for fixing allow for this expansion (5mm per length), which takes place primarily in the length of the plank. Weatherboards must not be cut to a tight fit between accessories.

Longer Weatherboards

Longer Palliside® weatherboards are available made to order (up to 8.0m) to aid in minimising the number of jointers required per elevation. To support the installation of these longer boards we recommend the use of 40mm x 2.8mm HDG annular groove type nails, (60mm x 2.8mm when installed over a cavity). Alternatively, a Class 4 type, 8-gauge countersunk screw of equivalent length may be used.

8.2 Underlay and Tapes

When installing the Palliside® cladding system direct to the frame, an absorbent building underlay complying with NZBC Acceptable Solution E2/AS1 Table 23 must be installed over the framing. Some synthetic flexible building underlays are not suitable for use with direct fixed non-absorbent claddings (such as uPVC, Steel or Aluminium), as they do not have a minimum absorbency rating of 100g/m².

In the situation where the Palliside® cladding system is installed over a drained cavity, it is not necessary for the building underlay to be absorbent.

The installer needs to ensure that the method of fitting the building underlay (including around openings) is addressed in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.5 and 9.1.7, or in accordance with the manufacturer's instructions.

Flexible wall underlay must be installed horizontally and be continuous around corners. Underlay must be lapped 75 mm minimum at horizontal joints and 150 mm minimum over studs at vertical joints. Generic rigid sheathing materials must be installed in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, and be overlaid with a flexible wall underlay. Proprietary systems shall be installed in accordance with the manufacturer's instructions. Particular attention must be paid to the installation of the wall underlay and sill and jamb tapes around window and door openings to ensure a continuous seal is achieved and all exposed wall framing in the opening is protected.

Air Barriers

In accordance with NZBC Acceptable Solution E2/AS1, any exterior walls that are not to have an internal lining (such as attic spaces or gable ends) must have a rigid sheathing or air barrier complying with Table 23 fixed to the framing prior to fixing the cladding or cavity battens. For attached garages, wall underlays must be selected in accordance with NZBC Acceptable Solution E2/ AS1, Paragraph 9.1.3.4.

8.3 Cavity Battens

In accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.8.4, Cavity Battens should be:

- › Nominal 20mm (between the limits of 18mm and 25mm) in thickness.
- › At least the same width as the stud.
- › Made of timber treated as required by NZS 3602 or,
- › Proprietary cavity battens covered by a valid BRANZ Appraisal.

Cavity battens must be installed over the wall underlay to the wall framing at maximum 600 mm centres where the studs are at 600 mm centres, or at 400 mm centres when studs are at 400 mm centres. Non-structural battens must be fixed in place with 40 x 2.5 mm hot-dip galvanised flathead nails (timber frame) or self-drilling 6 g galvanised Class 4 screws (steel frame) at maximum 800 mm centres. Structural battens must be fixed in place with 60 x 2.8 mm hot-dip galvanised flathead nails (timber frame) (or 64mm x 2.8mm air driven nails) or self-drilling 10 g galvanised Class 4 screws with a minimum head width of 7 mm (steel frame) at 300 mm centres.

Where studs are at greater than 450 mm centres and a flexible wall underlay is being used, a wall underlay support must be installed over the underlay at maximum 300 mm centres horizontally.

For installations in Wind Zones above Very High, Palliside® must be nailed through the batten using HDG 60mm x 3.15mm annular groove nails regardless of the type or method of fixing the cavity batten.

Structural battens must be minimum "H3.1 treated MSG 8 framing grade quality".

Batten layout

Refer CAD detail DC39 for typical cavity batten layout.

A continuous horizontal batten is permissible at the soffit only. Castellated battens may be installed horizontally below joinery or used as an alternative to standard vermin protection of the cavity providing that they meet standard durability requirements, allow for the minimum ventilation of 1000mm/m² and are sloped to the top edge by 20 degrees.

Spacers are required to allow Palliside® horizontal starting trims to be fixed at the required 300mm centres. If installing Palliside® to a timber subfloor these spacers should be vertically fixed. Horizontal spacers may also be used providing that they are:

- › A maximum 100mm in length.
- › Installed with a minimum slope of 5°.
- › Spaced at least 100mm away from any vertical batten or edge of window opening.

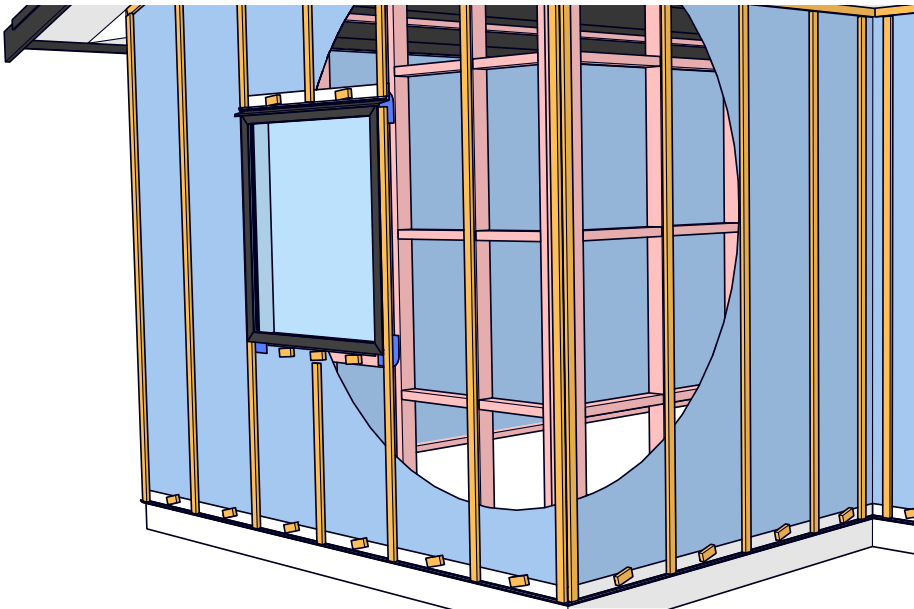


Figure H – Typical cavity batten layout

8.4 Fasteners

Full fixing specifications are published in the relevant application specific installation guide, available on the Palliside® website.

8.5 Sealants & Solvents

Sealants used must meet the requirements of the NZBC. Acid Cure Sealants must not be used with the Palliside® cladding system.

A range of MS based sealants matching the Palliside® colours is available. These and other neutral cured or silicon-based sealants can be applied to Palliside® in the following scenarios:

- › To form a flashing stop-end above joinery
- › Around the area where the head flashing penetrates the weatherboard to the sides of joinery
- › Finishing around penetrations such as pipes, etc.

Solvent cement is used for fixing Palliside® end plugs and flat soakers in place. When using solvent cement, care should be taken to avoid any solvent being placed on the parts of extruded uPVC accessories that are visible such as the caps of boxed corners and channel trims (this can lead to dimpling).

The use of solvent cement or sealant should not substitute the use of sound weathertightness principles and/or tidy finishing.

8.6 Installation of Joinery

Aluminium joinery and associated head flashings must be installed by the building contractor in accordance with the Technical Literature.

In drained cavity applications, a 7.5-10 mm nominal gap must be left between the joinery reveal and the wall framing so an air seal with in accordance with Acceptable Solution E2/AS1, Paragraph 9.1.6 or NASH Building Envelope Solutions, Paragraph 9.1.6 can be installed after the joinery has been secured in place.

In direct fixed applications, a 7.5-10 mm nominal gap must be left between the joinery reveal and the wall framing so a PEF rod and air seal can be installed after the joinery has been secured in place.

8.7 Finishing

The Palliside® cladding system is pre-finished and does not require painting at the completion of installation. Touch up of scratches and the like must be completed in accordance with the instructions of Dynex Extrusions Ltd.



Contact Details

For further information visit the website palliside.co.nz or alternatively contact:
DYNEX EXTRUSIONS LTD PO BOX 19-133, Avondale 1746, Auckland, New Zealand.

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Building towards a better tomorrow

The environmental impact of our daily choices is an important consideration for Dynex. We are committed to supplying products and services that are in accordance with the principles of environmental sustainability. Dynex PALLISIDE® is made from 100% recyclable material. We have a policy of recycling all internally-generated scrap material so that nothing is sent to landfill.

Dynex has a goal to reach 100% renewable electricity by 2025 by leveraging Meridian Energy's Certified Renewable Energy programme.



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