HARDIPLANK™ 7.5mm EXTERNAL WALL CLADDING

AS 4055	General Areas of Building		Within 1200mm of Building Edges	
Wind Load Classification	Stud Spacing (mm)	ULS Capacity (kPa)	Stud Spacing (mm)	ULS Capacity (kPa)
C2	450	2.90	450	2.90
C3	450	2.90	300	5.77
C4	450	2.90	300	5.77

SPECIFICATION

HARDIPLANK™ CLADDING
7.5mm nominal thickness 'Smooth', 'Woodgrain' or 'Cross-Cut' surface finish. Available in widths of 170mm, 230mm and 300mm. The stock length is 4200mm. Final surface finish (coating, painting etc) shall be as per James Hardie's "External Fixing Manual".

DESIGN
HARDIPLANK™ shall be fastened to the steel frame in accordance with the stud spacings tabulated above for the different wind conditions. The wind classifications are derived from AS 4055 of 1992 "Wind Loads For Housing" as in Table 1. Topographic classifications beyond T2 are likely to be uncommon in Darwin (refer to Clause 10 of AS 4055).

In selecting the wind classification, the designer should first determine whether the structure is in topographic classification T1 or T2 (or other up to T5), the nature of shielding (FS = full shielding, PS = partial shielding, NS = no shielding) and the applicable terrain category. The design wind speeds are given in Table 2.

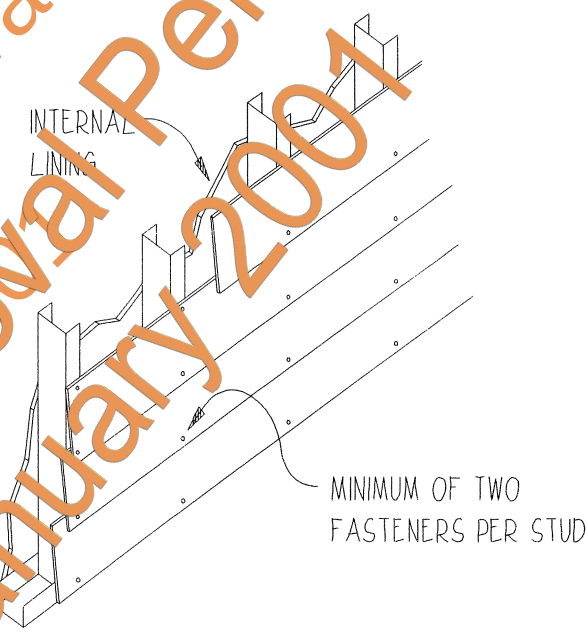
The proven capacity of each system is given in Design Table and may be used by designers for intermediate wind speeds or building outside the scope of AS 4055. An Ultimate Limit State material capacity reduction factor of $\phi = 0.9$ has already been applied.

WALL FRAME (STEEL)
Studs shall be rolled steel sections not exceeding 1.6mm in thickness. Maximum stud spacing shall be as in the Design Table.

FASTENERS (refer to James Hardie "External Fixing Manual")
HARDIDRIVE™ self-embedding head drill-point screws (or equivalent) shall be used when fastening to steel framing. Fasten through both thicknesses of plank, two fasteners per plank per stud. Locate fasteners no closer than 12mm from top and bottom edges of plank. Alternatively, James Hardie STUD CLIPS may be used on steel frame only. Fasten stud clips to steel studs using short Ø5mm hex head tecks screws or similar. One stud clip per plank per stud.

PLANK OVERLAP: 25mm minimum recommended.

DESIGN & CONSTRUCTION NOTES
[1] It has been assumed that HARDIPLANK™ board is an external wall cladding only. Internal pressures shall be resisted by internal linings. The HARDIPLANK™ cladding is therefore only subjected to external pressure and suction loadings.
[2] Do not use 300mm wide planks beyond wind class C1.
[3] In wind classication C4 use only 170mm wide planks, otherwise use 7.5mm thick James Hardie WEATHERBOARD™.



TIMBER FRAMED CONSTRUCTION: The same stud spacing designs may be applied equally using 40mm long Ø 2.8mm fibre cement (FC) nails, but do not use stud clips for wind classifications beyond C2.

TABLE 1
Wind Classification System for Region C, Darwin

Terrain Category	Topographic Classification T1			T2		
	FS	PS	NS	FS	PS	NS
TC 2.5	C2	C2	C2	C2	C2	C3
TC 2	C2	C2	C2	C2	C3	C3
TC 1	C2	C2	C2	C2	C3	C3

TABLE 2
Maximum Design Gust Wind Speed (V_h) at Height h

Wind Classification in Region C	Serviceability Limit State (m/s)	Permissible Stress Method (m/s)	Ultimate Limit State (m/s)
C2	39	50	61
C3	47	60	74
C4	55	70	86

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FIXING TO STEEL FRAMES
HARDIPLANK™ 7.5 mm (nominal)
EXTERNAL WALL CLADDING
IN THE DARWIN AREA

DESIGN DATA SHEET

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12-18 Tryon Road, Lindfield NSW 2070, Australia

Certified: .....
Date: F.I.E. AUST, C.P.Eng
8th January 1996

NORTHERN TERRITORY
DEPT OF LANDS & HOUSING
BUILDING AUTHORITY BRANCH

Approved: .....
Date: 11/1/96

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M203/8