

to.

Geoff Spice
433 Kaludabah Road
Piambong NSW 2850

date.

4.04.2023

reference.

41215-SL01_A

Dear Geoff,

Re: Kaludabah Heights at 433 Kaludabah Road, Piambong NSW 2850
Internal Fit-Out for Habitable Shed – Building Information Certificate (BIC)
Structural Inspection

I hereby certify that Mr. Sam Rochester, a Structural Engineer, visited the above address on Thursday 30th March 2023. The purpose of the inspection was to review and certify the internal works completed within the existing shed structure to obtain a Building Information Certificate (BIC) with Mid-Western Regional Council.

The client advised that the shed was constructed approximately eight years prior to the inspection and was modified in August of 2022 for use as a habitable structure. The client provided the attached design drawings produced by the shed supplier, Wide Span Sheds, along with photographs taken during the internal fit-out. The drawings have been stamped during construction by Whitehall Building Certifiers indicating that the shed is adequate for use as a Class 10a building as per the design drawings.

Further evidence that the shed was constructed in accordance with the design drawings was collected during the inspection. The steel framing of the original shed was inspected directly by removing some of the roof and wall sheets. The slab was confirmed to be minimum 100mm thick with a plastic membrane installed underneath and mass concrete piers located below each column. This matches the specification provided for Class A, S or M sites. A geotechnical investigation was completed by Barnson at the site of the shed in 2015. The report produced following this investigation, 23581-GR01_A, advises that a site classification of M-D should be adopted.

The stamped drawings and observations made during the inspection confirm that the original shed was constructed in accordance with the design drawings and is therefore structurally adequate for use as a Class 10a building. The internal fit-out has been completed in order to convert the building

to a habitable structure or Class 1a building. Based on the provided photographs the steel and timber framing installed as part of the internal fit-out are in accordance with the NASH standard and AS1684.2 respectively. The slab was designed for a Class 10a building and specification for the type of slab used is not provided in *AS2870:2011 – Residential slabs and footings*. Although the slab has not been designed for residential purposes, we advise that it is structurally adequate to support the floor loading for a self-contained dwelling. It should be noted however that due to the low stiffness of the slab, cracking should be expected to brittle installations (i.e., plasterboard lining).

Some additions not included on the original design drawings were noted. A steel framed verandah was attached to the South-West, South-East and North-East side of the building. A 100mm thick concrete slab was installed below this verandah on the North-East side and along a partial length of the South-East side. The steel-framed verandah was noted to have C150 rafters spanning maximum 3m to a C200 verandah beam, which is supported over 100SHS columns embedded into concrete piers.

Photographs of the structure as provided by the client during the fit-out and taken during the inspection are included in Appendix B.

Upon analysis, the structure has been checked in accordance with accepted engineering principles and has been found to generally be structurally adequate to the below Australian Standards and design parameters:

1. Loading:

General principles of loading calculation and loading combinations to Australian Loading Code AS1170.0-2002 and other relevant codes as below:

a. Dead Loads:

- i. Roof: Weight of steel sheeted and cold-formed steel framed roof with plasterboard ceiling lining, 0.3kPa.
- ii. Roof: Weight of solar panels, maximum 0.2kPa.
- iii. Framing: Self-weight of steel wall sheeting, cold-formed steel framing elements and internal wall lining, 0.4kN/m².
- iv. Floor: Self-weight of reinforced concrete floor slab, 25kN/m³.

b. Live Loads:

- i. Roof: Maintenance load of $1.8/A + 0.12\text{kPa}$ (min 0.25kPa), or 1.4kN point loading as per AS1170.1-2002.
- ii. Floor: Imposed action for general areas of self-contained dwellings, 1.5kPa distributed action or 1.8kN point loading as per AS1170.1-2002.

c. Wind Loads:

- i. Wind Class N3 to AS4055-2012.

2. Design Standards:

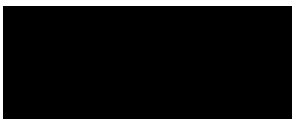
- a. AS/NZS 1170.0:2002 – Structural Design Actions, General Principles
- b. AS/NZS 1170.1:2002 – Structural Design Actions, Permanent Imposed and Other Actions
- c. AS/NZS 1170.2:2011 – Wind Actions
- d. AS/NZS 1684.2:2010 – Residential Timber Framed Construction
- e. AS4100:1998 – Steel Structures

We advise the structure complies with the above standards as is suitable for use as a habitable structure.

If you have any further enquiries regarding this matter, please contact the undersigned.

Yours faithfully,

BARNSON PTY LTD



Luke Morris
BE ME FIEAust CPEng (Reg)
Director

Encl:

- *Design Drawings – Wide Span Sheds*
- *Site Photographs*

APPENDIX A

Building Plans/Documentation

Design Information Sheet

Building Details

Item	Design Value		
	Building Description	Portal Design Steel Frame and Steel Clad Building	
Job Reference #	WSS160069		
Site Address	433 Kahubah Rd PIAMBONG NSW 2850		
Building Classification	Class 10		
Effective Design Height	3.18 m		
	Main Building	Left Leanto	Right Leanto
Length	12m	NA	NA
Bay Size	4 evenly spaced	NA	NA
Span	7m	NA	NA
Roof Pitch	06 degrees	NA	NA

Pressure Coefficients

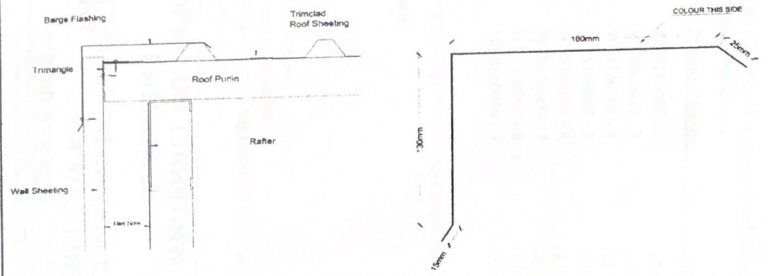
Item	Design Value	Reference
Internal Pressure coefficient CPI	0.7	AS/NZS 1170.2 Clause 5.3
Windward Wall (External Across)	0.7	AS/NZS 1170.2 Table 5.2 (A)
Windward Rafter (External Across)	-0.9, -0.4	AS/NZS 1170.2 Table 5.3 (B)
Leeward Rafter (External Across)	-0.47	AS/NZS 1170.2 Table 5.3 (C)
Leeward Wall (External Across)	-0.5	AS/NZS 1170.2 Table 5.2 (B)
Side Wall (External Along)	-0.65	AS/NZS 1170.2 Table 5.2 (C)
Rafters (External Along)	-0.9, -0.4	AS/NZS 1170.2 Table 5.3 (A)
Local Pressures Applied	Yes	AS/NZS 1170.2 Table 5.6

Site Classification

Item	N	NE	E	SE	S	SW	W	NW
Wind Region	A1							
Importance level	2							
Terrain Category	2	2	2	2.5	2.5	2	2.5	2
Shielding Multiplier (Ms)	1	0.9	0.95	1	1	1	0.95	1
Topographic Multiplier (Mt)	1	1	1	1	1	1	1	1
Wind Direction Multiplier (Md)	0.9	0.8	0.8	0.8	0.85	0.95	1	0.95
Design Wind Speed	39 m/s							
Snowload Factor	0kPa							
Seismic Factor (Z)	NA							

**WHITEHALL BUILDING
CERTIFIERS**

COMPLYING DEVELOPMENT
CERTIFICATE NO. 7/6
PCA BPB 0439



Barge Flashing XF 11 - Sheeting Gable

XF 11

**WHITEHALL BUILDING
CERTIFIERS**
COMPLYING DEVELOPMENT
CERTIFICATE NO716.....
PCA BPB 0439

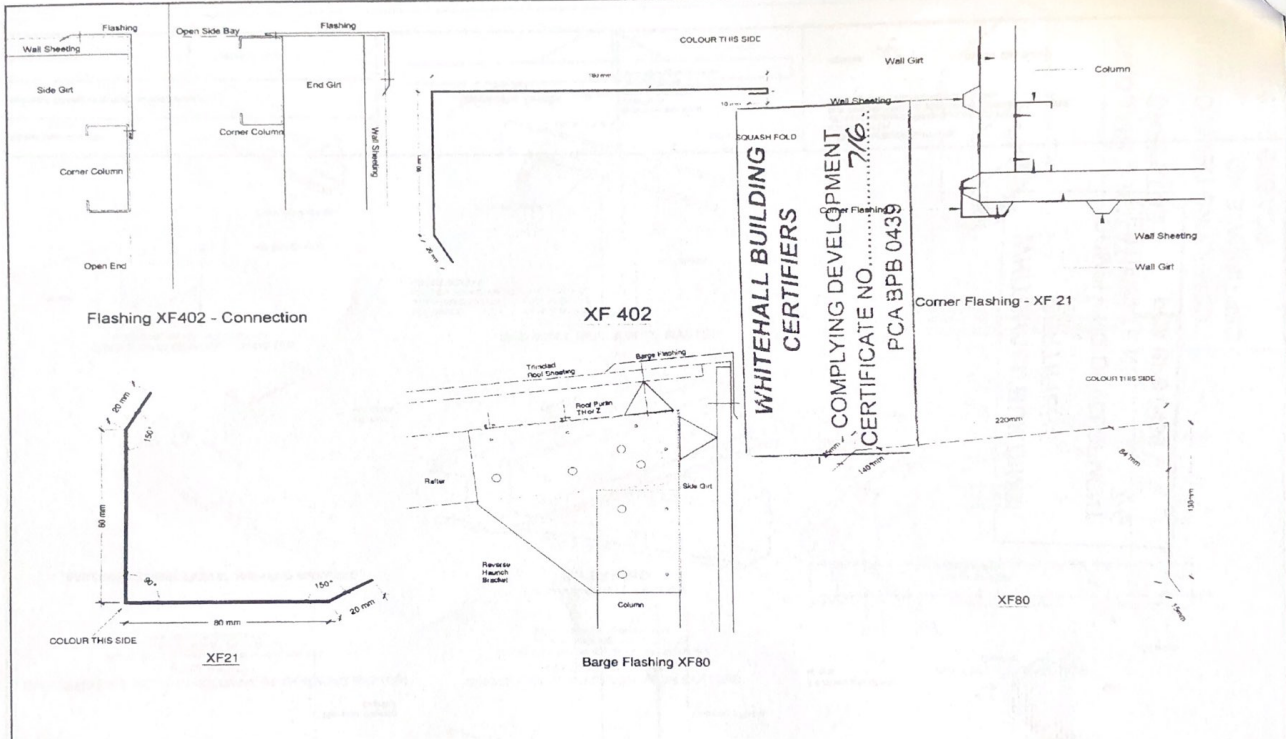
Purchaser Name: Geoff Spies	
Site Address: 433 Kalubarr Rd PAMBONG NSW Australia 2550	
Drawing # WES18009 - 9	Print Date: 21/01/16

Flashing Fixing Details
Page 2 of 2

Seller: White Open Sheds
Sheds Pty Ltd
Phone: 07 5507 6885
Fax: 07 5507 8909
Email: sdhiv@sheds.com.au

SHOWERS ENGINEERING PTY LTD
ACN: 075 007 144
ME Aust. (Registered) NFER Structural & Civil 321767
OLD: RFED No. 1547; NC: ECAN 62; TAG: CC4600H; NT: 4692963;
Practising Professional Structural & Civil Engineer

Signature: [Redacted] R.J. Showers Date: 21/01/16

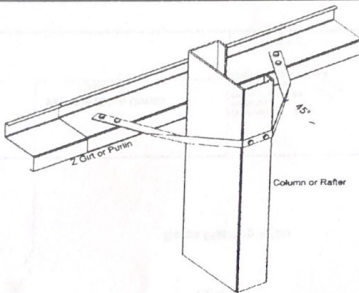
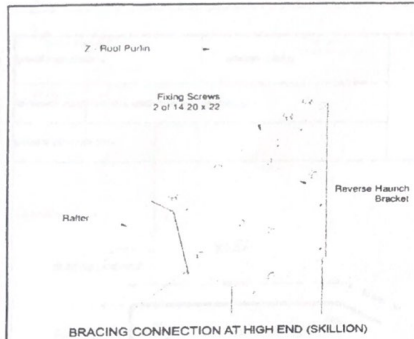


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 Drawing # VSS180006 - 9
 Print Date: 21/01/16

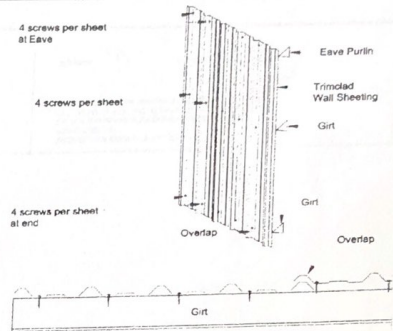
Flashing Fixing Details
 Page 1 of 2

Seller: Wide Span Sheets
 Sheels Pty Ltd
 Phone: 07 5657 8800
 Fax: 07 5657 8800
 Email: admin@sheels.com.au

SHOWERS ENGINEERING PTY LTD
 ACN 075 007 144
 ME Aust (Registered NFER Structural & Civil)
 OLD RPTD No. 1047 VIC. ECN 1155 THE GOARDIAN NT 4992RSD
 Practising Professional Structural & Civil Engineer
 Signature: [Redacted] R.J. Showers Date: 21/01/16



FIXING SCREWS 6 of 14.20 x 22
FLY BRACING



**WHITEHALL BUILDING
CERTIFIERS**
 COMPLYING DEVELOPMENT
 CERTIFICATE NO. 716
 PCA BPB 0439

Purchaser Name: Onof Sokic	
Site Address: 433 Kalubrah Rd PAMBONG NSW Australia 2850	
Drawing # MS16009 - B	Print Date: 21/01/16

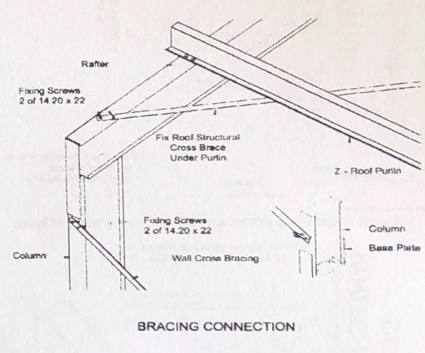
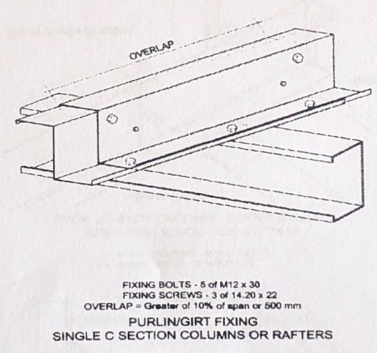
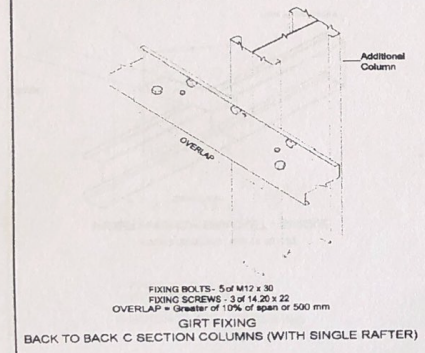
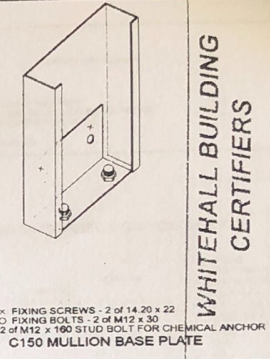
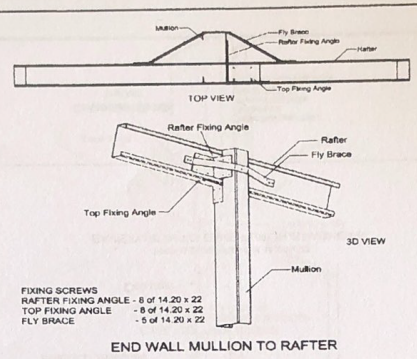
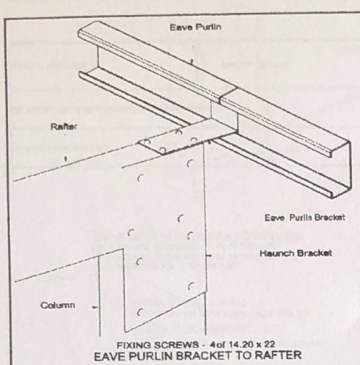
Connection Details
Page 5 of 5

SHOWNERS ENGINEERING PTY LTD
 ACN 076 507 144
 ME Awt. (Registered NPER Structural & Civil) 321787
 QLD: RPESD No. 1547, VIC: EC24182, TAS: CC240004, NT: 469266S,
 Practising Professional Structural & Civil Engineer

Seller: Wide Span Sheds
 Sheels Pty Ltd
 Phone: 07 5977 8888
 Fax: 07 5977 8889
 Email: admin@sheds.com.au

Signature:  R.J. Showers Date: 21/01/16

DEVELOPMENT
 716
 0439



WHITEHALL BUILDING
CERTIFIERS

COMPLYING DEVELOPMENT
CERTIFICATE NO. 716

PCA BPB 0439

Purchaser Name: Geoff Spink

Site Address: 433 Kaludrah Rd PAMBONG NSW Australia 2850

Drawing # MS180089 - 8

Print Date 21/01/16

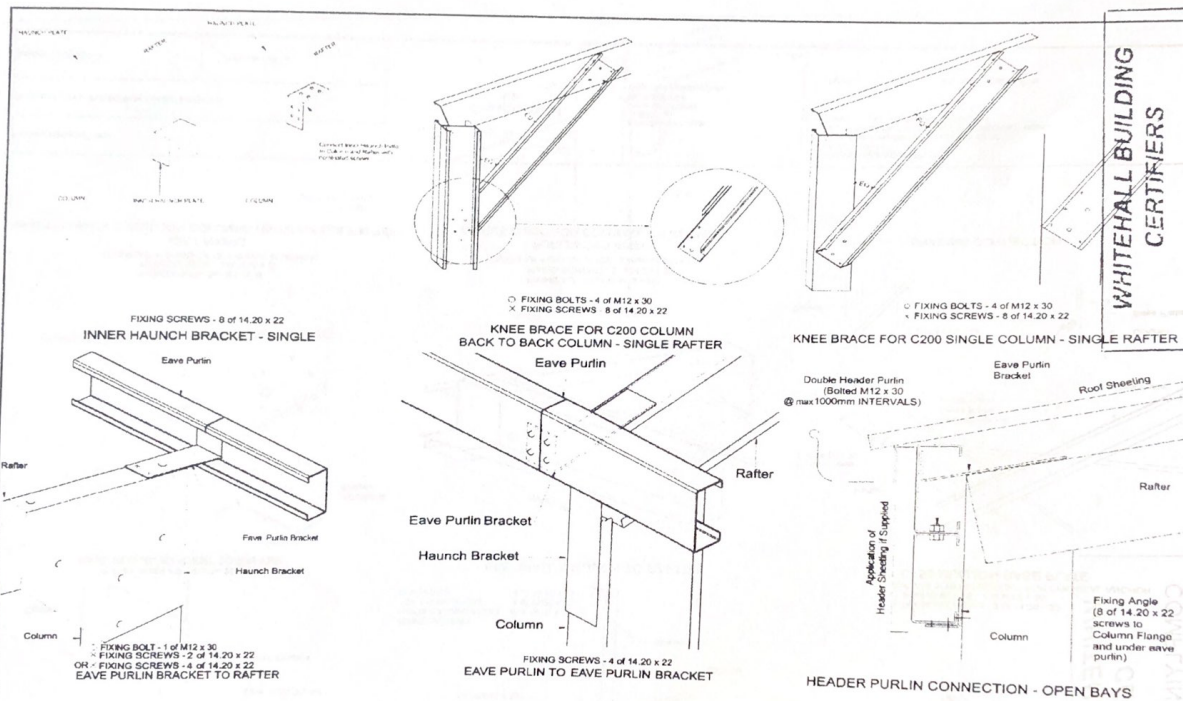
Connection Details

Page 4 of 5

Seller: White Open Goods
Steel Pty Ltd
Phone: 07 5987 8800
Fax: 07 5987 8899
Email: admin@shacks.com.au

SHOWERS ENGINEERING PTY LTD
ACN: 075 007 144
ME Aust (Registered NER Structural & Civil) SC11787
CLD: RP010 No. 1847, VIC: TECHIES THE CORPORATION 469265E
Practising Professional Structural & Civil Engineer

Signature: [Redacted] R.J. Showers Date: 21/01/16



WHITEHALL BUILDING
CERTIFIERS

COMPLYING DEVELOPMENT
CERTIFICATE NO. 716

PGA-BPB-0439

Purchaser Name: Ocof Spks

Site Address: 433 Galudrah Rd PARRAMONG NSW Australia 2650

Drawing # VAS210009 - 8

Print Date: 21/01/16

Connection Details

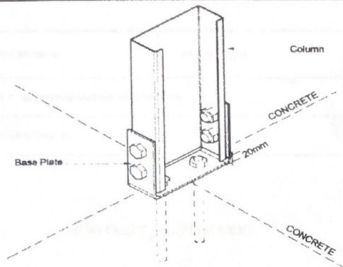
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Seller: White Span Sheets
Steel Pty Ltd
Phone: 07 5657 8008
Fax: 07 5657 8000
Email: sales@steel.com.au

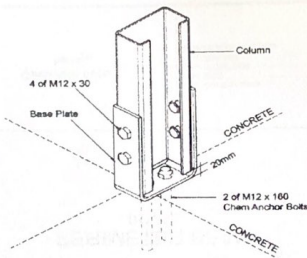
SHOWERS ENGINEERING PTY LTD
ACN: 079 07 144
ME, Aust. (Page 1 and NFER Structural & Civil) 321787
Q.L.D. (REG. NO. 1547) VIC. (ECN 182, 176) CD 480001 NT 46928ES
Practising Professional Structural & Civil Engineer

Signatures: [Redacted] R.J. Showers Date: 21/01/16

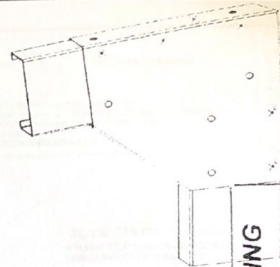
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 COMPLYING DEVELOPMENT
 CERTIFICATE NO. 716
 PGA-BPB-0439



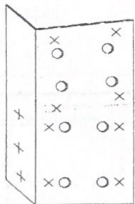
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2 of M12 x 180 CHEM ANCHOR BOLTS
C200 COLUMN FIXING



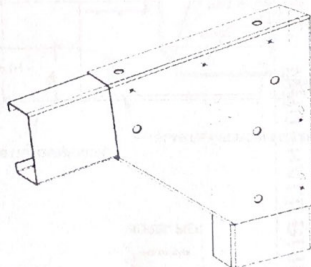
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2 of M12 x 180 CHEM ANCHOR BOLTS
C150 COLUMN FIXING



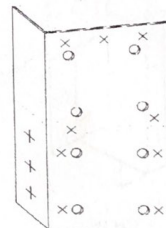
FIXING BOLTS - 8 of M12 x 30
FIXING SCREWS - 6 of 14.20 x 22
HAUNCH PLATE - C200, 6 deg



FIXING BOLTS - 8 of M12 x 30
FIXING SCREWS - 11 of 14.20 x 22
HAUNCH PLATE - C150, 6 deg



FIXING BOLTS - 8 of M12 x 30
FIXING SCREWS - 5 of 14.20 x 22
REVERSE HAUNCH PLATE - C150, 6 deg



FIXING BOLTS - 8 of M12 x 30
FIXING SCREWS - 12 of 14.20 x 22
HAUNCH PLATE - C200, 6deg

WHITEHALL BUILDING
CERTIFIERS

COMPLYING DEVELOPMENT
CERTIFICATE NO. 7/6

PCA BPB 0439

Purchaser Name: Geoff Spink

Site Address: 433 Kukulbeh Rd PAMBONG NSW Australia 2650

Drawing # WSS160226 - 8

Print Date: 2/01/16

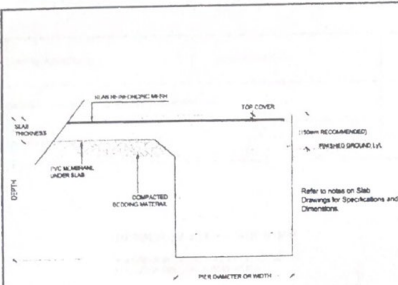
Connection Details
Page 2 of 5

Subs: White Spink Sheds
Sheds Pty Ltd
Phone: 07 5677 8953
Fax: 07 5677 8950
Email: ash@wss.com.au

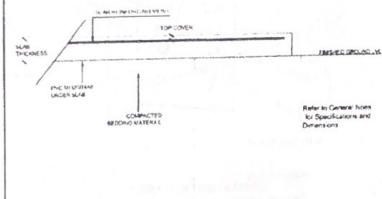
SHOWERS ENGINEERING PTY LTD
ACN 075507344
ME Auth. (Registered NPER Structural & Civil) 321787
OLD. REG. NO. 1547. MC. REG. NO. 128. CO-6000/N.T. 492265.
Practising Professional Structural & Civil Engineer

Signature

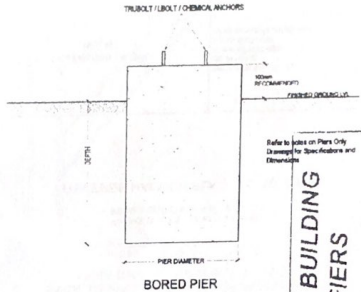
R.J. Showers Date: 2/01/16



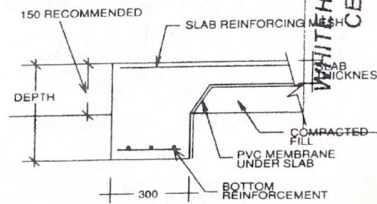
SLAB AND PIER DETAIL



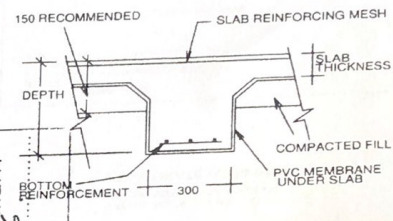
SLAB DETAIL BETWEEN PIERS



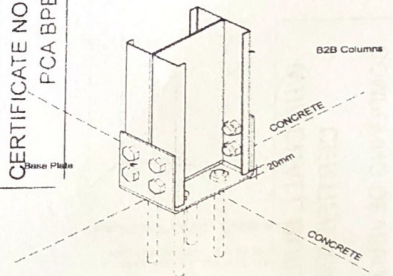
BORED PIER



PERIMETER BEAM (H1, H2)



INTERNAL BEAM (H1, H2)



FIXING BOLTS - 8 of M12 x 30
4 of M12 x 150 CHEM ANCHOR BOLTS
2C200 COLUMN FIXING

WHITFIELD BUILDING CERTIFIERS
 COMPLYING DEVELOPMENT CERTIFICATE NO 7/16
 PCA BPB 0439

Purchaser Name: Geoff Spice	
Site Address: 433 Kalbarrah Rd PAMBONG NSW Australia 2650	
Drawing # VES10069 - 8	Print Date: 21/01/16

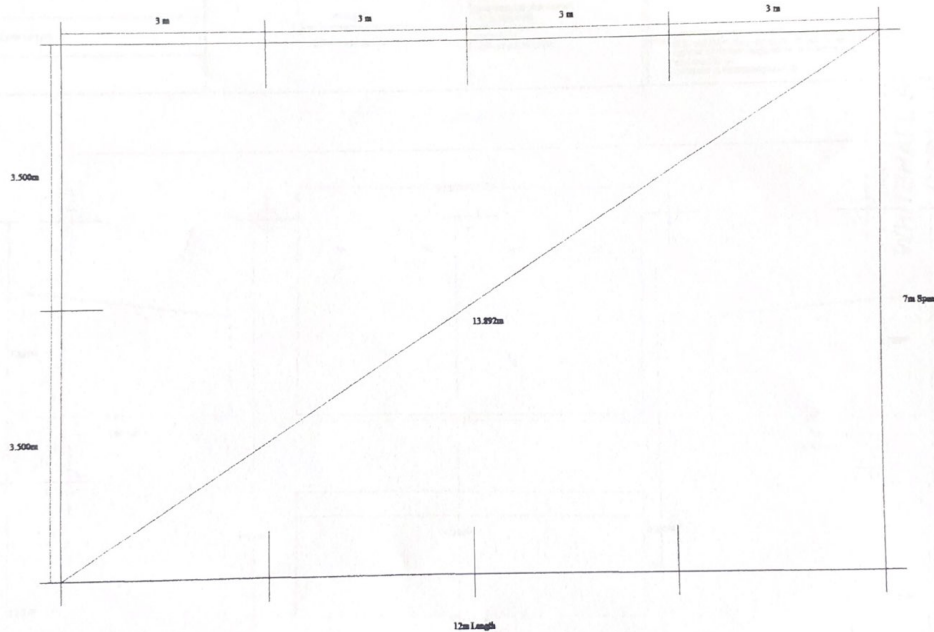
Connection Details
Page 1 of 5

Seller: Vale Span Sheds
Sheds Pty Ltd
Phone: 07 5507 8808
Fax: 07 5627 8006
Email: admin@sheds.com.au

SHOWERS ENGINEERING PTY LTD
ACN 0751007144
ME ASSE (Registered NFER Structural & Civil) 321787
C/O 179/200 Mt. Sgarbi Rd. GLENKIRK NSW 2162
Practising Professional Structural & Civil Engineer

Signature: [Redacted] R.L. Showers Date: 21/01/16

DEVELOPMENT CERTIFICATE NO 7/16
 PCA BPB 0439



WHITEHALL BUILDING
CERTIFIERS
COMPLYING DEVELOPMENT
CERTIFICATE NO. 716
PCA BPB 0439

Purchase Name: Ceolif Solo

Site Address: 433 Kukulbeh Rd PINEBROOK NSW Australia 2850

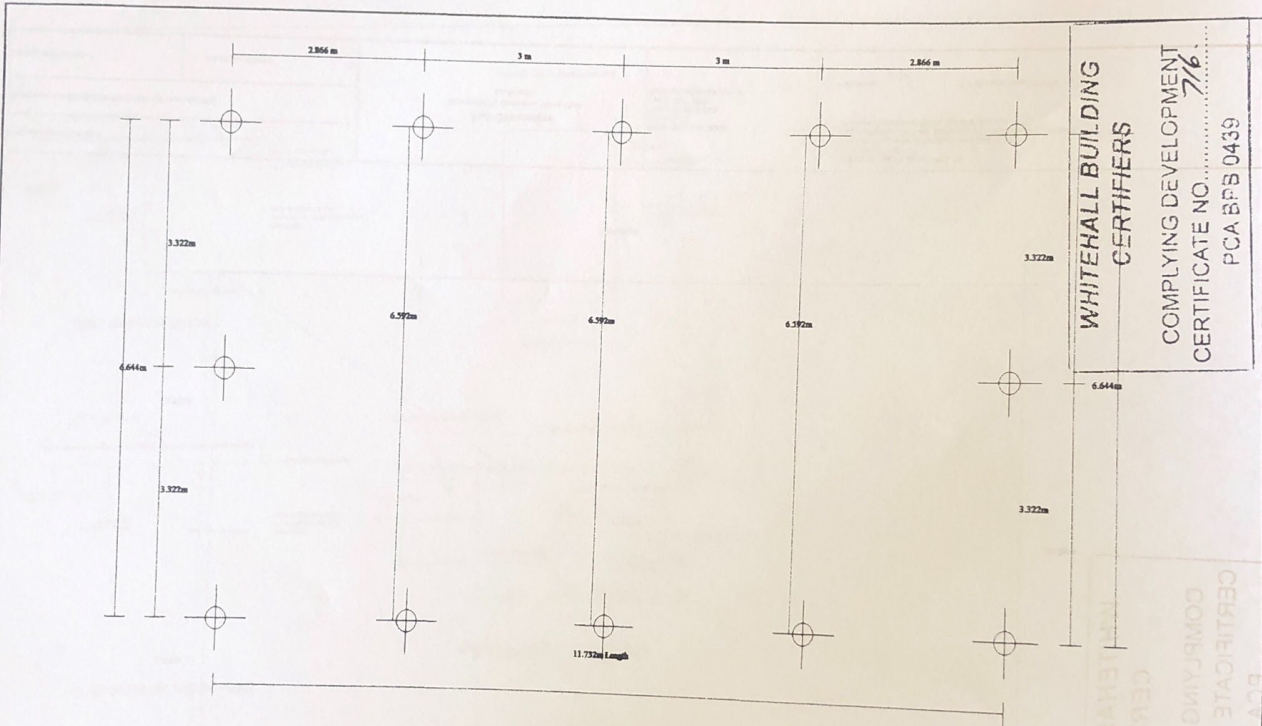
Drawing #: WSS190209-7

Slab Dimensions
Also refer to Concrete Plans Plan
Not to Scale

Seller: White Spin Sheds
Shedding Pty Ltd
Phone: 07 5557 8958
Fax: 07 5557 8959
Email: admin@sheds.com.au

SHOWERS ENGINEERING PTY LTD
ACN: 075 007 144
MR Asst. (Registered NPSR Structural & Civil) S11707
C.L.D. (REGISTERED) S14714; M.E. (REGISTERED) S19; CQ-46004 (NT) 4602825;
Practising Professional Structural & Civil Engineer

Signature: [Redacted] R.J. Showers Date: 21/01/16



**WHITEHALL BUILDING
CERTIFIERS**

COMPLYING DEVELOPMENT
CERTIFICATE NO. **716**

PCA BFB 0439

Purchaser Name: Geoff Spice

Site Address: 433 Kalubahi Rd PARRAMONG NSW Australia 2050


Drawing # VAS180089 - 6

Print Date: 21/01/18

Concrete Piers
(PER MEASUREMENT ONLY)
Not to Scale

Seller: Vicks Span Sheds
Sheds Pty Ltd
Phone: 07 5607 8088
Fax: 07 5607 8086
Email: admin@vicks.com.au

SHOWERS ENGINEERING PTY LTD
ACN: 075 007 144
ME: Neil (Registered MEMBER Structural & CIVIL) 321797
CIVIL / PREGO No: 1547; MC: EC04185; TMS: 10 CAROON / N.T. 4802828;
Practising Professional Structural & Civil Engineer

Signature: 

R.J. Showers Date: 21/01/18

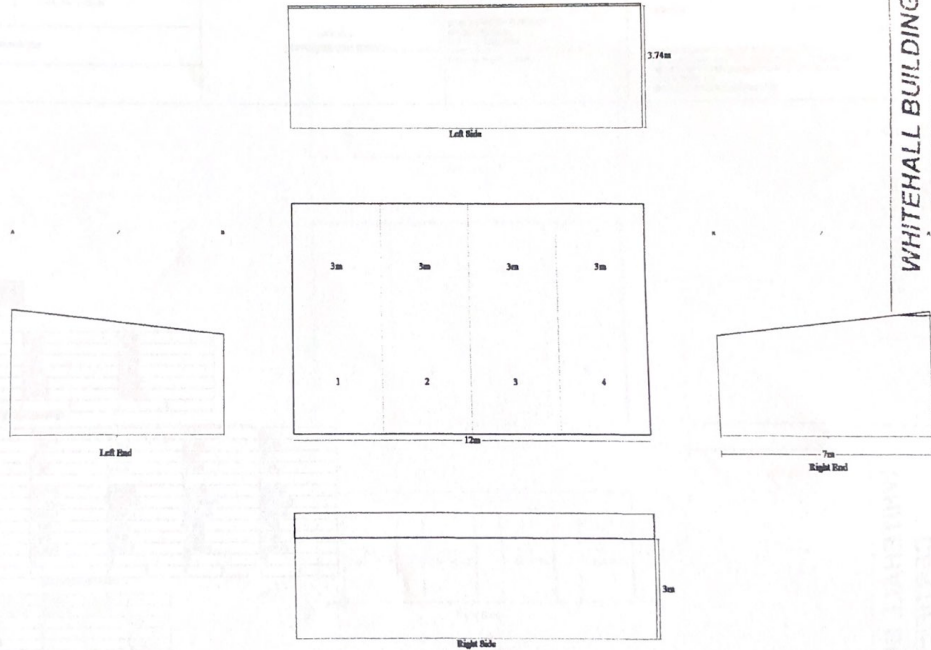
716
0439

WHITEHALL BUILDING

CERTIFIERS

COMPLYING DEVELOPMENT
CERTIFICATE NO. **7%**

PCA BPB 0439



Purchaser Name: Garff Sika
Site Address: 433 Kalutbah Rd PAMECHANG NSW Australia 2150
Drawing # VAS18009 - 5
Print Date: 21/01/16

Bracing

Seller: White Swan Checks
Shed: Pty Ltd
Phone: 07 5657 8800
Fax: 07 5657 8892
Email: ash@whitechecks.com.au

SHOWERS ENGINEERING PTY LTD
ACN 078 007 144
ME Aust (Registered NRE Structural & Civil) 221787
QLD: RPE2 No. 1547, VIC: EC24162, TAS: CC4800K, NT: 46228ES;
Practising Professional Structural & Civil Engineer

Signature:

R.J. Showers Date: 21/01/16

MATERIAL SPECIFICATIONS

All dimensions are in meters. Pier sizes noted are suitable for Class A, S or M sites. Refer to General Notes.

Building Dimensions						
Categories	Span	Length	Pitch	Height	Grade	Profile
Main Building	7	12	0	3	A-B	1-5

Grid / Portal Number	Portal Frame Elements					
	1	2	3	4	5	
Columns	A	C19012	C20015	C20015	C20015	C19012
Pier	Diameter	0.3	0.45	0.45	0.45	0.3
	Depth	0.75	0.8	0.8	0.8	0.75
	B	C19012	C20015	C20015	C20015	C19012
Pier	Diameter	0.3	0.45	0.45	0.45	0.3
	Depth	0.75	0.8	0.8	0.8	0.75
Roofes	A - B	C19012	C20015	C20015	C20015	C19012
End Wall Mullions	Z	C19019	-	-	-	C19019
Pier	Diameter	0.3	-	-	-	0.3
	Depth	0.75	-	-	-	0.75
Knee Brace	A - B	-	C10012	C10012	C10012	-
	B - A	-	C10012	C10012	C10012	-

Grid / Bay Number	Bay Section Elements					
	0	1	2	3	3	4
Bay Width	A - B	210010	210010	210010	210010	210010
Floor Purlins	A - B	1,408	1,408	1,408	1,408	1,408
Floor Purlin Spacing (End)	A - B	1,408	1,408	1,408	1,408	1,408
Floor Purlin Spacing (Internal)	A - B	1,408	1,408	1,408	1,408	1,408
Eave Girt	A	210010	210010	210010	210010	210010
Eave Purlin	B	C210010	C210010	C210010	C210010	C210010
Side Girt	A	210010	210010	210010	210010	210010
	B	-	-	-	-	-
Side Girt Spacing (End)	A	1,189	1,189	1,189	1,189	1,189
	B	0,11	0,11	0,11	0,11	0,11
Side Girt Spacing (Internal)	A	1,189	1,189	1,189	1,189	1,189
	B	0,11	0,11	0,11	0,11	0,11

Grid / Portal Number	End Bay Section Elements	
	1	5
End Girt	A - Z	210010
	Z - B	210010
End Girt Spacing (End)	A - Z	1,385
	Z - B	1,385
End Girt Spacing (Internal)	A - Z	1,385
	Z - B	1,385

Roofing Elements		
Categories	Color	Product
Roof	Zincalume	Thimble 0.42 Bldf (AATFC)
Wall	Zincalume	Thimble 0.42 Bldf (AATFC)

Purchaser Name: Geoff Spica

Site Address: 433 Kullabshi Rd PMB3081 NSW Australia 2850

Drawing # MS210010 - 4

Print Date: 21/01/16

Specification Sheet

Page 1 of 1

Seller: Wide Span Sheds
Sheds Pty Ltd
Phone: 07 5657 8000
Fax: 07 5657 8000
Email: admin@widespansheds.com.au

SHOWERS ENGINEERING PTY LTD
ACN 075 007 144
18E Avon (Registered NPFR Structural & Civil Engineer)
OLD - NPFR No. 1547, MC, EC24162, TAS - CCAR0004, N.T. - 48500025
Practising Professional Structural & Civil Engineer

Signature: 

R.J. Showers Date: 21/01/16

**WHITEHALL BUILDING
CERTIFIERS**

COMPLYING DEVELOPMENT
CERTIFICATE NO. 7/6

PCA BPS 0439

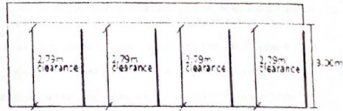
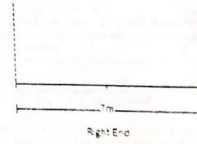
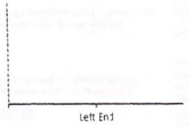
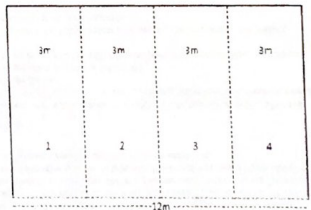
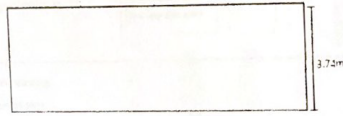
WHITEHALL BUILDING

CERTIFIERS

COMPLYING DEVELOPMENT

CERTIFICATE NO. 716

PCA BPB 0439




Purchase Name: Geoff Eskin	
Site Address: 433 Kauldsh Rd PAMBONG NSW Australia 2650	
Drawing # WS10009-3	Print Date: 21/01/16

Layout

Seller: Wide Span Sheds
 Shedd Pty Ltd
 Phone: 07 5667 8008
 Fax: 07 5667 8000
 Email: admin@wss.com.au

SHOWERS ENGINEERING PTY LTD
 ACN: 079 007 144
 ME (Asst. Registered) NFER Structural & Civil 321787
 QLD: RP62 No. 1547, MC: EC24182, TAG: GC4600H, N.T. 46592ES
 Practising Professional Structural & Civil Engineer

Signature:  R.L. Showers Date: 21/01/16

GENERAL NOTES

These documents show the general arrangement of the building and include some items not supplied (refer to the quotation for nomination of all items to be provided). All items not nominated therein shall be supplied and installed by others.

DESIGN CRITERIA

These building plans have been prepared to comply with the standards nominated in the engineer's letter and tensed details in the attached Design Information Sheet.

The plans provided here are the latest at the time of print. Earlier plans provided may have become outdated due to engineering changes and should not be used. The plans and drawings are extensive and give all the information needed for a competent person to erect the building. The building is not designed to stand up by itself when it is partially complete. Consequently, construction bracing is critical during erection.

The owner has been requested to check off the BOM after the building delivery. You should check that you are able to locate all materials nominated in the BOM. You should also confirm that the length and size (including thickness), nominated in the BOM is what has been provided. Any missing items are the responsibility of the client once correct delivery has been confirmed as per Terms and Conditions of Sale.

ADDITIONAL DOCUMENTATION TO BE SUPPLIED BY PURCHASER/OWNER

The Purchaser/Owner is responsible for:

- * Provision of Soils Report for the site and in the building area on which the building is to be erected
- * Site/Drainage Plans
- * Any other plans not covered by these engineering plans requested by the local Council or the authority

BUILDING CONSTRUCTION REQUIREMENTS

The Purchaser/Owner is to be ensured that all building construction is carried out in accordance with the Plans, the Construction Manual and the Bill of Materials (BOM).

SLAB AND PIER DETAILS - GENERAL

- * Where columns or end wall Mullions have been removed, piers are not required.
- * End wall mullion spacing may move due to location of openings or doors. Check layout plan, and relocate piers as required.

Concrete Slab

- * Design covers sites with a minimum of 100kPa safe bearing capacity and of soil classifications of A, S, M, H1 or H2 for a class 10 building. Other than this, owner to provide slab and pier design details.
- * Designs are in accordance with AS 3600:2009
- * All concrete to be in accordance with AS 3600:2009. Minimum 25 Mpa, with 80mm slump.
- * Concrete should be cured for 7 days before commencing construction of the building.
- * Refer to connection details.
- * Saw construction joints to be 25mm deep x 5mm wide. Saw cuttings shall take place no later than 24 hours after pouring. Saw construction joints to be placed at a maximum spacing of 6.3m (in both the length and the span). Care should be taken to avoid construction cuts intersecting where any fixing to the slab is to be made.

For Class A, S or M Sites

- * Slab thickness to be a minimum of 100mm with SL 72 mesh and 40mm top cover.

* The minimum size of Piers under the columns and End Wall Mullions are nominated below. When the slab and piers are poured as one pour, the depth of the pier is to the top of the slab.

C15012, C15019 - 300mm dia x 750mm deep, centered to the C Section

C20015 - 450mm dia x 800mm deep, centered to the C Section

C20015 - 450mm dia x 1200mm deep, centered to the C Section

* Pier Reinforcement for any piers over 1100mm, deformed bar to within 100mm of base and minimum 75mm top cover. Minimum side cover 75mm, maximum 100mm. Rod to be caged horizontally at least twice and at a maximum of 300mm spacing. Tie with a minimum of 6mm diameter cage tie. Where pier diameter is less than 450mm diameter, use 4 N12. For diameters equal to and over 450mm, use 4 N16.

For Class H1 or H2 Sites

- * Slab thickness to be a minimum of 125mm with SL 82 mesh and 40mm top cover.

* Edge beam 400mm deep x 300mm wide with Y12 3 bar Trench Mesh to the perimeter of the building.

* Thickening beams 400mm deep by 300mm wide with Y12 3 bar Trench Mesh at a max spacing of 6.2m.

* The minimum size of Piers under the columns and End Wall Mullions are nominated below. When the slab and piers are poured as one pour, the depth of the pier is to the top of the slab.

C15012, C15019 - 300mm dia x 1000mm deep, centered to the C Section

C20015 - 450mm dia x 1000mm deep, centered to the C Section

C20015 - 450mm dia x 1500mm deep, centered to the C Section

* Pier Reinforcement for any piers over 1100mm, deformed bar to within 100mm of base and minimum 75mm top cover. Minimum side cover 75mm, maximum 100mm. Rod to be caged horizontally at least twice and at a maximum of 300mm spacing. Tie with a minimum of 6mm diameter cage tie. Where pier diameter is less than 450mm diameter, use 4 N12. For diameters equal to and over 450mm, use 4 N16.

Concrete Piers Only

* Pier design covers sites with a minimum of 100kPa safe bearing capacity and of soil classification A, S, M, H1 or H2 for a class 10 building. Other than this, owner to provide slab and pier design details.

* Designs are in accordance with AS 3600:2009

* All concrete to be in accordance with AS 3600:2009. Minimum 25 Mpa, with 80mm slump.

* Piers should be cured for 7 days before commencing construction of the building.

* All dimensions are from center of columns.

* Refer to connection details.

* Saw construction joints to be 25mm deep x 5mm wide. Saw cuttings shall take place no later than 24 hours after pouring. Saw construction joints to be placed at a maximum spacing of 6.3m (in both the length and the span). Care should be taken to avoid construction cuts intersecting where any fixing to the slab is to be made.

For Class A, S or M Sites

Piers to be a minimum of

C15012, C15019 - 300mm dia x 750mm deep, centered to the C Section
C20015 - 450mm dia x 800mm deep, centered to the C Section
C20015 - 450mm dia x 1200mm deep, centered to the C Section
Piers 1000mm and under in depth do not require any steel reinforcement. Piers over 1000mm in depth to have a minimum of 4 N16 deformed bar to within 100mm of base and minimum 75mm top cover. Minimum side cover 75mm, maximum 100mm. Rod to be caged horizontally at least twice and at a maximum of 300mm spacing. Tie with a minimum of 6mm diameter cage tie.

For Class H1 or H2 Sites

Piers to be a minimum of
C15012, C15019 - 300mm dia x 1000mm deep, centered to the C Section
C20015 - 450mm dia x 1000mm deep, centered to the C Section
C20015 - 450mm dia x 1500mm deep, centered to the C Section
Piers 1000mm and under in depth do not require any steel reinforcement. Piers over 1000mm in depth to have a minimum of 4 N16 deformed bar to within 100mm of base and minimum 75mm top cover. Minimum side cover 75mm, maximum 100mm. Rod to be caged horizontally at least twice and at a maximum of 300mm spacing. Tie with a minimum of 6mm diameter cage tie.

BRACING NOTES

* Refer to Connection Details.

* All bracing strip to be 32mm x 1.6mm G450

* Cross bracing is to be fixed taught and secured with 2 x 14.20 x 22 frame screws at each end.

* Fly bracing to be fixed to the purlins/rafters at all mid portal rafters, columns and end wall mullions. The spacing between fly braces is determined by column/rafter sizes as follows:

C150 - maximum 1800mm spacing

C200 - maximum 2200mm spacing

C250 - maximum 2800mm spacing

C350 - maximum 3400mm spacing

Initial measurement is from the haunch of the column/rafter, and from the rafter for any end wall mullions.

* Open bays to have fly bracing fitted to every available girt supporting the header sheets.
* All bracing strip ends to be located as close as practical to structural members (columns, rafters, mullions) centerline.

BOLTS

* Unless otherwise nominated, all bolts are grade 4.6 and zinc plated

* All tensioned bolts shall be tensioned using the part turn method (refer to AS4100). For the erector, full details are in the construction manual.

OTHER MATERIALS NOTES

- * All sheeting and flashing screws are class 3, all framing screws are class 3.
- * All purlin material has 2350 zinc coating with minimum strength of 450MPa.

Purchaser Name: Geoff Spice

Site Address: 433 Kuluahāhi Rd PAKIANG NSW Australia 2850

Drawing # HES18009-2

Print Date: 21/01/18

General Notes

Page 1 of 1

Seller: White Swan Works
Email: PLS@SWW.COM.AU
Phone: 07 5567 8088
Fax: 07 5567 8089
Email: admin@sws.com.au

SHOWERS ENGINEERING PTY LTD
ACN 076027 144
ME AUST (Registered NFER Structural & Civil) 321787
C.L.D. (Professional) 1547, A.E. (ECM) 1512, J.H.E. (CC) 40008, N.T. 4602655,
Practising Professional Structural & Civil Engineer

Signature:

R.J. Showers Date: 21/01/18

WHITE SWAN BUILDING CERTIFIERS

COMPLYING DEVELOPMENT CERTIFICATE NO. 7/16

PCA BPB 0439

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APPENDIX B

Site Photographs



Figure 1 – Top hat battens installed to support ceiling lining (client supplied)

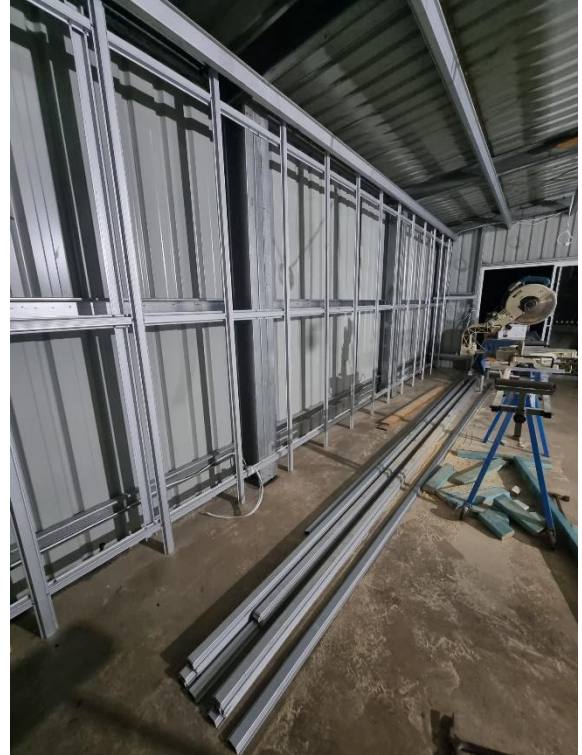


Figure 2 – Top hat frame installed to support internal wall lining (client supplied)



Figure 3 – Exposed timber framing of partition walls (client supplied)

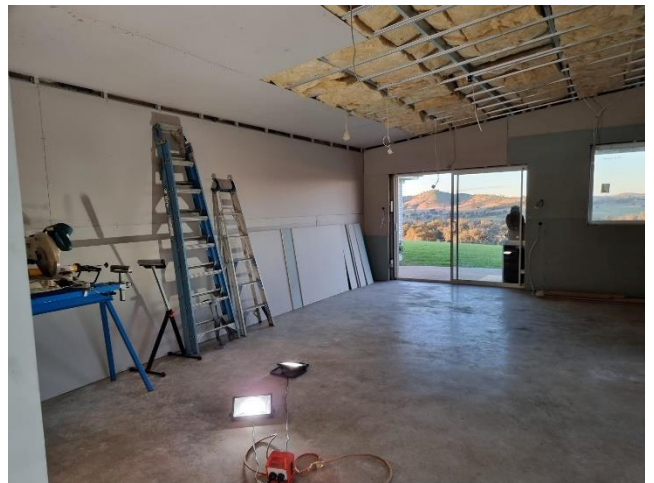


Figure 4 – Wall and ceiling lining installed for fit-out (client supplied)



Figure 5 – South-East face of converted shed, open and enclosed section of attached verandah



Figure 6 – North-East side of converted shed



Figure 7 – Verandah attached on South-West side of converted shed

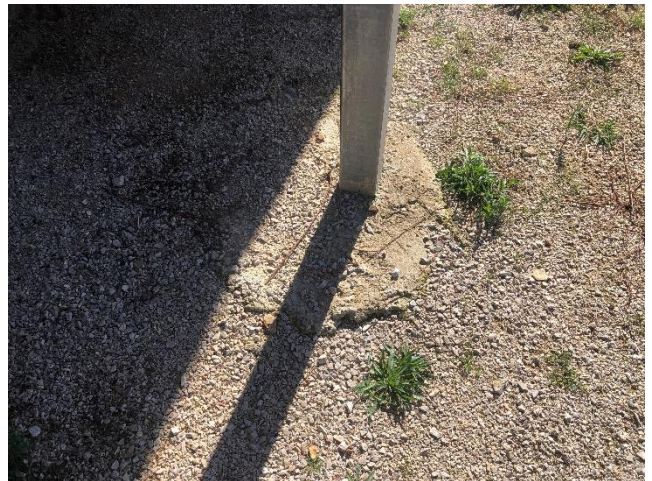


Figure 8 – 100SHS verandah Post embedded into concrete pier



Figure 9 – Framing of attached verandah roof on North-East side of converted shed



Figure 10 – Plastic membrane visible under slab edge