

0437P FIELDERS CLADDING – SPECIALISED PANELS

Branded worksection

This branded worksection *Template* has been developed by NATSPEC in conjunction with **FIELDERS** and may be used whilst the Product Partner is licensed to distribute it. The copyright remains with NATSPEC. As with all NATSPEC worksections, it is the responsibility of the user to make sure it is completed appropriately for the project. The user should also review its applicability for local conditions and regulations. Check www.natspec.com.au for the latest updated version.

Worksection abstract

This branded worksection *Template* is applicable to FIELDERS lightweight external wall cladding from the Finesse range.

Background

The Australian profiled sheet steel industry is organised as follows:

- BlueScope manufacture Colorbond® pre painted steel and Zinalume® steel coils.
- FIELDERS, using steel coils, shapes steel into different profiles and cuts sheets to length.
- Installers take off material quantities, order and install, often as subcontractors to the contractor.

Guidance text

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the NATSPEC Toolbar or the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

Optional style text

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- 0342 *Light steel framing* for subframing.
- 0382 *Light timber framing* for subframing.
- 0432 *Curtain walls*.
- 0433 *Stone cladding*.
- 0434 *Cladding – flat sheets and panels*.
- 0435 *Cladding – planks and weatherboards*.
- 0436p *FIELDERS cladding - profiled sheet metal*.
- 0471 *Thermal insulation and pliable membranes* for wall installation, thermal breaks and vapour permeable membranes.
- 0511 *Lining*.
- 0531 *Suspended ceilings – combined* for suspended soffits.

Documenting this and related work

You may document this and related work as follows:

- Check if your cladding is required to be non-combustible, refer to BCA Section C and ABCB Advisory Note 3. Consider adding a requirement in **SUBMISSIONS** for evidence of conformance from the contractor. If using a performance solution for facade cladding, type testing to AS 5113 may be used as the verification method for combustible external walls.
- Document the structural support system to your office documentation policy.
- Locate the extent of cladding types, accessories, and finishes on drawings to your office documentation policy.
- Penetrations: Show on the drawings the location and extent of penetrations for services and structural elements including flashing details.

If required, state the minimum added thermal resistance (R-Value) (m² KW). See NATSPEC TECHnote DES 031 for information on specifying R-Values.

- Document bushfire protection requirements to conform to AS 3959 and the BCA. See NATSPEC TECHnote DES 018 for information on bushfire protection.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search acumen.architecture.com.au, the Australian Institute of Architects' practice advisory subscription service, for notes on the following:

- Guarantees and warranties.

Specifying ESD

The following may be specified by including additional text:

- Metal cladding manufactured from recycled metal and/or is recyclable.
- Metal cladding finished with low VOC or non-VOC finish.
- Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

FIELDERS manufacture a comprehensive range of mainly roll-formed products which are supplied to commercial, industrial and domestic building contractors. The main manufacturing sites are at Mile End in South Australia, Wangara and Osborne Park in Western Australia, Campbellfield in Victoria, and Minchinbury in New South Wales. Branches are located at Marion, Gawler and Noarlunga in South Australia, O'Conner, Bunbury and Geraldton in Western Australia, and Darwin in the Northern Territory.

Products include roofing and cladding in a range of profiles and gauges, fencing systems, rainwater goods, gutters, flashings, sheet metal fabrication, fascia, purlins, door frames, KingFlor structural decking, carports and sheds.

1.1 RESPONSIBILITIES

General

Requirement: Provide FIELDERS specialised panel, lightweight external wall cladding and associated work, as documented.

Documented is defined in 0171 General requirements as meaning contained in the contract documents.

Location exposure severity

Exposure severity determines the grade of Colorbond® steel and Zinalume® steel. Refer to BlueScope TB-01B guide on selecting steel cladding products.

Exposure severity category: [complete/delete]

Exposure severity category: The approximate distance from marine influence. Select from the following:

- Benign: > 1000 m from breaking surf/exposed marine or > 1000 m from calm marine.
- Moderate: 401 to 1000 m from breaking surf/exposed marine or 201 to 1000 m from calm marine.
- Marine: 201 to 400 m from breaking surf/exposed marine or 101 to 200 m from calm marine.
- Severe marine: 101 to 200 m from breaking surf/exposed marine or 0 to 100 m from calm marine.
- Very severe marine: 0 to 100 m from breaking surf/exposed marine.
- For organic coating used in sheet steel, there are additional corrosivity categories. Add, if appropriate. They are:
- Tropical inland - North Queensland, Northern Territory, North-West Western Australia, Papua New Guinea and the Pacific Islands, except where affected by salinity, and
- Very high - offshore and beach front locations and aggressive industrial environments where pH may be less than 5.
- Refer to 0171 General requirements for the designation of the Exterior atmospheric corrosivity category of the project.

1.2 COMPANY CONTACTS

FIELDERS technical contacts

Website: www.fielders.com.au/asp/contact.aspx

1.3 CROSS REFERENCES

General

Requirement: Conform to the following:

- 0171 General requirements.

0171 General requirements contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. 0171 General requirements references the 018 Common requirements subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.4 MANUFACTURER'S DOCUMENTS

FIELDERS technical manuals

Specifying FIELDERS Roofing and Walling Manual: www.fielders.com.au/manuals-software/roofing-walling-manual/

1.5 TOLERANCES

Permitted deviations

Requirement: To AS 1562.1 clause 4.2 and FIELDERS recommendations.

1.6 SUBMISSIONS

Operation and maintenance manuals

Requirement: Submit a manual of recommendations from *Specifying FIELDERS Roofing and Walling Manual* for the maintenance of the cladding system, including frequency of inspection and recommended methods of access, inspection, cleaning, repair and replacement.

Refer to Maintenance and Care in *Specifying FIELDERS Roofing and Walling Manual*.

Products and materials.

Type tests: As appropriate for the project, submit evidence of conformance to the following:

- Metal cladding generally: Cladding and fastenings to AS 1562.1 clause 5.5 for resistance to wind pressure.
- Metal cladding in cyclonic regions to AS/NZS 1170.2: Cladding and fastenings to AS 1562.1 clause 5.6.

Type tests are carried out before the contract. However, submission of evidence of a successful type test may be called up here for requirements specified in **SELECTIONS** or **PRODUCTS** when there are no **SELECTIONS**.

Samples

Approved samples are retained on site and define the acceptable limits of colour and texture variation.

Finish: Submit samples of the cladding material.

Subcontractors

General: Submit names and contact details of proposed installers and evidence of installation experience.

Evidence of experience: [complete/delete]

e.g. Check conditions of warranty for panels selected. Delete if installer details are not required.

Warranties

Requirement: Submit the following: [complete/delete]

Describe the requirements of warranties in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here.
e.g. Interlocking warranty for sealant type and application.

Cladding materials: Submit the manufacturer's published product warranties.

1.7 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Framing, sarking, vapour barrier and insulation before covering up or concealing.

Amend to suit the project, adding critical stage inspections required.

Hold points, if required, should be inserted here.

2 PRODUCTS

2.1 GENERAL

Product substitution

Other products: Conform to **PRODUCTS, GENERAL, Substitutions** in *0171 General requirements*.

The *0171 General requirements* worksection clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling

Requirement: Store and handle materials to the manufacturer's recommendations and the following:

- Protect materials including edges and surfaces from damage.
- Do not drag sheets across each other or over other materials.
- Store metal materials away from uncured concrete and masonry on a level base.
- Do not store metal materials in contact with other materials which may cause staining, denting or other surface damage.
- Use gloves when handling precoated metal cladding material.

2.2 FIELDERS SPECIALISED PANELS

The Finesse range includes: Shadowline 305, Shadowline WA, Neo-Roman, Nailstrip, Interlocking Panel and Millennium. Other FIELDERS products available include Aramax and Freeform. If using one of these systems, contact FIELDERS for design and technical assistance.

General

Requirement: FIELDERS profiled specialised cladding panels.

Design and installation: To AS 1562.1.

AS 1562.1 requires materials to conform to the following standards:

- Aluminium: AS/NZS 1734.
- Steel: AS 1397 for continuously hot-dip metallic coated sheet and strip or AS/NZS 2728 for prepainted and organic film/metal laminate products.

Stainless steel: To ASTM A240/A240M.

AS 1449 cited in AS 1562.1 for stainless steel has been withdrawn.

Selection: To the **FIELDERS specialised panel cladding schedule**.

Plywood substrate: Flush finished continuous plywood sheeting.

2.3 COMPONENTS**Fasteners**

Type, size, corrosion resistance class and spacing: To FIELDERS recommendations.

Refer to FIELDERS Head Office.

Self drilling screw material: Stainless steel.

Screw fixed fastening clips:

- Minimum screw pull out strength: 500 N.
- Screws: [complete/delete]

Refer to FIELDERS Head Office.

Finish for exposed fasteners on coloured cladding: Prefinish exposed fasteners with an oven baked polymer coating to match the cladding material.

FIELDERS flashings, cappings and accessories

Standard: To AS/NZS 2904.

Coordinate with 0423p FIELDERS roofing - profiled sheet metal.

Product: FIELDERS.

Material and colour: Match wall sheeting.

Rib notching: Match wall sheeting.

Fillers and sealants

Profiled fillers: Purpose-made closed cell polyethylene foam profiled to match the cladding profile.

Add locations as required.

Sealant: 100% natural cure non-acid based silicone rubber to match cladding.

2.4 PLYWOOD SUBSTRATE**Plywood sheeting**

Delete as appropriate.

Exterior use: To AS/NZS 2271.

Marine plywood to AS/NZS 2272 has the internal veneers laid up without gaps or knots, and is bonded with the same grade of adhesive as waterproof ply for external use. The cost difference is substantial, but could be justified for extreme applications.

Surface grade: CD to AS/NZS 2269.0.

Bond: Type A.

Thickness: 19 mm.

Plywood sheet certification

Identification: Panels labelled under the authority of a recognised certification program applicable to the product.

Certification program: Engineered Wood Products Association of Australia (EWCAA) Quality Control and Plywood and LVL Product Certification Scheme.

3 EXECUTION

3.1 PREPARATION

Substrates or framing

Preparation: Before fixing cladding, check the alignment of substrates or framing and adjust if necessary.

Flexible underlay: Check that the underlay is restrained.

3.2 INSTALLATION

General

Requirement: To *Specifying FIELDERS Roofing and Walling Manual*.

Fixing method: As documented or to the following:

- Steel and timber framing: Screw.
- Minimum penetration for profiled metal sheets: 30 mm for timber framing.

Accessories and trim

Requirement: Provide accessories and trim necessary to complete the installation.

Corner flashing for profiled and seamed metal sheets: Finish off at corners with purpose-made folded flashing strips.

Metal separation

Design for compatibility or detail separation.

Requirement: Prevent direct contact between incompatible metals, and between green hardwood or chemically treated timber and aluminium or coated steel, by either of the following methods:

- Apply an anti-corrosion, low moisture transmission coating to contact surfaces.
- Insert a separation layer.

Incompatible metal fixings: Do not use.

3.3 PLYWOOD SUBSTRATE

Delete as appropriate.

Plywood sheeting

Installation: Lay the length of the sheets at right angles to the supports.

End joints: Stagger the end joints and locate centrally over framing members.

Edge support: If panels are not tongue and grooved, provide noggings or trimmer joists to support the edge.

Fixing: 300 mm centres to each support:

- Timber: Adhesive and nail.
- Steel: Metal coated self drilling/tapping screws with the heads finishing below the surface.

Control joints: 12 mm gap at abutting building elements.

Detail the assembly to provide a 25 mm air gap between the plywood and insulation.

3.4 FIELDERS SPECIALISED PANEL CLADDING

Fabrication

Requirement: Factory fabricate cladding trays.

Minimum bending radius: 1.75 mm.

Installation

Fixing start location: [complete/delete]

Note the elevation that will allow fixing to proceed from leeward to the windward of prevailing wind.

Expansion joints: [complete/delete]

Expansion joints should be provided every 35 m in sheet length for walls with concealed fixings and 24 m in sheet length for walls with exposed fixings.

Clip spacing: [complete/delete]

Contact FIELDERS for guidance on the number of fixing clips per sheet of Aluminium with respect to weather and site conditions, and exposure to wind of various parts of the roof.

Seams

Method: Mechanically form and welt seal in situ using a mechanical seaming tool, to stand 25 mm high on completion. Dress seams flat at gutters, ridges and hips, and fold both pan and seam down into gutters and up to form stop ends at ridges and hips.

3.5 COMPLETION

Cleaning

Requirement: Remove excess debris, metal swarf, solder, sealants and unused materials.

Exposed metal surfaces: Clean surfaces of substances that interfere with uniform weathering or oxidisation.

Damaged materials: Replace materials that have been damaged or degraded.

Protection

Protective coating: Remove the protective plastic coating after completion of structure.

Warranties

Warranty period:

Material warranty: [complete/delete]

Watertight installation guarantee: [complete/delete]

Maximum material warranties – Select from:

- Aluminium products: 20 years.
- Zinalume & Colorbond range: 30 years.

Maximum watertight installation warranties:

- Pierced fixing: 5 years.
- Concealed fixing: 20 years.

Conditions:

- Material warranty: Subject to satisfactory inspection of the installation by FIELDERS.

Sample warranties are published in *Specifying FIELDERS Roofing and Walling Manual*.

Use only where warranties extending beyond the defects liability period are available for the particular system. Insert the required warranty period and terms, which should be negotiated beforehand. If the warranty is in the form of separate material and installation warranties, require the signatures of both manufacturer and installer. Delete if not applicable.

4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 PRODUCT

FIELDERS specialised panel cladding schedule

Property	A	B	C
----------	---	---	---

Property	A	B	C
Product			
Panel direction			
Panel joint			
Material type			
Minimum base metal thickness (BMT) (mm):			
Width between ribs			
Colour			
Plywood substrate			
Trims			
Control joints			
Flashings and cappings			
Fasteners			
Structural frame material			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Product: Select from:

- FIELDERS Shadowline 305.
- FIELDERS Shadowline WA.
- FIELDERS Neo-Roman 275 mm or 475 mm.
- FIELDERS Nailstrip.
- FIELDERS Interlocking Panel.
- FIELDERS Millennium.

Panel direction: Horizontal or Vertical.

Panel joint: Select from:

- All in one panel.
- Neo-Roman: All in one panel or Panel with Stand Alone Rib for Neo-Roman.
- Interlocking panel longitudinal joint: Between 5 mm and 18 mm.
- Millenium: Select from: Double lock seam or Single lock seam.

Material type: Select the product material recommended by FIELDERS with reference to the **Atmospheric corrosivity category** nominated for the project in *0171 General requirements*. Refer also to NATSPEC TECHnote DES 010.

- Benign: Colorbond® steel, Colorbond® Metallic steel or Zinalume® steel.
- Moderate: Colorbond® steel.
- Severe marine: Colorbond® Ultra steel.
- Very severe marine: Colorbond® Stainless steel.

Minimum base metal thickness (BMT) (mm): Select from:

- Colorbond® Stainless steel: 0.55 BMT.
- Zinalume® steel: 0.55 BMT.
- Colorbond®: 0.55 BMT.
- Colorbond® Ultra steel: 0.55 BMT.
- Colorbond® Metallic: 0.55 BMT.

Width between ribs: Refer to the *Specifying FIELDERS Roofing and Walling Manual* for further information on the configurations.

- Neo-Roman: 275 mm or 475 mm.
- Nailstrip: 265 mm or 465 mm.
- Interlocking panel width: 200 mm, 250 mm or 300 mm.
- Millenium: 325 mm or 525 mm

Plywood substrate: Select Required or Not required as appropriate for the product and its application.

Trims: Select accessories for sills, reveals or corner returns from the FIELDERS product range as appropriate.

Flashings and cappings: Select from the FIELDERS product range as appropriate

Fasteners: e.g. Concealed or Pierced: Crest or Valley.

Structural frame material: e.g. Concrete, Timber or Steel. Refer to project details. FIELDERS offer guidance with typical detail drawings.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS 1170		Structural design actions
AS/NZS 1170.2	2011	Wind actions
AS 1562		Design and installation of sheet roof and wall cladding
AS 1562.1	1992	Metal
AS/NZS 2269		Plywood - Structural
AS/NZS 2269.0	2012	Specifications
AS/NZS 2271	2004	Plywood and blockboard for exterior use
AS/NZS 2904	1995	Damp-proof courses and flashings
ASTM A240/A240M	2016	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

The following documents are mentioned only in the *Guidance* text:

AS 1397	2011	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS 1449	1994	Wrought alloy steels - Stainless and heat-resisting steel plate, sheet and strip
AS/NZS 1734	1997	Aluminium and aluminium alloys - Flat sheet, coiled sheet and plate
AS/NZS 2272	2006	Plywood - Marine
AS/NZS 2728	2013	Prefinished/repainted sheet metal products for interior/exterior building applications - Performance requirements
AS 3959	2009	Construction of buildings in bushfire prone areas
AS 5113	2016	Fire propagation testing and classification of external walls of buildings
ABC Advisory Note 3	2016	Fire performance of external walls and cladding
BlueScope TB-01B	2013	Steel walling products - Selection guide
NATSPEC DES 010	2009	Atmospheric corrosivity categories for ferrous products
NATSPEC DES 018	2008	Bushfire protection
NATSPEC DES 031	2014	Specifying R-Values
NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2016	Specifying ESD