

Preliminary Concept of Structural Steel Frame Structure for Class 1/ 10a in Cyclonic Areas

Henri's Engineering, hereby certify that the following elements of the works have been designed by a representative of this office. This certification is only valid for works as identified below as Preliminary Concept and shall not be used for a construction without further design that shall comply with local legislation and standards.

Basis of Design:

- An External Steel frame to support an external wall system that is capable of withstanding effects of cyclonic weather and airborne objects that could be subjected to in accordance with the standards in the area (the walling system is not a part of this structural investigation)
- External wall and roof sheeting to be designed by others; no protruding vents to be installed
- Roof truss system to be designed by others
- The design is for structures of class 1 and 10a, that fall within specification of AS4055:2021 Wind loads for housing
- The footing design is based on basic site classification up to class "M" with assumption of no instability or any factors that could reduce the bearing capacity of the soil with parameters of very stiff clay of minimum 100kPa bearing capacity and undrained capacity C_u of minimum 50kPa. The footing design is preliminary only, the site classification shall be obtained for each individual structure
- The design is based on use of materials approved by Australian authorities and regulations; without use of combustible cladding or other materials
- The design shall not apply to building larger than 16.7m long and 8.7m wide;
- The roof shall be HIF roof with 25degree slope with no eaves eliminating increase of turbulence
- Wall height up to 2.5m maximum
- All windows and doors to have a solid shutters that are to be fully closed during the cyclonic event
- The design is based on compliance with Australian standards
- The Design is based on Wind Category D (C4) up to Ultimate Limit State 86m/s (309.6km/h) and Serviceability Limit State of 55m/s, as per AS 4055:2021 Table 2.2; Limitation is to the wind speed over the identified speed and marked in table as "N/A"

Wind region	TC	Topographic classification											
		T0	T0	T0	T1	T1	T1	T2	T2	T2	T3	T3	T4
		FS	PS	NS	FS	PS	NS	FS	PS	NS	PS	NS	NS
D	3	C2 (0-35) C1 (35-50)	C3 (0-20) C2 (20-50)	C3 (0-30) C2 (30-50)	C3 (0-20) C2 (20-50)	C3 (0-40) C2 (40-50)	C4 (0-10) C3 (10-50)	C3 (0-35) C2 (35-50)	C4 (0-20) C3 (20-50)	C4 (0-30) C3 (30-50)	N/A (0-5) C4 (5-50)	N/A (0-15) C4 (15-50)	N/A (0-35) C4 (35-50)
	2.5	C3 (0-10) C2 (10-50)	C3 (0-35) C2 (35-50)	C4 (0-5) C3 (5-50)	C3 (0-30) C2 (30-50)	C4 (0-15) C3 (15-50)	C4 (0-25) C3 (25-50)	C4 (0-30) C3 (30-50)	C4 (0-30) C3 (30-50)	N/A (0-10) C4 (10-50)	N/A (0-20) C4 (20-50)	N/A (0-30) C4 (30-50)	N/A (0-45) C4 (45-50)
	2	C3 (0-25) C2 (25-50)	C4 (0-5) C3 (5-50)	C4 (0-15) C3 (15-50)	C4 (0-5) C3 (5-50)	C4 (0-25) C3 (25-50)	N/A (0-5) C4 (5-50)	C4 (0-20) C3 (20-50)	N/A (0-15) C4 (15-50)	N/A (0-25) C4 (25-50)	N/A (0-30) C4 (30-50)	N/A (0-40) C4 (40-50)	N/A (0-50)
	1	C4 (0-5) C3 (5-50)	C4 (0-25) C3 (25-50)	N/A (0-5) C4 (5-50)	C4 (0-25) C3 (25-50)	N/A (0-15) C4 (15-50)	N/A (0-25) C4 (25-50)	N/A (0-10) C4 (10-50)	N/A (0-30) C4 (30-50)	N/A (0-40) C4 (40-50)	N/A (0-50)	N/A (0-50)	N/A (0-50)

Key

FS = Full shielding

PS = Partial shielding

NS = No shielding

TC = Terrain Category

N/A = Not applicable, that is, beyond the scope of this Standard (see AS/NZS 1170.2)

NOTE For wind Regions C and D, the numbers in brackets indicate the distance in km from the outer boundary (smoothed coastline or higher wind region) that the wind classification applies to. For example, C3 (0 to 10) C2 (10 to 50) means that houses within 0 to 10 km of the outer boundary (smoothed coastline or higher wind region) have a C3 wind classification and houses between 10 and 50 km from the outer boundary have a C2 wind classification.

- m) As per AS4055 and from AS/NZS 1176.2: 2021 Figure 2.2 Boundaries of Regions A, B1, B2, C and D (marked with capital letters; Coastal region boundaries are smooth lines set in from a smoothed coastline by 50km, 100km, 150km and 200km; Islands within 50km of the coast are designed in the same region as the adjacent coast.



- n) Terrain category 'TC' ranging from TC1 to TC3 is identified in AS 4055:2021 par. 2.3 as:
- Terrain Category 1 (TC1)** — Very exposed open terrain with very few or no obstructions, and all water surfaces, e.g. flat, treeless, poorly grassed plains; open ocean, rivers, canals, bays and lakes.
 - Terrain Category 2 (TC2)** — Open terrain including grassland with well-scattered obstructions having heights generally from 1.5 m to 5 m with no more than two obstructions per hectare, e.g. farmland and cleared subdivisions with isolated trees or clumps of trees, equivalent to at least house size, and uncut grass.
 - Terrain Category 2.5 (TC2.5)** — Terrain with a few trees or isolated obstructions. This category is intermediate between TC2 and TC3 and represents the terrain in developing outer urban areas with scattered houses or clumps of trees equivalent to house size, or large acreage developments with fewer than 10 house-size obstructions per hectare.
 - Terrain Category 3 (TC3)** — Terrain with numerous closely spaced obstructions having heights generally from 3 m to 10 m. The minimum density of obstructions shall be at least the equivalent of 10 house-size obstructions per

hectare, e.g. suburban housing, light industrial estates or clumps of trees greater than house size.

This information is provided only for informative purposes and not to be used for a substitute of a professional assessment. Further information shall be obtained from AS 4055:2021 or AS 1170.2-2021.

- o) Topographic class for housing site shall be identified by notation T0, T1, T2, T3, T4 and T5 and to be determined from Table 2.4 (AS4055:2021) – Topographic classification for hills and escarpments:

Table 2.4 — Topographic classification for hills, ridges or escarpments

Maximum slope (ϕ_2)	Site location, see Figures 2.4(A) and 2.4(B)				
	Lower-third zone	Mid-third zone	Top-third zone		
			[E] [Text deleted.] [E]		
	[E] [Text deleted.] [E]	[E] [Text deleted.] [E]	$H \leq 10$ m	$10 \text{ m} < H \leq 30$ m	$H > 30$ m
$< 1:20$ ($< 2.9^\circ$)	T0	T0	T0	T0	T0
$\geq 1:20$ ($\geq 2.9^\circ$) $< 1:10$ ($< 5.7^\circ$)	T0	T0	T1	T1	T1
$\geq 1:10$ ($\geq 5.7^\circ$) $< 1:7.5$ ($< 7.6^\circ$)	T0	T1	T1	T2	T2
$\geq 1:7.5$ ($\geq 7.6^\circ$) $< 1:5$ ($< 11.3^\circ$)	T0	T1	T2	T2	T3
$\geq 1:5$ ($\geq 11.3^\circ$) $< 1:3$ ($< 18.4^\circ$)	T0	T2	T2	T3	T4
$\geq 1:3$ ($\geq 18.4^\circ$)	T0	T2	T3	T4	T5

- p) The above assessment leads to identifying an Ultimate pressure on the structure assumed as per table 3.5 (A) of AS4055:2021

Table 3.5(A) — Ultimate strength pressures (kPa) for wind classification from the net pressure coefficients given in Clause 3.2

Walls				Roofs				
Wind classification	Any position	Away from corners, see Note 2	Within 1 200 mm of corners, see Note 2	Wind classification	Any position	General away from edges, see Note 1	Within 1 200 mm of edges, see Note 1	At corners within 1 200 mm of both edges, see Note 1
Pressure zone	G, SC Figure 3.1(B)	G Figure 3.1(B)	SC Figure 3.1(B)	Pressure zone	G, RE, RC Figure 3.1(A)	G Figure 3.1(A)	RE Figure 3.1(A)	RC Figure 3.1(A)
$K_c C_{ps}$	+0.9	-0.77	-1.35	$K_c C_{ps}$	+0.63	-0.99	-1.8	-2.61
N1w	+0.62	-0.53	-0.94	N1r	-0.44	-0.69	-1.25	-1.81
N2w	+0.86	-0.74	-1.30	N2r	+0.60	-0.95	-1.73	-2.51
N3w	+1.35	-1.16	-2.03	N3r	+0.95	-1.49	-2.70	-3.92
N4w	+2.01	-1.72	-3.01	N4r	+1.41	-2.21	-4.02	-5.83
N5w	+2.96	-2.53	-4.44	N5r	+2.07	-3.25	-5.91	-8.58
N6w	+3.99	-3.42	-5.99	N6r	+2.80	-4.39	-7.99	-11.58
$K_c C_{ps}$	+1.2	-1.2	-1.8	$K_c C_{ps}$	+0.95	-1.44	-2.25	-3.06
C1w	+1.90	-1.80	-2.7	C1r	+1.43	-2.16	-3.38	-4.59
C2w	+2.68	-2.68	-4.02	C2r	+2.12	-3.21	-5.02	-6.83
C3w	+3.94	-3.94	-5.91	C3r	+3.12	-4.73	-7.39	-10.05
C4w	+5.33	-5.33	-7.99	C4r	+4.22	-6.39	-9.98	-13.58

NOTE 1 For roofs, net pressures on cladding, fasteners and immediate supporting members (such as battens and purlins) are specific to the pressure zone. Net pressure effects on trusses and rafters can be taken from the net pressures for general zones.

NOTE 2 For walls, net pressures on cladding elements and fasteners (such as wall sheathing, windows and doors) are specific to the pressure zone. Net pressure effects on wall studs and frames can be taken from the net pressures for general zones.

NOTE 3 The design net pressures for eaves and soffit linings are taken as equal to the net pressures applied to adjacent wall surface, e.g. the design pressure for eaves lining within 1 200 mm of a corner for a C2 classification is +2.68 kPa and -4.02 kPa.

NOTE 4 In order to use the internal pressures in the N classifications in this table, all of the cladding elements including windows, doors and garage doors need to be able to withstand the design wind loads.

- q) For assessment of a 3D model of the structure by engineering principles using SPACEGASS software, the windloads were modelled as per the table using AS 1170.2-2021.

AS/NZS 1170.2:2021 (Amd 2) Wind Calculations				
	Towards Front	Towards Left	Towards Rear	Towards Right
h and z (average roof) (m):	3.990904			
V _r (Ultimate) (m/s):	86			
V _r (Serviceability) (m/s):	55			
M _d :	0.9	0.9	0.9	0.9
β for M _d :	0	90	180	270
M _c :	1.05	1.05	1.05	1.05
M _{z, cat} :	0.9898181	0.9898181	0.9898181	0.9898181
M _s :	1	1	1	1
M _t :	1.069356	1.069356	1.069356	1.069356
V _{sit, β} (Ultimate) (m/s):	86.02165	86.02165	86.02165	86.02165
V _{sit, β} (Serviceability) (m/s):	55.01385	55.01385	55.01385	55.01385
V _{des, β} (Ultimate) (m/s):	86.02165	86.02165	86.02165	86.02165
V _{des, β} (Serviceability) (m/s):	55.01385	55.01385	55.01385	55.01385
F _s :	0.4090049	0.4090049	0.4090049	0.4090049
p (C _{shp} =1.0, C _{dyn} =1.0) (kPa):	4.439835	4.439835	4.439835	4.439835
d/b:	1.941176	0.5151515	1.941176	0.5151515
h/d:	0.241873	0.4695181	0.241873	0.4695181

Reference Documentation:

- Mark-up of the set of sketches sheet 1 to 6 of the structure provided – ref. no. 25020:

Bases of certification:

relevant provisions of the NCC 2022 vol 2

AS/NZS 1170.0:2002 Structural design actions - General principles

AS/NZS 1170.1:2002 - Structural design actions, Part 1: Permanent, imposed and other actions

AS/NZS 1170.2:2002 - Structural design actions, Part 2: Wind Actions

AS 4055:2021 - Wind loads for housing

AS/NZS 4100:2022 - Steel Structures

AS 2870:2011 - Residential Slabs and footings

OneSteel Duragal design capacity tables for steel hollow sections 03/2002

AS 4055-2021 - Wind Loads for housing

AS 1684-2021 - Residential Timber-Framed Construction

AS 1720.1-2010 - Timber Structures Design Methods

Ramset guidelines

Design Specification:

Roof sheeting – 25 deg slope (slope suitable for types of sheeting depending on location – see manufacturer's specification for cyclonic areas) – generally 600mm maximum span

Roof dead loads – design allowance 0.4kN/m² as per AS1684.3 and AS/NZS 1170.1

Impact load from windborne debris – to resist a timber test member of 4kg mass of density minimum 600kg/m³ with nominal cross section of 100x50mm impacting surface with a speed of 34.4m/s (Technical Note No. 4. Simulated windborne debris impact testing of building envelope components. Cyclone Testing Station, James Cook University)

Roof Live load – (A/1.8+0.12) 0.87kPa and 1.4kN Concentrated action (AS/NZS 1170.1)

Wall sheeting - horizontally ribbed - to reduce wind friction; connected to ply backing

Steel Stramit roof battens BMT0.75mm G550 – truss spacing at 600mm – 450mm spacing with 2 No 14 screws G450 or 2 No 12 type 17 into timber – covers most of cases

Roof Trusses – Steel - Not currently a part of the design assessment; to be provided by others including bracing and tie down

Posts 168.3x7.1 CHS Grade 350 to footings as detailed

Amended connection required for corner posts

Designation			Mass per m kg/m	Design Section Axial Capacities		Design Section Moment Capacities	Design Shear Capacity	Torsion
d _s mm	t mm			Comp φN _c kN	Tens φN _t kN	φM _x kNm	φV _z kN	φM _t kNm
508.0 x	12.7	CHS	155	6220	6220	962	2240	902
	9.5	CHS	117	4690	4690	683	1690	688
	6.4	CHS	79.2	2720	3180	408	1140	472
457.0 x	12.7	CHS	139	5580	5580	789	2010	724
	9.5	CHS	105	4210	4210	565	1510	553
	6.4	CHS	71.1	2580	2850	343	1030	380
406.4 x	12.7	CHS	123	4950	4950	620	1780	567
	9.5	CHS	93.0	3730	3730	456	1340	434
	6.4	CHS	63.1	2430	2530	282	912	299
355.6 x	12.7	CHS	107	4310	4310	471	1550	428
	9.5	CHS	81.1	3250	3250	356	1170	329
	6.4	CHS	55.1	2210	2210	224	796	228
323.9 x	12.7	CHS	97.5	3910	3910	388	1410	351
	9.5	CHS	73.7	2960	2960	296	1060	271
	6.4	CHS	50.1	2010	2010	189	724	188
273.1 x	12.7	CHS	81.6	3270	3270	271	1180	244
	9.3	CHS	60.5	2430	2430	204	874	186
	6.4	CHS	42.1	1690	1690	139	608	132
	4.8	CHS	31.8	1270	1270	98.3	459	101
219.1 x	8.2	CHS	42.6	1710	1710	115	616	104
	6.4	CHS	33.6	1350	1350	91.2	485	83.5
	4.8	CHS	25.4	1020	1020	66.3	366	64.0
168.3 x	7.1	CHS	28.2	1130	1130	58.2	408	52.6
	6.4	CHS	25.6	1030	1030	52.9	369	48.0
	4.8	CHS	19.4	777	777	40.4	280	37.0

Steel posts to be protected with 100mm above and below concrete with bituminous paint; concrete footings

Wall steel frame assumed 100 steel frame clad with structural ply 17mm filled with concrete frame

Connections to slab to withstand minimum of 6.4kN/m – min, M10 or M12 bolt at 600centres into concrete slab

INSTALLATION DATA

ChemSet Maxima Spin Capsules Studs Hdg Gr5.8 M10x130 / hef = 90 mm

Product Code:

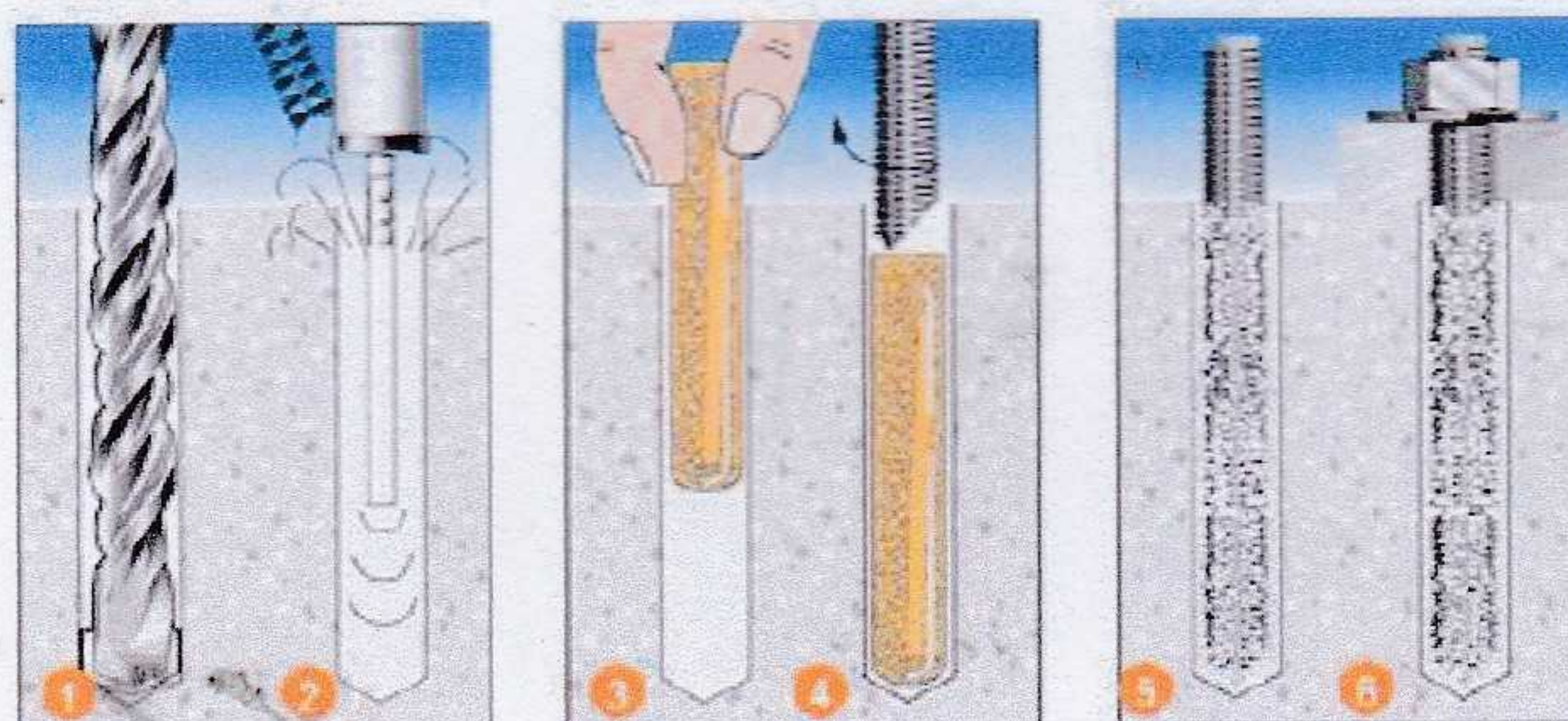
CHEM10+CS10130GH

Effective embedment :

90 mm

ETA-18/0197 issued 2018/05/02

Minimum stud length:	102.5 mm
Effective embedment :	90 mm
Minimum thickness of base material :	120 mm
Hole diameter in the base material :	12 mm
Hole depth in the base material :	90 mm
Installation torque :	20.00 Nm
Base plate thickness :	2 mm
Profile family (section type) :	
Clearance diameter :	12 mm

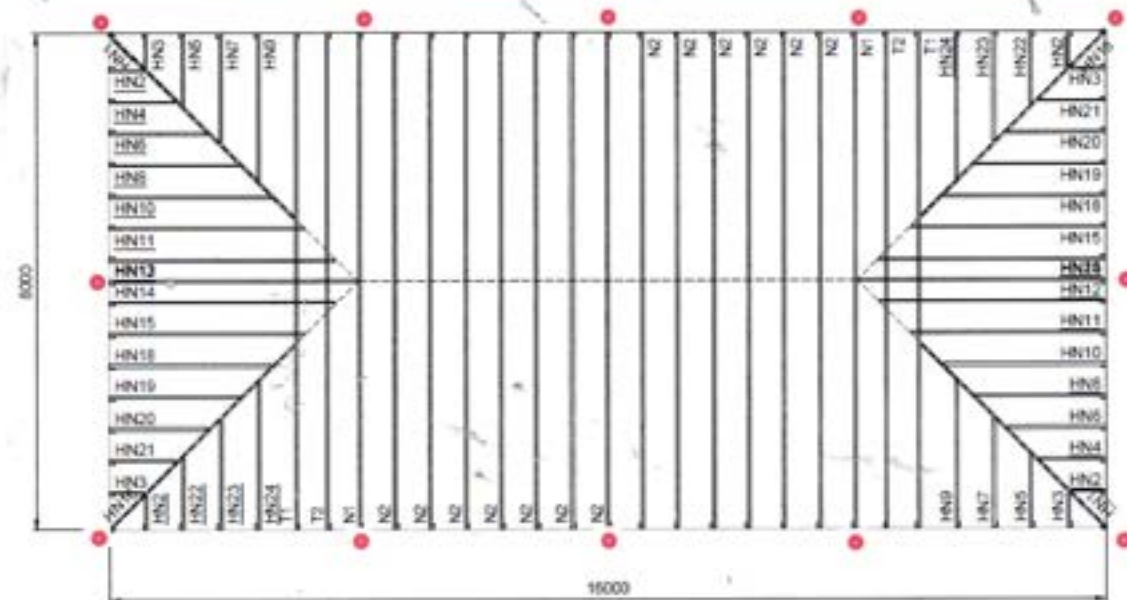
INSTALLATION Method

1. Drill recommended diameter and depth hole.
2. **Important:** Use **Ramset™** Dustless Drilling System to ensure holes are clean. Alternatively, clean dust and debris from hole with stiff wire or nylon brush and blower in the following sequence: blow x 2, brush x 2, blow x 2.
3. Insert correct size Spin capsule into the hole.
4. Using appropriate driver accessories, drive the ChemSet™ Anchor Stud into the hole using a hammer drill (on rotation).
5. Cure as per setting times.
6. Attach fixture and tighten nut in accordance with recommended tightening torque.

Slab and footing design to follow AS2870 – concrete slab to be min. 100mm thick, 250mm above ground finished floor level; with DCP and sand bedding as per AS2870. Strip footings to be around perimeter 300mm wide, minimum 250mm embedded in ground.

Soil parameters used for the design: Very stiff clay (site classification M)

- bearing capacity 100kPa for slabs,
- 150kPa end of piers;
- Undrained cohesion c_u – 100kPa from the depth below 1.5diameter of pier
- preliminary design did not consider the influence of the slab structure on lateral capacity and uplift
- pier to be minimum 450mm diameter, 1.7m deep
- posts to have end cap 10mm MS plate
- posts to be fully encased, or piers to be reinforced with 6/N20 N500 reo bars, with R6 helical ligature



Bearer 275x100 F17 supporting wall laterally between columns:



350x65 Hyne Beam 21 Cambered H3 Treated *

460x68 BearerBeam Cambered H3 Treated *

2/270x45 KD Hwd F27 * (DL=2.3)

2/300x50 Uns Hwd F14 H3 Treated * (DL=4.1)

☒ 2/275x50 Uns Hwd F17 H3 Treated * (DL=4.6)

Bearer supporting roof structure between steel posts -roof to be fully supported by the timber beam without additional support of the external walls.

Maximum Performance Statistics

2/275x50 Uns Hwd F17 H3 Treated	Design Value	Control Value	Pass/Fail	Stress Ratio %	Location	Load Combination
Moment (N.m)	47457	53648	Pass	88.5	Member 2, Left end	0.9G + 1.0W
Shear (N)	47075	60944	Pass	77.2	Member 2, Left end	0.9G + 1.0W
Reaction Bearing (N)	96423	188100	Pass	51.3	Member 2, Left end	1.2G + 1.0W
Deflection - variable (mm)	4.6	10.1	Pass	45.4	Member 1, Centre	0.9G Only
Deflection - fixed value (mm)	4.6	10.0	Pass	45.8	Member 1, Centre	0.9G Only
Support Crushing (N)	15328	202257	Pass	17.5	Support 3	0.9G + 1.0W

The "+" against this member signifies that there are relevant notes:

Generic Product: Confirm/validate design results with the product supplier

This is conservative solution due to the beam being connected to walling system full length and having a full lateral restraint. Though the walling system is not to transfer any roof load, it will reduce vertical deflection caused by the roof loads.

HENRI'S ENGINEERING Pty Ltd ATF

ABN 17 196 524 337

Phone: 0754837721

Mobile: 0401873274

Postal: 4 Glastonbury Rd, Southside

Email: info@henrisengineering.com

Website: www.henrisengineering.com



Changes/ Issues addressed / or to be addressed from previous draft after the latest meeting:

1. Additional posts on 8m sides needed too be added – the timber beam is designed to span up to maximum 4m, so the 8m span needed to be divided; this needs to be confirmed
2. Roof slope was considered in the design as 25degrees – provided documentation of the roof design (by others varies in slope and may not represent the concept design; however, it is only preliminary concept; for a full final design this needs to be addressed
3. Size of footings – piers currently designed without influence of the slab; if the slab to be added, this will change; the final design to be confirmed, however, it will always vary depending on the site specifications
4. Bracket on top of the post – the current shape allows for "pin connection", which does not transfer well vertical loads and as such, without strengthening it, the timber beam would not be transferring the load as requested. As per mark-up, the side plates need to be ideally all the way to the end, to provide a very stiff moment connection, which will reduce the vertical movement of the bracket and the bearer. This detail needs to be discussed further if possible
5. Channels in wall frames marked as 100x50 - the preliminary specification was taken as one from software -LC100230; which is 102 high profile and 3mm thick. This might not be exactly, what was expected, so to check the correct section, the specification needs to be confirmed.

This is a concept design only and shall not be used for construction.

Details of Person Signing:

Name of Firm: Henri's Engineering Pty Ltd

Business Address: 4 Glastonbury Rd, Southside QLD 4570

Name of person signing: Henrieta Anderson

Qualifications: MIEAust Eng RPEQ 8148

Position: Director

Phone Number: 07 54837721

Kind regards,

HENRIETA ANDERSON MIEAust Eng RPEQ

For and on behalf of Henri's Engineering



HENRI'S ENGINEERING Pty Ltd

Phone: 07 5483 7721

www.henrisengineering.com

Southside, Qld 4570

Beam needs to be continuous over 2 spans of size 275x100 Unseasoned Hardwood F17 or 300x100 F14 Unseasoned Hardwood.

Lateral capacity of the wall needs to be transferred into the frame via beam of lateral strength as below:

150x150 Uns Hwd F17 H3 Treated	Design Value	Control Value	Pass/ Fail	Stress Ratio %	Location	Load Combination
Moment (N.m)	15679	18130	Pass	86.4	Member 1, Centre	Wind Pressure Strength
Shear (N)	13882	42891	Pass	32.4	Member 1, Left end	Wind Pressure Strength
Reaction Bearing (N)	0	0	Pass	0.0	Member 0, Left end	
Deflection - variable (mm)	17.3	20.2	Pass	86.0	Member 1, Centre	Wind Pressure Deflection
Deflection - fixed value (mm)	17.3	20.0	Pass	86.7	Member 1, Centre	Wind Pressure Deflection

The '*' against this member signifies that there are relevant notes:

Generic Product: Confirm/Validate design results with the product supplier

Wall frame as per sketches -built in C10024 or LC10230

External sheeting cyclonic rated sheeting (if in marine environment, then with coating to suit, including fixings)

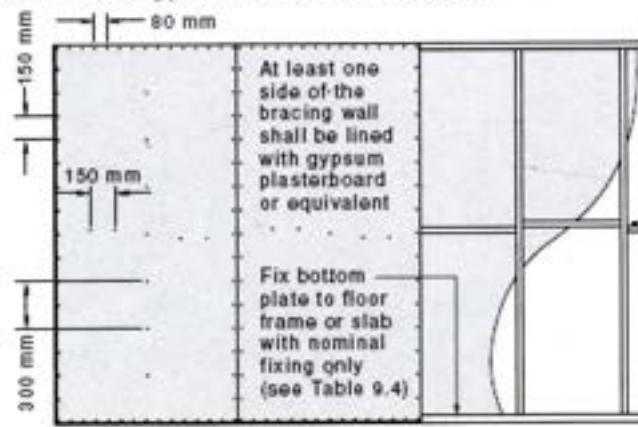
Sheeting attached to a structural form-ply minimum 12-25-5 for exterior (similar to FORMrite, but H2 treated).

Internal Ply to be H2 treated, suitable for interior use (limited emissions of harmful chemicals).

If fixed to the framing equivalently to the diagram below, the walls will have also bracing capacity.

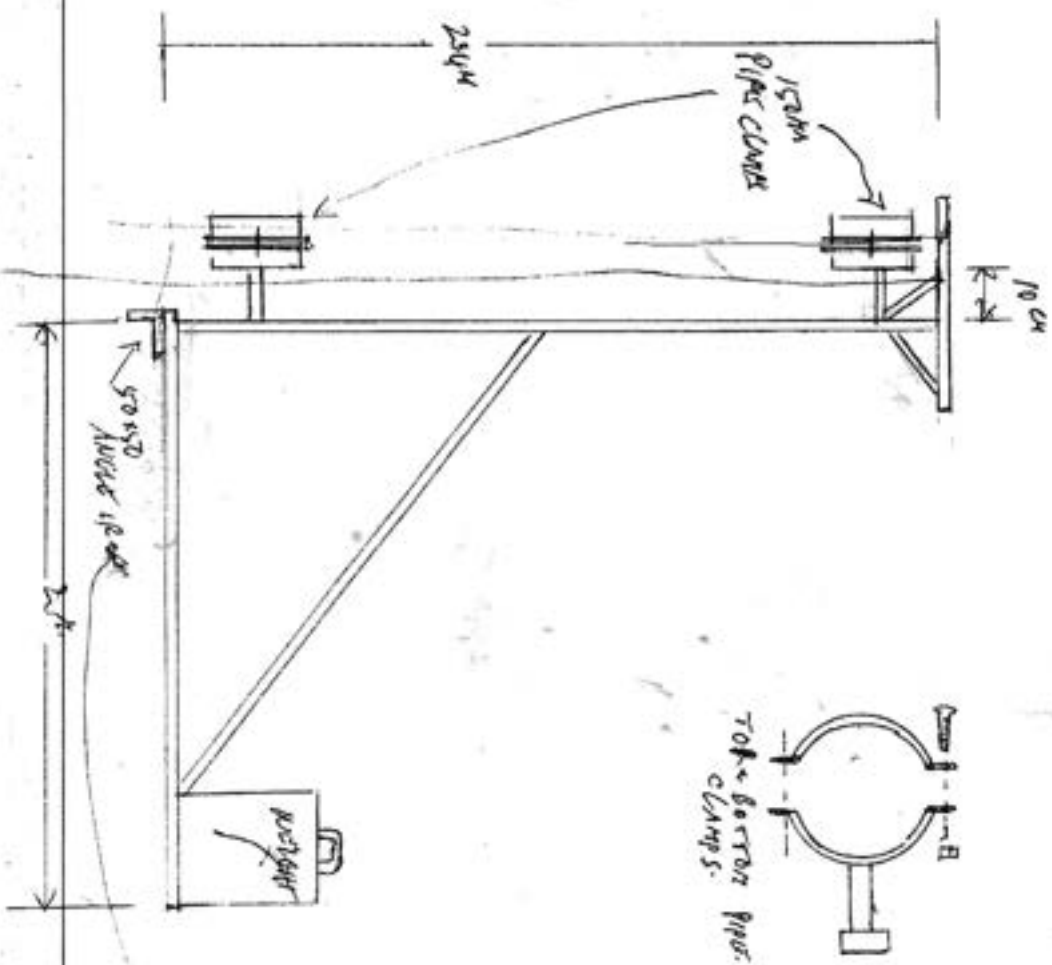
Internal space needs to be divided by bracing walls at the spacing no more than 8m to stop walls from buckling under wind pressure.

Table 8.18(1) — Structural wall bracing (maximum wall height 2.7 m)

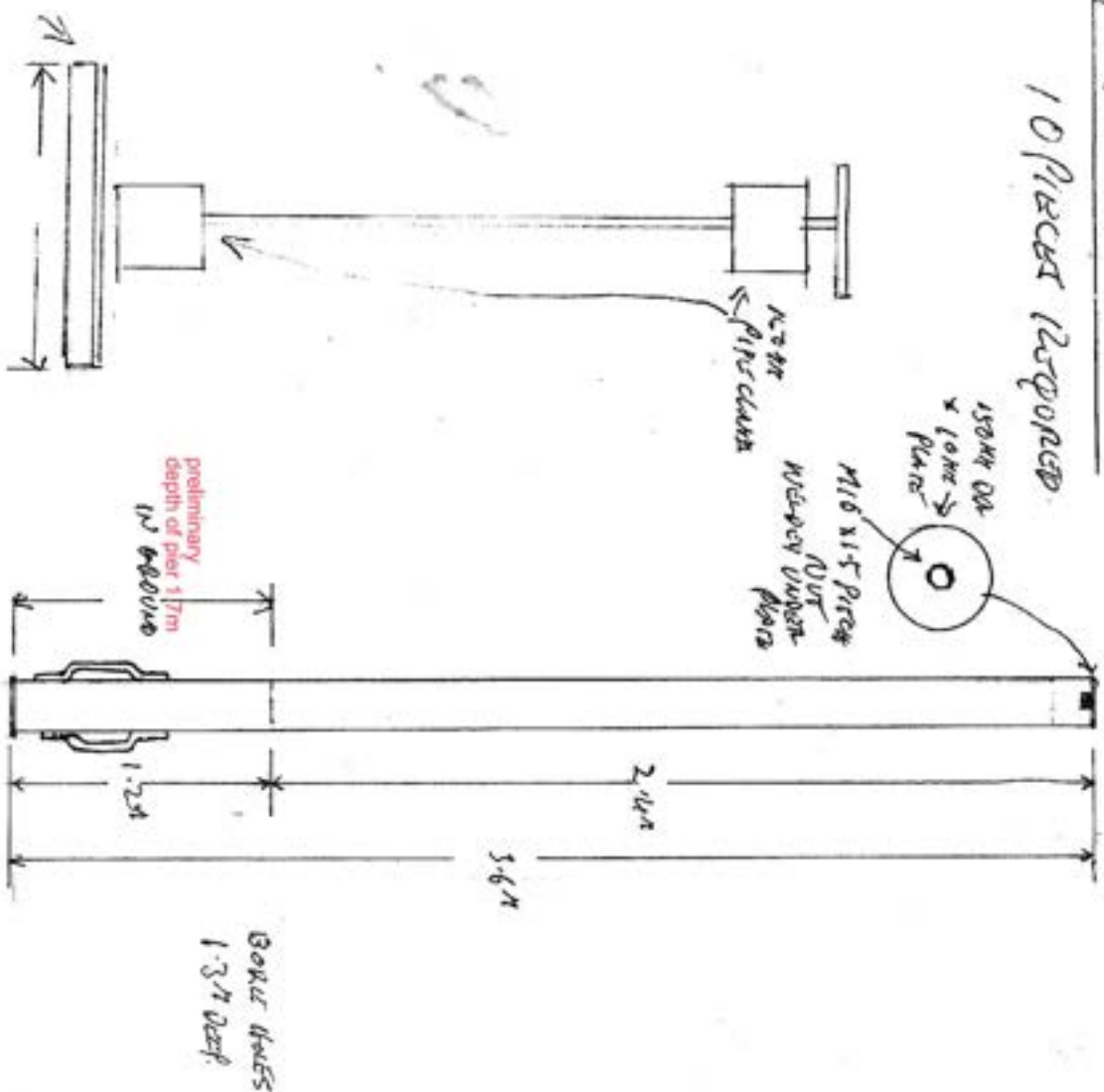
Type of bracing		Bracing capacity, kN/m
(1) Hardboard Type A — Hardboard shall conform to AS/NZS 1859.4. Hardboard shall be nailed to frame using min. 30 mm x 2.8 mm ϕ galvanized flat-head nails or equivalent. Nails shall be located a min. of 10 mm from the vertical edges and 15 mm from the top and bottom edges. Maximum stud spacing shall be 600 mm. Bracing panel min. width shall be 900 mm. 		
Minimum hardboard thickness, 4.8 mm		
Fastener spacing, mm		
Top and bottom plates	80	Type A 2.9
Vertical edges and nogging	150	
Intermediate studs	300	
Fixing of bottom plate to floor frame or slab		
Type A: Fixing bottom plate to floor frame or slab with nominal fixing requirement (see Table 9.4)		

KXO SHELTON 150th PIPE COLLECTION PLANT

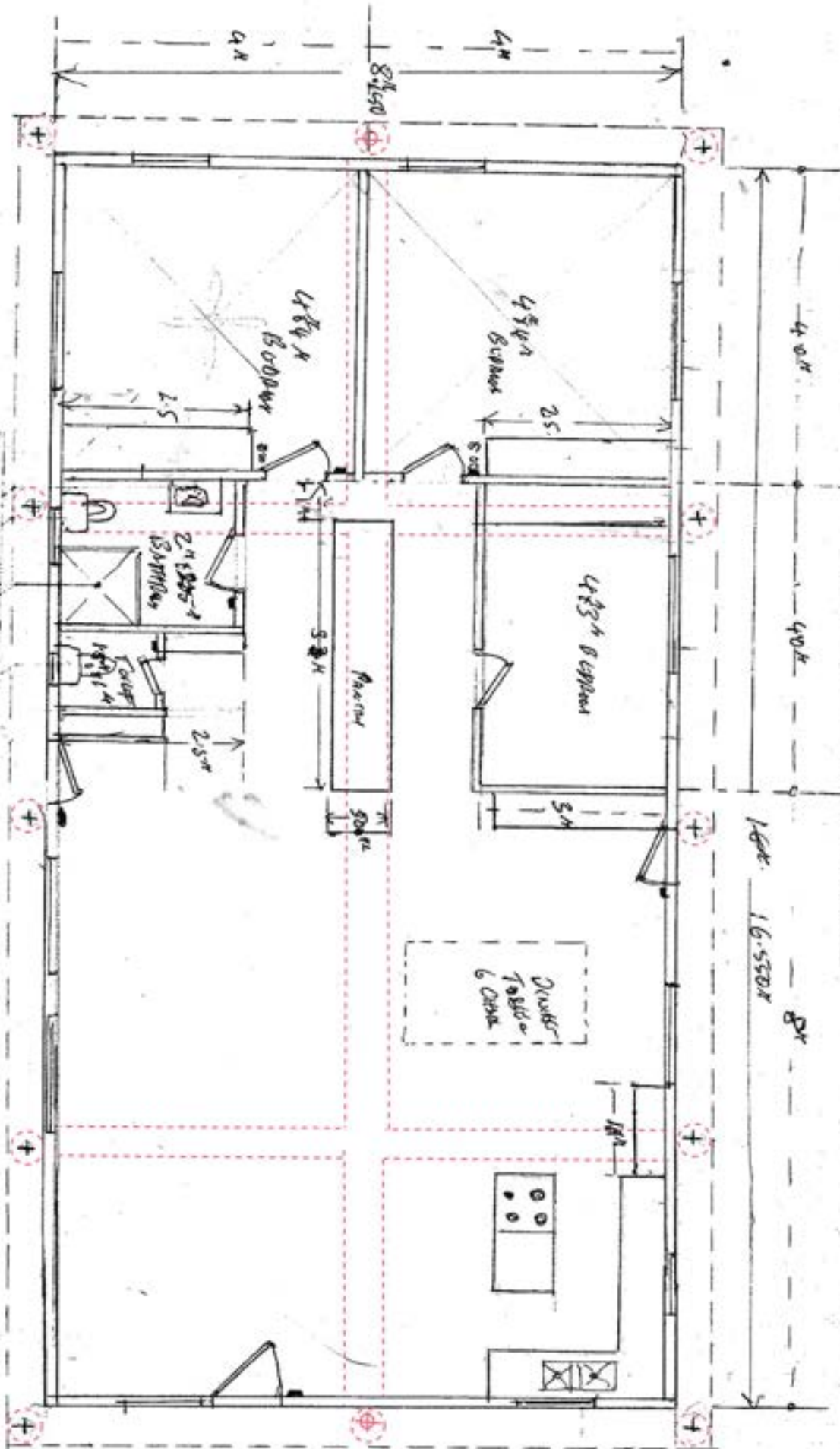
10 x 150 ft station
6 x 85 ft station



10 Pieces 12500000



Class Room Building House



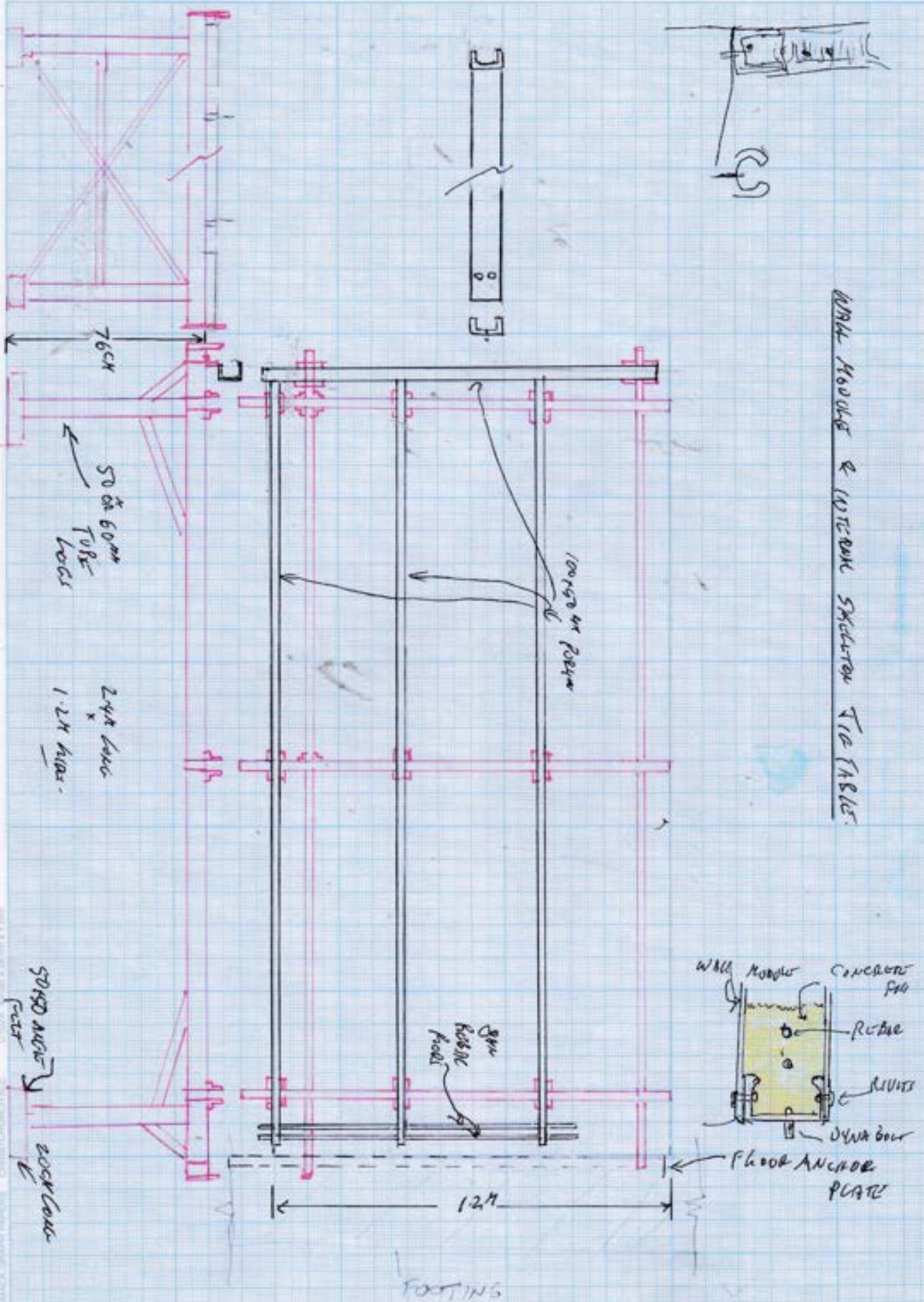
Scale 1:500

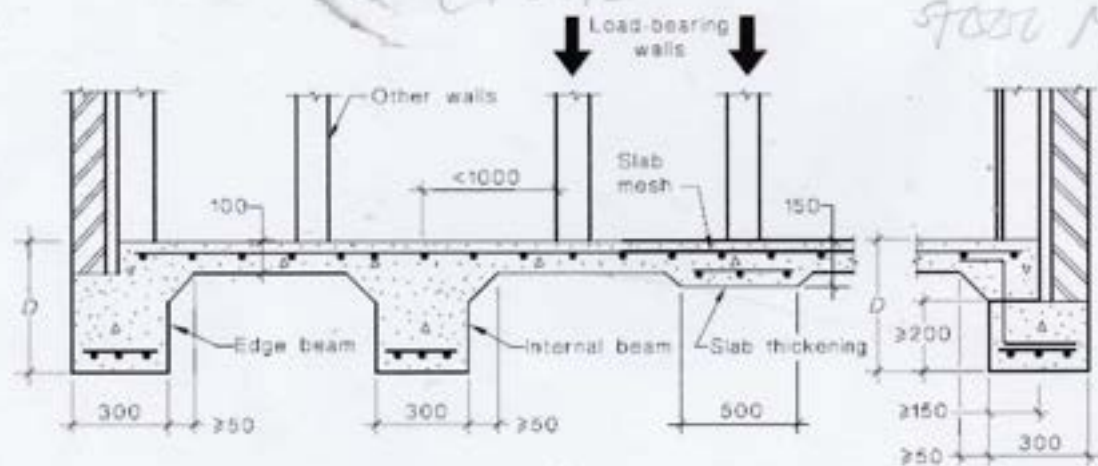
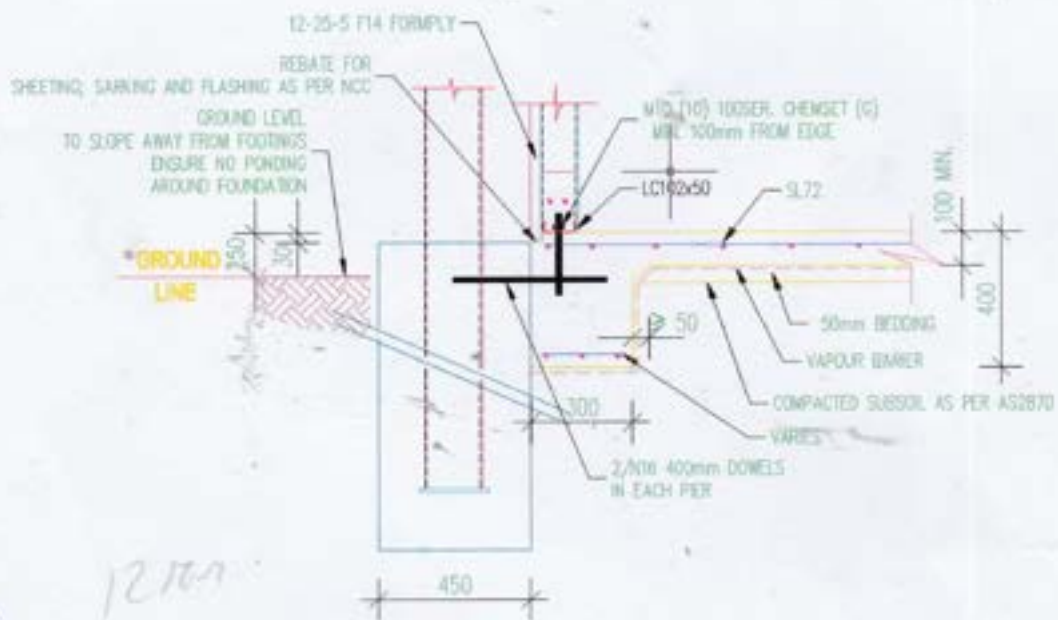
preliminary footing design for class M

Phase 1

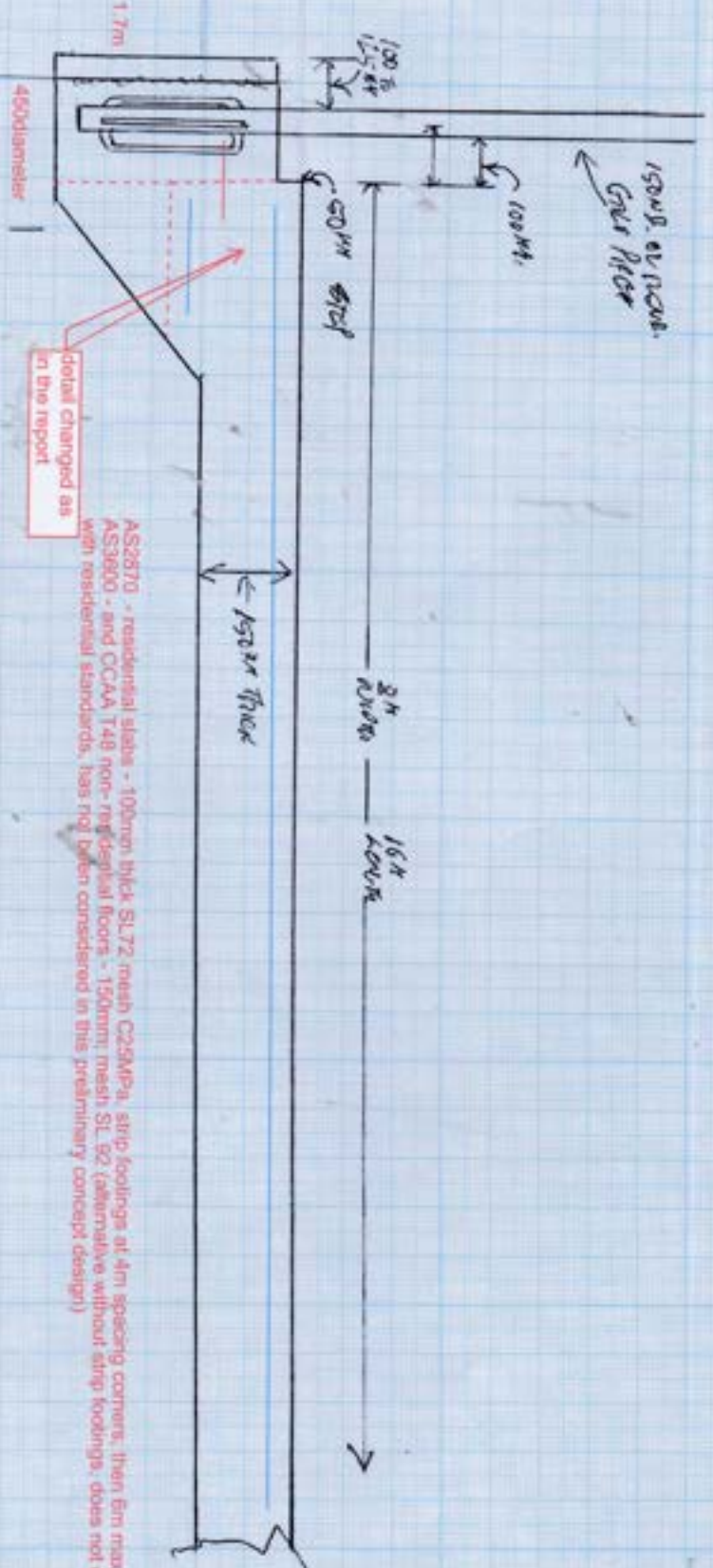


WALL MODULE & INTERIOR SHEETON TIE TABLE





Caution: Slab Detail for Greenhouse Foundation



Adolescents changed as in the report

AS/670 - residential slabs - 100mm thick SL72 mesh C25MPa, strip footings at 4m spacing corners, then 6m max. for class M AS3600 - and CCAA T48 non-mercaptan floors - 150mm mesh SL 92 (deliberative without strip footings, does not comply with residential standards, has not been considered in this preliminary concept design)

Exo salutarin Ppt 12500 or 15000

Piper
quail

125 N16
9 N16
135 N16

DETAILED "E"

ROOF TRUSS HOISTING EQUIPMENT

NOTE: TRUSS WITHIN 20' OF RIGID FOR TYPICAL DESIGN

ROOF TRUSS DETAIL

TRUSS CABIN

PITCH 7/12 55°

SPACING 6'0"

SPIN ON PULLEY IN PLACE

GENERAL 27 TRUSSES

OFFSHORE 300'

PLACE PER 200'

200' x 175' x 11'0"

Roof slope needs to be uniform across the documentation - design assumed 25deg as initially discussed

