

Uni-Pier® construction data for single-storey buildings

65 x 65 x 2.0 mm (G350) and 75 x 75 x 2.5 mm (G350)

This document provides construction data needed to use LYSAGHT Uni-Piers in single storey buildings.

Uni-Piers are available in two cross-sections. 65 x 65 mm is available in lengths from 200 mm to 2800 mm, in 200 mm increments. 75 x 75 mm is available in lengths from 200 mm to 4000 mm, also in 200 mm increments.

Wind regions

Data is given for seven wind regions in five groups. Throughout the document we have used the notation in AS 4055—1992, as follows.

AS 4055 Equivalent to:

N1	W28N permissible
	W34N limit state
N2	W33N permissible
	W40N limit state
N3	W41N permissible
	W50N limit state
N4 & C1	W50N & W41C permissible
	W61N & W50C limit state
N5 & C2	W60N & W50C permissible
	W74N & W61C limit state

Notes

* All brickwork must be supported on concrete footings.

* Interpolation within tables is allowed.

Design Loads

Dead load of floor: 0.5 kPa

Live load of floor: 1.5 kPa

(for internal areas)

Live load of floor: 3.0 kPa

(for external areas, verandahs).

Both tile and sheet roofs are considered.

Live load on roof: 0.25 kPa

Stud wall with plasterboard is considered.

* Maximum height of the wall is 3.0 m.

* From ground to the highest point of the roof should not exceed 5.5 m.

Roof pitch should not exceed 35°.

No bracing implies brick veneer type of construction. Bracing implies clad type of construction.

Capacity (Pages 2—5)

Except for the verandah (pier location 3), the capacity tables are based on the piers being equispaced in both directions. (Grid spacing X = Grid spacing Y)

To obtain the maximum pier load area (m²) for your job:

1. Choose a pier location from the Pier location box below.

2. Choose a Capacity table (Page 2 or 4).

3. In the chosen table:

- Select the chosen pier location number;
- Choose from timber or rectangular hollow (RHS) steel section bearers; or C-section steel bearers.

4. Find the maximum pier load area (m²) by selecting:

- 4.1 Roof width (fascia to fascia, see sketch at right);
- 4.2 Maximum pier height;
- 4.3 Sheet or tile roofing;
- 4.4 Braced or not-braced piers.

Connections (Pages 6—7)

The tables give the fixing required for:

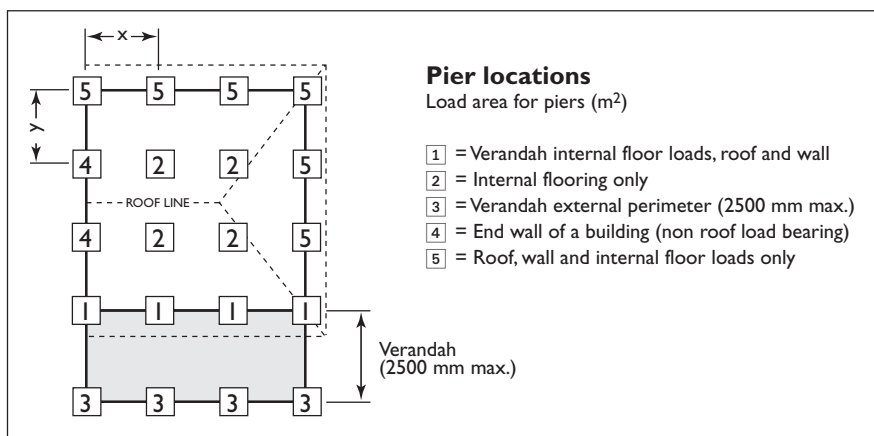
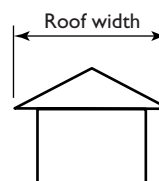
- Uni-Pier head to post;
- Uni-Pier fin plate to bearer;
- Uni-Pier to footing.

To obtain the required number of fasteners for your job:

1. Choose a pier location from the Pier location box below.
2. Use the chosen pier location number, roof width and grid spacing in the connection table on Pages 6 & 7.

Bracing (Pages 8—9)

Bracing is fixed between Uni-Piers to resist the forces resulting from wind blowing on the walls and roof.



CAPACITY 65 x 65 x 2

CAPACITY 65 x 65 x 2				Bearer type	Roof width (m)	Max pier height (m)	Pier load areas (m ²) Wind region N1				Pier load area (m ²) Wind region N2				Pier load area (m ²) Wind region N3				Pier load area (m ²) Wind region N4 & C1				Pier load area (m ²) Wind region N5 & C2																						
							Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile																				
							No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace																			
PIER LOCATION 1	 	9.0	0.6	29.1	24.0	29.1	29.1	24.0	24.0	29.1	22.1	24.0	17.6	29.1	13.7	24.0	11.6	24.0	8.4	19.4	7.3	24.0	10.2	18.5	8.4	18.5	6.3	14.4	5.3																
			1.3	24.0	19.3	24.0	27.0	19.4	19.4	16.0	16.8	12.2	12.2	16.0	10.2	12.2	8.4	16.0	6.2	13.0	4.8	11.6	3.6	9.0	3.2	5.3	1.7	4.4	1.4																
			2.0	16.0	12.2	16.0	16.8	12.2	12.2	16.0	10.2	12.2	8.4	9.0	4.8	6.8	4.0	4.0	1.4	2.9	6.2	2.2	2.6	0.8	2.0	0.6	5.3	1.7	4.4	1.4															
			2.8	9.0	6.8	9.0	8.4	6.8	6.2	4.8	2.6	3.2	2.0	4.8	2.6	3.2	2.0	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	2.6	0.8	2.0	0.6																
			3.6	4.8	3.2	4.8	4.0	3.2	2.9	4.8	2.6	3.2	2.0	4.8	2.6	3.2	2.0	4.0	1.4	2.9	1.0	2.6	0.8	2.0	0.6	4.0	1.4	2.9	1.0																
		12.6	0.6	26.0	19.4	26.0	29.2	19.4	20.2	26.0	18.5	19.4	13.7	26.0	13.7	16.0	10.2	20.2	9.0	18.5	9.0	16.8	6.8	13.0	5.3	13.0	4.8	9.6	4.0	7.8	2.9	5.8	2.2												
			1.3	21.2	16.0	21.2	22.1	16.0	16.0	13.7	13.7	9.6	9.6	13.7	8.4	9.6	6.2	9.6	4.0	9.0	4.0	7.8	2.9	5.8	2.2	3.6	1.4	2.6	1.0	1.7	0.6	1.2	0.5												
			2.0	13.7	9.6	13.7	13.7	9.6	9.6	10.2	11.6	8.4	7.3	10.2	6.7	8.4	4.8	9.0	4.0	6.2	2.9	5.3	2.2	4.0	1.7	2.6	1.0	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5										
			2.8	7.3	5.3	7.3	6.8	5.3	4.4	6.2	5.3	4.0	3.6	6.2	3.2	4.0	2.2	4.4	1.7	2.9	1.4	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5								
			3.6	4.0	2.6	4.0	3.2	2.6	2.0	4.0	3.2	2.6	2.0	4.0	2.0	2.6	1.4	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	1.0	0.3	0.6	0.2	0.5	0.1	0.3	0.2												
		16.2	0.6	23.0	16.0	23.0	24.0	16.0	16.0	18.5	18.5	13.0	12.2	18.5	11.6	13.0	8.4	15.2	6.8	10.2	5.3	9.0	4.0	6.8	3.2	9.0	4.0	6.8	3.2	5.3	2.2	4.0	1.7	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3				
			1.3	18.5	13.0	18.5	18.5	13.0	12.2	12.2	11.6	8.4	7.3	12.2	6.7	8.4	4.8	9.0	4.0	6.2	2.9	5.3	2.2	4.0	1.7	2.6	1.0	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3								
			2.0	12.3	8.4	12.2	11.6	8.4	7.3	6.2	5.3	4.0	3.6	6.2	3.2	4.0	2.2	4.4	1.7	2.9	1.4	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
			2.8	6.3	4.0	6.2	5.3	4.0	3.6	3.2	2.6	2.0	1.7	3.2	1.4	2.0	1.0	3.2	1.4	2.0	1.0	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
			3.6	3.2	2.0	3.2	2.6	2.0	1.7	3.2	2.6	2.0	1.7	3.2	1.4	2.0	1.0	3.2	1.4	2.0	1.0	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
		9.0	0.6	13.7	10.2	13.7	13.7	10.2	10.2	11.6	11.6	9.0	8.4	11.6	7.3	9.0	5.3	7.8	2.6	5.8	2.2	5.3	1.7	4.0	1.4	2.9	0.8	2.2	0.6	1.4	0.5	1.2	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3		
			1.3	11.6	9.0	11.6	11.6	9.0	8.4	8.4	7.8	6.2	5.8	5.3	4.4	3.6	3.2	3.2	2.6	2.2	2.0	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
			2.0	8.4	6.2	8.4	7.8	6.2	5.8	5.3	4.4	3.6	3.2	3.2	2.6	2.2	2.0	3.2	2.6	2.2	2.0	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
			2.8	4.8	3.6	5.3	4.4	3.6	3.2	3.2	2.6	2.2	2.0	3.2	2.6	2.2	2.0	3.2	2.6	2.2	2.0	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
			3.6	2.9	2.2	3.2	2.6	2.2	2.0	3.2	2.6	2.2	2.0	3.2	2.6	2.2	2.0	3.2	2.6	2.2	2.0	2.6	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
		12.6	0.6	11.5	8.4	11.6	11.6	8.4	7.8	9.6	9.0	6.8	6.2	9.6	5.3	6.8	4.0	7.3	3.2	7.3	3.2	6.2	2.2	4.8	2.0	3.6	1.4	2.6	1.0	1.7	0.6	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3
			1.3	9.6	6.8	9.6	9.0	6.8	6.2	7.3	6.2	4.8	4.4	7.3	4.0	4.8	2.9	4.4	2.0	2.9	1.4	2.2	1.0	1.7	0.8	1.2	0.5	0.8	0.3	2.0	0.8	2.0	0.8	1.7	0.6	1.2	0.5	0.8	0.3						
			2.0	7.3	4.8	7.3	6.2	4.8	4.4	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2				
			2.8	4.0	2.9	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2	4.4	3.6	2.9	2.2				
			3.6	2.6	1.7	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2	2.6	2.0	1.7	1.2				
		16.2	0.6	10.2	6.8	10.2	9.6	6.8	6.2	8.4	7.3	5.3	4.8	8.4	4.4	5.3	3.2	5.8	3.2	4.0	2.2	3.6	2.9	2.2	1.7	2.0	1.4	1.2	1.0	0.6	0.2	0.5	0.1	0.3	0.2	0.5	0.1	0.3	0.2	0.5	0.1	0.3	0.2		
			1.3	8.4	5.3	8.4	7.3	5.3	4.8	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2				
			2.0	5.8	4.0	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2	6.2	5.3	4.0	3.2				
			2.8	3.6	2.2	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6	2.9	2.2	1.7	3.6			
			3.6	2.0	1.2	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0	1.4	1.2	1.0	2.0			

PIER LOCATION 2	 	NA	0.6	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4	34.8	30.2	34.8	30.2	34.8	32.5	34.8	32.5	34.8	31.4	34.8	31.4
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	Bearer type	Roof width (m)	Max pier height (m)	Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile	
				No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace
PIER LOCATION 4		9.0	0.6	64.0				64.0	64.0	64.0	64.0	64.0	39.7	64.0	39.7	64.0	31.4	64.0	31.4	64.0	20.2	64.0	20.2
			1.3	53.3				53.3	51.8	53.3	51.8	53.3	31.4	53.3	31.4	53.3	24.0	53.3	24.0	53.3	15.2	53.3	15.2
			2.0	39.7				39.7	34.8	39.7	34.8	39.7	20.2	39.7	20.2	39.7	15.2	39.7	15.2	39.7	9.0	39.7	9.0
			2.8	26.0				26.0	18.5	26.0	18.5	26.0	10.2	26.0	10.2	26.0	7.3	26.0	7.3	26.0	4.4	26.0	4.4
			3.6	16.8	14.4	16.8	14.4	16.8	9.6	16.8	9.6	16.8	4.8	16.8	4.8	16.8	3.6	16.8	3.6	16.8	2.0	16.8	2.0
		12.6	0.6	62.4				62.4	57.8	62.4	57.8	62.4	34.8	62.4	34.8	62.4	27.0	62.4	27.0	62.4	16.8	62.4	16.8
			1.3	51.8				51.8	46.2	51.8	46.2	51.8	27.0	51.8	27.0	51.8	21.2	51.8	21.2	51.8	13.0	51.8	13.0
			2.0	38.4				38.4	30.2	38.4	30.2	38.4	16.8	38.4	16.8	38.4	13.0	38.4	13.0	38.4	7.8	38.4	7.8
			2.8	25.0	23.0	25.0	23.0	25.0	16.0	25.0	16.0	25.0	8.4	25.0	8.4	25.0	6.2	25.0	6.2	25.0	3.6	25.0	3.6
			3.6	16.0	13.0	16.0	13.0	16.0	8.4	16.0	8.4	16.0	4.4	16.0	4.4	16.0	2.9	16.0	2.9	16.0	1.7	16.0	1.7
		16.2	0.6	60.8				60.8	54.8	60.8	54.8	60.8	32.5	60.8	32.5	60.8	24.0	60.8	24.0	60.8	15.2	60.8	15.2
			1.3	50.4				50.4	43.6	50.4	43.6	50.4	25.0	50.4	25.0	50.4	18.5	50.4	18.5	50.4	11.6	50.4	11.6
			2.0	37.2				37.2	28.1	37.2	28.1	37.2	16.0	37.2	16.0	37.2	11.6	37.2	11.6	37.2	6.8	37.2	6.8
			2.8	25.0	21.2	25.0	21.2	25.0	14.4	25.0	14.4	25.0	7.8	25.0	7.8	25.0	5.3	25.0	5.3	25.0	3.2	25.0	3.2
			3.6	16.0	11.6	16.0	11.6	16.0	7.8	16.0	7.8	16.0	4.0	16.0	4.0	16.0	2.6	16.0	2.6	16.0	1.4	16.0	1.4
		9.0	0.6	36.0				36.0	29.2	36.0	29.2	36.0	16.8	36.0	16.8	36.0	13.0	36.0	13.0	36.0	7.8	36.0	7.8
			1.3	31.4				31.4	24.0	31.4	24.0	31.4	13.7	31.4	13.7	31.4	10.2	31.4	10.2	31.4	6.2	31.4	6.2
			2.0	25.0				25.0	17.6	25.0	17.6	25.0	9.6	25.0	9.6	25.0	6.8	25.0	6.8	25.0	4.0	25.0	4.0
			2.8	17.6	15.2	17.6	15.2	17.6	10.2	17.6	10.2	17.6	5.3	17.6	5.3	17.6	4.0	17.6	4.0	17.6	2.2	17.6	2.2
			3.6	13.0	9.6	13.0	9.6	13.0	6.2	13.0	6.2	13.0	2.9	13.0	2.9	13.0	2.2	13.0	2.2	13.0	1.2	13.0	1.2
		12.6	0.6	34.8				34.8	26.0	34.8	26.0	34.8	14.4	34.8	14.4	34.8	10.2	34.8	10.2	34.8	6.2	34.8	6.2
			1.3	30.2				30.2	21.2	30.2	21.2	30.2	11.6	30.2	11.6	30.2	8.4	30.2	8.4	30.2	4.8	30.2	4.8
			2.0	25.0	22.1	25.0	22.1	25.0	15.2	25.0	15.2	25.0	7.8	25.0	7.8	25.0	5.8	25.0	5.8	25.0	3.2	25.0	3.2
			2.8	16.8	13.7	16.8	13.7	16.8	9.0	16.8	9.0	16.8	4.4	16.8	4.4	16.8	3.2	16.8	3.2	16.8	2.0	16.8	2.0
			3.6	11.6	7.8	11.6	7.8	11.6	5.3	11.6	5.3	11.6	2.6	11.6	2.6	11.6	2.0	11.6	2.0	11.6	1.0	11.6	1.0
		16.2	0.6	33.6				33.6	24.0	33.6	24.0	33.6	13.0	33.6	13.0	33.6	9.6	33.6	9.6	33.6	5.3	33.6	5.3
			1.3	29.2	28.1	29.2	28.1	29.2	19.4	29.2	19.4	29.2	10.2	29.2	10.2	29.2	7.3	29.2	7.3	29.2	4.4	29.2	4.4
			2.0	24.0	20.2	24.0	20.2	24.0	13.7	24.0	13.7	24.0	7.3	24.0	7.3	24.0	5.3	24.0	5.3	24.0	2.9	24.0	2.9
			2.8	16.8	12.2	16.8	12.2	16.8	8.4	16.8	8.4	16.8	4.0	16.8	4.0	16.8	2.9	16.8	2.9	16.8	1.7	16.8	1.7
			3.6	11.6	7.3	11.6	7.3	11.6	4.8	11.6	4.8	11.6	2.2	11.6	2.2	11.6	1.4	11.6	1.4	11.6	0.8	11.6	0.8
PIER LOCATION 5		9.0	0.6	49.0	49.0	38.4	37.2	49.0	39.7	38.4	30.2	49.0	26.0	38.4	20.2	41.0	16.0	31.4	13.0	28.1	12.2	22.1	10.2
			1.3	41.0	39.7	32.5	30.2	41.0	31.4	32.5	24.0	42.2	19.4	31.4	16.0	32.5	11.6	25.0	9.6	21.2	9.0	16.8	7.8
			2.0	29.2	27.0	22.1	19.4	29.2	20.2	22.1	15.2	28.1	12.2	20.2	9.6	21.2	7.3	16.0	5.8	13.7	5.3	10.2	4.4
			2.8	17.6	14.4	13.0	10.2	17.6	10.2	13.0	7.3	15.2	6.2	10.9	4.8	10.9	3.2	7.8	2.9	6.8	2.6	5.3	2.0
			3.6	10.9	7.8	7.3	4.8	10.9	5.3	7.3	3.6	8.4	2.9	5.3	2.2	5.8	1.7	4.0	1.2	3.2	1.2	2.6	1.0
		12.6	0.6	43.6	42.2	31.4	29.2	43.6	32.5	31.4	23.0	41.0	20.2	28.1	16.0	30.2	12.2	21.2	9.6	19.4	9.6	14.4	7.84
			1.3	36.0	34.8	26.0	23.0	36.0	26.0	26.0	17.6	32.5	16.0	22.1	11.6	24.0	9.6	16.8	7.3	15.2	7.3	10.9	5.8
			2.0	25.0	22.1	17.6	14.4	25.0	16.0	16.8	10.9	21.2	9.6	13.7	7.3	14.4	5.8	10.2	4.4	9.0	4.4	6.8	3.6
			2.8	15.2	11.6	9.6	7.3	15.2	8.4	9.6	5.3	10.9	4.8	6.8	3.2	7.3	2.6	4.8	2.0	4.4	2.0	3.2	1.7
			3.6	9.0	5.8	5.3	3.6	8.4	4.0	4.8	2.6	5.8	2.2	3.6	1.7	3.6	1.2	2.6	1.0	2.0	1.0	1.4	0.8
		16.2	0.6	37.2	36.0	26.0	23.0	37.2	27.0	26.0	18.5	32.5	16.8	21.2	12.2	22.1	10.2	15.2	7.3	13.7	7.8	9.6	6.2
			1.3	31.4	28.1	20.2	17.6	31.4	21.2	21.2	13.7	25.0	13.0	16.0	9.0	16.8	7.8	11.6	5.8	10.2	6.2	7.3	4.4
			2.0	21.2	18.5	13.7	10.9	22.1	13.7	13.0	8.4	16.0	7.8	9.6	5.3	10.9	4.4	6.8	3.2	6.2	3.6	4.4	2.6
			2.8	12.2	9.6	7.3	5.3	12.2	6.8	6.8	4.0	8.4	4.0	4.8	2.6	5.3	2.0	3.2	1.4	2.9	1.7	2.0	1.2
			3.6	7.3	4.8	4.0	2.6	6.2	3.2	3.2	2.0	4.0	1.7	2.2	1.2	2.6	1.0	1.7	0.6	1.4	0.8	1.0	0.6
		9.0	0.6	26.0	23.0	19.4	16.0	26.0	16.8	19.4	12.2	24.0	10.2	16.0	7.8	18.5	6.2	13.7	4.8	11.6	4.4	9.0	3.6
			1.3	22.1	18.5	16.0	13.0	22.1	13.7	16.0	10.2	20.2	8.4	13.7	6.2	15.2	4.8	10.9	4.0	9.0	3.6	7.3	2.9
			2.0	16.8	13.7	12.2	9.6	17.6	9.6	12.2	7.3	14.4	5.8	10.2	4.4	10.9	3.2	7.8	2.6	6.2	2.2	4.8	2.0
			2.8	11.6	8.4	7.8	5.3	11.6	5.8	7.8	4.0	9.0	3.2	5.8	2.6	6.2	2.0	4.4	1.4	3.6	1.2	2.6	1.0
			3.6	7.8	4.8	4.8	3.2	7.8	3.2	4.8	2.2	5.3	2.0	3.2	1.4	3.6	1.0	2.6	0.8	2.0	0.6	1.4	0.5
		12.6	0.6	22.1	18.5	15.2	12.2	22.1	13.7	15.2	9.0	17.6	8.4	11.6	5.8	13.0	4.8	8.4	3.6	7.8	3.6	5.3	2.9
			1.3	18.5	15.2	12.2	9.6	18.5	10.9	12.2	7.3	14.4	6.2	9.6	4.8	10.2	3.6	6.8	2.9	5.8	2.9	4.4	2.2
			2.0	14.4	10.9	9.0	6.8	14.4	7.8	9.0	5.3	10.2	4.4	6.8	3.2	7.3	2.6	4.8	2.0	4.0	2.0	2.9	1.4
			2.8	9.0	6.8	5.8	4.0	9.0	4.4	5.3	2.9	6.2	2.6	4.0	2.0	4.0	1.4	2.6	1.0	2.2	1.0	1.7	0.8
			3.6	5.8	3.6	3.2	2.2	5.3	2.6	2.9	1.7	3.6	1.4	2.2	1.0	2.2	0.8	1.4	0.6	1.2	0.5	0.8	0.3
16.2	0.6	18.5	15.2	11.6	9.0	19.4	10.9	10.9	7.3	13.0	6.8	8.4	4.4	9.0	3.6	5.8	2.9	5.3	2.9	3.6	2.2		
	1.3	16.0	12.2	9.6	7.3	16.0	9.0	9.0	5.8	10.9	5.3	6.8	3.6	7.3	2.9	4.8	2.2	4.0	2.2	2.9	1.7		
	2.0	11.6	9.0	6.8	5.3	11.6	6.2	6.2	4.0	7.3	3.6	4.8	2.6	4.8	2.0	3.2	1.4	2.9	1.4	2.0	1.2		
	2.8	7.8	5.3	4.0	2.9	6.8	3.6	3.6	2.2	4.4	2.0	2.6	1.2	2.9	1.0	1.7	0.8	1.4	0.8	1.0	0.6		
	3.6	4.4	2.9	2.2	1.4	4.0	2.0	2.0	1.2	2.6	1.0	1.4	0.8	1.4	0.6	1.0	0.5	0.8	0.5	0.5	0.3		

CAPACITY

75 x 75

x 2.5

	Bearer type	Roof width (m)	Max pier height (m)	Pier centres Wind region N1				Pier centres Wind region N2				Pier centres Wind region N3				Pier centres Wind region N4 & C1				Pier centres Wind region N5 & C2			
				Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile	
				No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace
PIER LOCATION 1		9.0	0.6	53.3		44.9		53.3		44.9		53.3	47.6	44.9	38.4	53.3	30.3	44.9	26.0	51.8	19.4	42.3	16.8
			1.3	46.2		38.4		46.2		38.4		46.2	39.7	38.4	32.5	46.2	25.0	38.4	21.2	42.3	16.0	34.8	13.7
			2.0	34.8		28.1		34.8		28.1	27.0	34.8	27.0	28.1	22.1	34.8	16.8	28.1	14.4	30.3	10.2	24.0	9.0
			2.8	22.1		17.6		22.1	20.3	17.6	16.0	22.1	16.0	17.6	12.3	22.1	9.6	17.6	7.8	16.8	5.8	13.7	4.8
			3.6	12.3		9.6	9.0	12.3	10.2	9.6	7.8	12.2	7.8	9.6	2.3	12.2	4.4	9.6	3.6	8.4	2.6	6.8	2.3
		12.6	0.6	49.0		38.4		49.0		38.4	37.2	49.0	39.7	38.4	30.3	43.6	21.2	38.4	20.3	37.2	16.0	29.2	13.0
			1.3	41.0		32.5		41.0		32.5	30.3	41.0	32.5	32.5	25.0	36.0	16.8	32.5	16.0	30.3	12.3	23.0	10.2
			2.0	31.4	24.0	23.0		31.4	28.1	24.0	21.2	30.3	22.1	24.0	16.8	25.0	11.6	23.0	10.9	21.2	8.4	16.0	6.8
			2.8	19.4	18.5	14.4	13.0	19.4	16.0	14.4	11.6	19.4	12.3	14.4	9.6	13.7	6.3	13.0	5.8	11.6	4.4	9.0	3.6
			3.6	10.9	9.0	7.8	6.3	10.9	7.8	7.8	5.8	10.8	6.3	7.8	4.8	6.8	2.9	6.3	2.9	5.8	2.3	4.4	1.7
		16.2	0.6	44.9		33.6	31.4	44.9	41.0	33.6	29.2	44.9	33.6	32.5	24.0	42.3	20.3	30.3	16.0	27.0	12.3	20.3	10.2
			1.3	38.4	37.2	28.1	26.0	38.4	33.6	28.1	24.0	37.2	27.0	27.0	20.3	34.8	16.8	24.0	13.0	22.1	9.6	16.8	7.8
			2.0	28.1	25.0	19.4	17.6	28.1	23.0	19.4	16.0	28.1	18.5	19.4	13.7	24.0	10.9	16.8	8.4	15.2	6.3	10.9	5.3
			2.8	17.6	14.4	11.6	9.6	17.6	13.0	11.6	9.0	16.8	10.9	11.6	7.3	13.7	6.3	9.0	4.4	8.4	3.6	6.3	2.9
			3.6	9.6	7.3	6.3	4.8	9.6	6.3	6.3	4.4	9.6	4.8	6.3	3.6	6.8	2.9	4.4	2.3	4.0	1.7	2.9	1.2
PIER LOCATION 2		NA	0.6	54.8	51.8	54.8	51.8	54.8	50.4	54.8	50.4	54.8	49.0	54.8	49.0	54.8	46.2	54.8	46.2	54.8	43.6	54.8	43.6
			1.3	49.0	46.2	49.0	46.2	49.0	44.9	49.0	44.9	49.0	43.6	49.0	43.6	49.0	41.0	49.0	41.0	49.0	37.2	49.0	37.2
			2.0	39.7	37.2	39.7	37.2	39.7	36.0	39.7	36.0	39.7	34.8	39.7	34.8	39.7	31.4	39.7	31.4	39.7	28.1	39.7	28.1
			2.8	28.1	26.0	28.1	26.0	28.1	25.0	28.1	25.0	28.1	24.0	28.1	24.0	28.1	21.2	28.1	21.2	28.1	17.6	28.1	17.6
			3.6	19.4	16.8	19.4	16.8	19.4	16.0	19.4	16.0	19.4	14.4	19.4	14.4	19.4	12.3	19.4	12.3	19.4	8.4	19.4	8.4
		NA	0.6	30.3	28.1	30.3	28.1	30.3	27.0	30.3	27.0	30.3	26.0	30.3	26.0	30.3	23.0	30.3	23.0	30.3	19.4	30.3	19.4
			1.3	28.1	26.0	28.1	26.0	28.1	25.0	28.1	25.0	28.1	23.0	28.1	23.0	28.1	20.3	28.1	20.3	28.1	16.8	28.1	16.8
			2.0	24.0	22.1	24.0	22.1	24.0	21.2	24.0	21.2	24.0	19.4	24.0	19.4	24.0	16.8	24.0	16.8	24.0	13.0	24.0	13.0
			2.8	18.5	16.0	18.5	16.0	18.5	16.0	18.5	16.0	18.5	13.7	18.5	13.7	18.5	10.9	18.5	10.9	18.5	7.8	18.5	7.8
			3.6	13.7	11.6	13.7	11.6	13.7	10.9	13.7	10.9	13.7	9.0	13.7	9.0	13.7	6.3	13.7	6.3	13.7	2.9	13.7	2.9
		2.5	0.6	26.3		23.7		26.3		23.7		26.3		23.7		26.3		23.7		26.3		23.7	
			1.3	23.3		21.2		23.3		21.2		23.3		21.2		23.3		21.2		23.3		21.2	
			2.0	19.0		17.1		19.0		17.1		19.0		17.1		19.0		17.1		19.0		17.1	
			2.8	13.8		12.5		13.8		12.5		13.8		12.5		13.8		12.5		13.8		12.5	
			3.6	9.4		8.5		9.4		8.5		9.4		8.5		9.4		8.5		9.4		8.5	
		2.5	0.6	14.9		13.4		14.9		13.4		14.9		13.4		14.9		13.4		14.9		13.4	
			1.3	13.4		12.1		13.4		12.1		13.4		12.1		13.4		12.1		13.4		12.1	
			2.0	11.6		10.5		11.6		10.5		11.6		10.5		11.6		10.5		11.6		10.5	
			2.8	9.0		8.1		9.0		8.1		9.0		8.1		9.0		8.1		9.0		8.1	
			3.6	6.6		6.1		6.6		6.1		6.6		6.1		6.6		6.1		6.6		6.1	
		NA	0.6		30.8				30.8					30.8				30.8				30.8	
			1.3		27.4				27.4				27.4					27.4				27.4	
			2.0		22.3				22.3				22.3					22.3				22.3	
			2.8		16.3				16.3				16.3					16.3				16.3	
			3.6		11.1				11.1				11.1					11.1				11.1	
PIER LOCATION 3 No verandah roof loading		NA	0.6		17.3				17.3					17.3				17.3				17.3	
			1.3		15.8				15.8				15.8					15.8				15.8	
			2.0		13.6				13.6				13.6					13.6				13.6	
			2.8		10.5				10.5				10.5					10.5				10.5	
			3.6		7.9				7.9				7.9					7.9				7.9	
		NA	0.6		17.3				17.3					17.3				17.3				17.3	
			1.3		15.8				15.8				15.8					15.8				15.8	
			2.0		13.6				13.6				13.6					13.6				13.6	
			2.8		10.5				10.5				10.5					10.5				10.5	
			3.6		7.9				7.9				7.9					7.9				7.9	

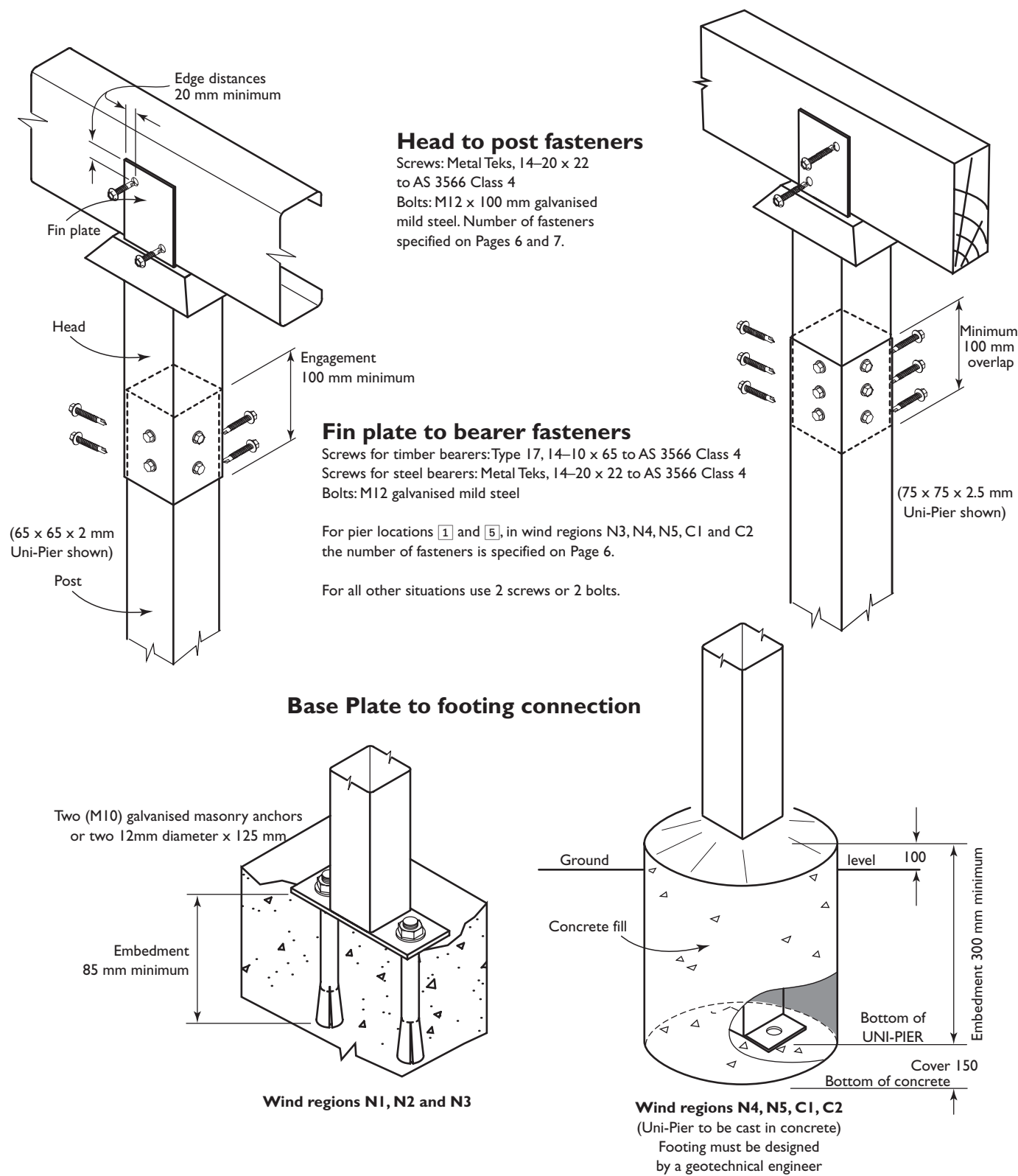
	Bearer type	Roof width (m)	Max pier height (m)	Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile		Sheet		Tile	
				No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace	No brace	Brace
PIER LOCATION 4	 	9.0	0.6	100.0				100.0				100.0	79.2	100.0	79.2	100.0	64.0	100.0	64.0	100.0	43.6	100.0	43.6
			1.3	88.4				88.4				88.4	67.2	88.4	67.2	88.4	53.3	88.4	53.3	88.4	34.8	88.4	34.8
			2.0	70.6				70.6				70.6	47.6	70.6	47.6	70.6	37.21	70.6	37.2	70.6	24.0	70.6	24.0
			2.8	50.4				50.4	47.6	50.4	47.6	50.4	29.2	50.4	29.2	50.4	22.1	50.4	22.1	50.4	13.7	50.4	13.7
			3.6	33.6				33.6	27.0	33.6	27.0	33.6	15.2	33.6	15.2	33.6	10.9	33.6	10.9	33.6	6.8	33.6	6.8
		12.6	0.6	98.0				98.0				98.0	70.6	98.0	70.6	98.0	56.2	98.0	56.2	98.0	37.2	98.0	37.2
			1.3	86.5				86.5				86.5	59.3	86.5	59.3	86.5	46.2	86.5	46.2	86.5	30.2	86.5	30.2
			2.0	68.9				68.9				68.9	42.2	68.9	42.2	68.9	32.5	68.9	32.5	68.9	20.2	68.9	20.2
			2.8	49.0				49.0	42.2	49.0	42.2	49.0	25.0	49.0	25.0	49.0	18.5	49.0	18.5	49.0	11.6	49.0	11.6
			3.6	32.5				32.5	23.0	32.5	23.0	32.5	13.0	32.5	13.0	32.5	9.6	32.5	9.6	32.5	5.8	32.5	5.8
		16.2	0.6	96.0				96.0				96.0	65.6	96.0	65.6	96.0	50.4	96.0	50.4	96.0	32.5	96.0	32.5
			1.3	84.6				84.6				84.6	54.8	84.6	54.8	84.6	42.2	84.6	42.2	84.6	27.0	84.6	27.0
			2.0	67.2				67.2	64.0	67.2	64.0	67.2	38.4	67.2	38.4	67.2	29.2	67.2	29.2	67.2	18.5	67.2	18.5
			2.8	47.6				47.6	39.7	47.6	39.7	47.6	23.0	47.6	23.0	47.6	16.8	47.6	16.8	47.6	10.2	47.6	10.2
			3.6	31.4	30.2	31.4	30.2	31.4	21.2	31.4	21.2	31.4	11.6	31.4	11.6	31.4	8.4	31.4	8.4	31.4	4.8	31.4	4.8
	 	9.0	0.6	54.8				54.8	53.3	54.8	53.3	54.8	32.5	54.8	32.5	54.8	25.0	54.8	25.0	54.8	16.0	54.8	16.0
			1.3	49.0				49.0	46.2	49.0	46.2	49.0	27.0	49.0	27.0	49.0	21.2	49.0	21.2	49.0	13.0	49.0	13.0
			2.0	42.2				42.2	37.2	42.2	37.2	42.2	22.1	42.2	22.1	42.2	16.0	42.2	16.0	42.2	10.2	42.2	10.2
			2.8	31.3				31.3	25.0	31.3	25.0	31.3	13.7	31.3	13.7	31.3	10.2	31.3	10.2	31.3	6.2	31.3	6.2
			3.6	23.0	22.1	23.0	22.1	23.0	15.2	23.0	15.2	23.0	8.4	23.0	8.4	23.0	5.8	23.0	5.8	23.0	3.6	23.0	3.6
		12.6	0.6	53.3				53.3	47.6	53.3	47.6	53.3	28.1	53.3	28.1	53.3	21.2	53.3	21.2	53.3	13.0	53.3	13.0
			1.3	47.6				47.6	41.0	47.6	41.0	47.6	24.0	47.6	24.0	47.6	17.6	47.6	17.6	47.6	10.9	47.6	10.9
			2.0	41.0				41.0	32.5	41.0	32.5	41.0	18.5	41.0	18.5	41.0	13.7	41.0	13.7	41.0	8.4	41.0	8.4
			2.8	31.4	30.2	31.4	30.2	31.4	22.1	31.4	22.1	31.4	11.6	31.4	11.6	31.4	8.4	31.4	8.4	31.4	5.3	31.4	5.3
			3.6	22.1	19.4	22.1	19.4	22.1	13.7	22.1	13.7	22.1	6.8	22.1	6.8	22.1	4.8	22.1	4.8	22.1	2.9	22.1	2.9
		16.2	0.6	51.8				51.8	43.6	51.8	43.6	51.8	26.0	51.8	26.0	51.8	18.5	51.8	18.5	51.8	11.6	51.8	11.6
			1.3	46.2				46.2	38.4	46.2	38.4	46.2	22.1	46.2	22.1	46.2	16.0	46.2	16.0	46.2	9.6	46.2	9.6
			2.0	39.7				39.7	30.2	39.7	30.2	39.7	16.8	39.7	16.8	39.7	12.2	39.7	12.2	39.7	7.3	39.7	7.3
			2.8	30.2	28.1	30.2	28.1	30.2	20.2	30.2	20.2	30.2	10.9	30.2	10.9	30.2	7.8	30.2	7.8	30.2	4.4	30.2	4.4
			3.6	21.2	18.5	21.2	18.5	21.2	12.2	21.2	12.2	21.2	6.2	21.2	6.2	21.2	4.4	21.2	4.4	21.2	2.6	21.2	2.6
PIER LOCATION 5	 	9.0	0.6	81.0	68.9	67.2	81.0	75.7	67.2	60.8	81.0	51.8	67.2	42.2	79.2	33.6	64.0	28.1	56.2	27.0	46.2	23.0	
			1.3	72.2	70.6	59.3	59.3	70.6	64.0	59.3	51.8	72.2	43.6	59.3	36.0	67.2	28.0	53.3	23.0	47.6	22.1	38.4	18.5
			2.0	56.2	56.2	44.8	44.8	56.2	47.6	44.9	37.2	56.2	31.4	47.6	25.0	49.0	19.4	38.4	16.0	33.6	14.4	27.0	12.2
			2.8	38.4	37.2	30.2	27.0	38.4	29.2	30.2	22.1	38.4	17.6	29.1	14.4	30.2	10.9	23.0	9.0	20.2	8.4	16.0	6.8
			3.6	24.0	21.2	17.6	14.4	24.0	16.0	18.5	11.6	22.1	9.0	16.0	7.3	16.0	5.3	11.6	4.4	10.2	4.0	7.8	3.2
		12.6	0.6	74.0	57.8	57.8	74.0	65.6	56.2	49.0	74.0	43.6	56.2	33.6	60.8	27.0	44.9	22.1	41.0	22.1	31.4	17.6	
			1.3	64.0	49.0	49.0	64.0	54.8	49.0	41.0	64.0	36.0	49.0	28.1	50.4	22.1	37.2	17.6	33.6	17.6	26.0	14.4	
			2.0	49.0	37.2	36.0	49.0	49.0	39.7	37.2	28.1	49.0	25.0	34.8	19.4	36.0	15.2	26.0	12.2	24.0	12.2	17.6	9.6
			2.8	33.6	31.4	24.0	21.2	33.6	24.0	24.0	16.8	30.2	14.4	20.2	10.9	21.2	8.4	15.2	6.8	13.7	6.8	10.2	5.3
			3.6	20.2	17.6	13.7	10.9	20.2	12.2	13.7	8.4	16.0	7.3	10.9	5.3	10.9	4.0	7.8	3.2	6.8	3.2	4.8	2.6
		16.2	0.6	67.2	65.6	49.0	49.0	65.6	56.2	49.0	38.4	64.0	37.2	43.6	27.0	46.2	22.1	32.5	16.8	30.2	18.5	22.1	14.4
			1.3	57.8	57.8	41.0	41.0	57.8	46.2	41.0	32.5	53.3	30.2	36.0	22.1	38.4	18.5	27.0	13.7	25.0	15.2	18.5	11.6
			2.0	43.6	43.6	30.2	28.1	43.6	33.6	30.2	22.1	38.4	21.2	26.0	14.4	27.0	12.2	18.5	9.6	16.8	10.2	12.2	7.8
			2.8	29.2	26.0	19.4	16.0	29.2	19.4	19.4	13.0	23.0	11.6	14.4	8.4	16.0	6.8	10.2	5.3	9.6	5.3	6.8	4.0
			3.6	17.6	13.7	10.9	8.4	17.64	10.2	10.2	6.2	12.2	5.8	7.3	4.0	7.8	3.2	5.3	2.6	4.4	2.6	3.2	2.0
	 	9.0	0.6	42.2	41.0	32.5	30.2	41.0	32.5	32.5	25.0	41.0	20.2	32.5	16.0	33.6	12.2	26.0	10.2	22.1	9.6	17.6	7.8
			1.3	37.2	36.0	29.2	26.0	37.2	27.0	29.2	21.2	36.0	16.8	28.1	13.7	29.2	10.2	22.1	8.4	19.4	7.8	14.4	6.8
			2.0	31.4	29.2	24.0	21.2	31.4	22.1	24.0	16.0	30.2	13.0	22.1	10.2	23.0	7.8	17.6	6.8	15.2	5.8	11.6	4.8
			2.8	23.0	19.4	16.8	13.7	23.0	14.4	16.8	10.2	20.2	8.4	14.4	6.8	15.2	4.8	11.6	4.0	9.6	3.6	7.3	2.9
			3.6	16.0	12.2	10.9	8.4	16.0	9.0	10.9	6.3	13.0	4.8	9.0	4.0	9.7	2.9	6.8	2.2	5.8	2.0	4.0	1.7
		12.6	0.6	36.0	34.8	26.0	24.0	36.0	26.0	26.0	18.5	33.6	16.0	23.0	12.2	25.0	9.6	17.6	7.8	15.2	7.8	11.6	6.2
16.2	0.6	36.0	34.8	26.0	24.0	36.0	26.0	26.0	18.5	33.6	16.0	23.0	12.2	25.0	9.6	17.6	7.8	15.2	7.8	11.6	6.2		
	1.3	32.5	30.2	23.0	20.2	32.5	23.0	23.0	16.0	29.2	13.7	19.4	10.2	21.2	8.4	14.4	6.2	13.0	6.2	9.6	5.3		
	2.0	27.0	24.0	18.5	16.0	27.0	17.6	18.5	12.2	23.0	10.9	15.2	7.8	16.8	6.2	11.6	4.8	10.2	4.8	7.3	4.0		
	2.8	19.4	16.0	13.0	10.2	19.4	11.6	13.0	7.8	15.2	6.8	9.6	4.8	10.9	4.0	7.3	2.9	6.2	2.9	4.4	2.2		
	3.6	13.0	9.6	8.4	6.2	13.0	6.8	7.8	4.4	9.0	4.0	5.8	2.9	6.2	2.2	4.4	1.7	3.6	1.7	2.6	1.2		

Connections for 65x65x2 Uni-Pier & 75x75x2.5 Uni-Pier

Head to post connections. See drawings on next page.

Roof Spacings width (mm)	Number of fasteners Wind region N1					Number of fasteners Wind region N2					Number of fasteners Wind region N3					Number of fasteners Wind region N4 & C1					Number of fasteners Wind region N5 & C2				
	Sheet		Tile			Sheet		Tile			Sheet		Tile			Sheet		Tile			Sheet		Tile		
	No brace	Brace	S	B	S	B	No brace	Brace	S	B	S	B	No brace	Brace	S	B	No brace	Brace	S	B	No brace	Brace	S	B	
9.0	1.5x1.5	4	2	4	2	6	2	6	2	6	2	4	2	4	2	6	2	4	2	6	2	6	2	10	2
	2.5x2.5	8	2	8	2	8	2	8	2	8	2	8	2	10	2	10	2	8	2	12	3	10	2	18	4
	3.5x3.5	10	2	10	2	12	3	12	3	12	3	10	2	14	3	12	3	16	3	16	3	10	2	20	4
	4.5x4.5	14	3	14	3	16	3	16	3	14	3	18	4	16	3	20	4	14	3	18	4	14	3	24	5
	5.5x5.5	18	4	18	4	-	-	-	-	-	-	18	4	-	-	-	-	18	4	-	-	20	4	-	-
12.6	1.5x1.5	4	2	4	2	6	2	6	2	6	2	4	2	4	2	6	2	4	2	6	2	6	2	10	2
	2.5x2.5	8	2	8	2	10	2	10	2	8	2	10	2	12	3	10	2	12	3	12	3	10	2	16	3
	3.5x3.5	12	3	12	3	14	3	14	3	12	3	14	3	16	3	12	3	16	3	14	3	14	3	20	4
	4.5x4.5	16	3	16	3	18	4	18	4	16	3	18	4	20	4	16	3	20	4	18	4	16	3	24	5
	5.5x5.5	20	4	20	4	-	-	-	-	-	-	20	4	-	-	-	-	20	4	-	-	20	4	-	-
16.2	1.5x1.5	6	2	6	2	6	2	6	2	6	2	6	2	8	2	6	2	6	2	8	2	6	2	10	2
	2.5x2.5	8	2	8	2	10	2	10	2	8	2	10	2	12	3	8	2	12	3	10	2	12	3	18	4
	3.5x3.5	12	3	12	3	16	3	16	3	12	3	16	3	20	4	12	3	16	3	18	4	14	3	24	5
	4.5x4.5	16	4	16	4	20	4	20	4	16	4	20	4	24	5	16	4	20	4	22	5	18	4	26	6
	5.5x5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	1.5x1.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	6	2
	2.5x2.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	6	2
	3.5x3.5	8	2	8	2	8	2	8	2	8	2	8	2	10	2	8	2	10	2	8	2	8	2	10	2
	4.5x4.5	12	2	12	2	12	2	12	2	12	2	12	2	14	3	12	2	14	3	12	2	12	2	14	3
	5.5x5.5	16	3	16	3	16	3	16	3	16	3	16	3	18	4	16	3	18	4	16	3	16	3	18	4
NA	1.5x1.5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2.5x2.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	3.5x3.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	4.5x4.5	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2
	5.5x5.5	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2	8	2
NA	1.5x1.5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2.5x2.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	3.5x3.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	4.5x4.5	8	2	8	2	8	2	8	2	8	2	8	2	10	2	8	2	10	2	8	2	8	2	10	2
	5.5x5.5	10	2	10	2	10	2	10	2	10	2	10	2	12	3	10	2	12	3	10	2	10	2	12	3
9.0	1.5x1.5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2.5x2.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	3.5x3.5	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2
	4.5x4.5	10	2	10	2	10	2	10	2	10	2	10	2	12	3	10	2	12	3	10	2	10	2	12	3
	5.5x5.5	12	3	12	3	12	3	12	3	12	3	12	3	14	3	12	3	14	3	12	3	12	3	14	3
12.6	1.5x1.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	2.5x2.5	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2
	3.5x3.5	8	2	8	2	8	2	8	2	8	2	8	2	10	2	8	2	10	2	8	2	8	2	10	2
	4.5x4.5	10	2	10	2	10	2	10	2	10	2	10	2	12	3	10	2	12	3	10	2	10	2	12	3
	5.5x5.5	14	3	14	3	14	3	14	3	14	3	14	3	16	3	14	3	16	3	14	3	14	3	16	3
16.2	1.5x1.5	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
	2.5x2.5	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2
	3.5x3.5	8	2	8	2	8	2	8	2	8	2	8	2	10	2	8	2	10	2	8	2	8	2	10	2
	4.5x4.5	12	3	12	3	12	3	12	3	12	3	12	3	14	3	12	3	14	3	12	3	12	3	14	3
	5.5x5.5	16	3	16	3	16	3	16	3	16	3	16	3	18	4	16	3	18	4	16	3	16	3	18	4

Connections details



Fin plate to bearer connections

(For other pier locations, other wind regions and fixing details see Page 10)

Sheet	Roof width (m)	Pier centres (mxm)	Number of fasteners Fin plate to bearer Sheet roof Wind region N3		Number of fasteners Fin plate to bearer Sheet roof Wind region N4 & C1		Number of fasteners Fin plate to bearer, Sheet roof Wind region N5 & C2	
			Screws	Bolts	Screws	Bolts	Screws	Bolts
PIER LOCATIONS 1 & 5	9.0	1.5x1.5	2	2	2	2	3	2
		2.5x2.5	2	2	3	2	5	3
		3.5x3.5	2	2	4	2	7	4
		4.5x4.5	3	2	5	3	9	5
		5.5x5.5	3	2	6	3	10	6
	12.6	1.5x1.5	2	2	3	2	4	3
		2.5x2.5	3	2	4	3	7	4
		3.5x3.5	3	2	6	3	9	5
		4.5x4.5	4	2	7	4	12	7
		5.5x5.5	5	3	8	5	14	8
	16.2	1.5x1.5	2	2	3	2	5	3
		2.5x2.5	3	2	5	3	9	5
		3.5x3.5	4	3	7	4	12	7
		4.5x4.5	5	3	9	5	15	8
		5.5x5.5	6	3	11	6	18	10

Tile	Roof width (m)	Pier centres (mxm)	Number of fasteners Fin plate to bearer Tile roof Wind region N3		Number of fasteners Fin plate to bearer Tile roof Wind region N4 & C1		Number of fasteners Fin plate to bearer, Tile roof Wind region N5 & C2	
			Screws	Bolts	Screws	Bolts	Screws	Bolts
PIER LOCATIONS 1 & 5	9.0	1.5x1.5	2	2	2	2	2	2
		2.5x2.5	2	2	2	2	2	2
		3.5x3.5	2	2	2	2	2	2
		4.5x4.5	2	2	2	2	2	2
		5.5x5.5	2	2	2	2	2	2
	12.6	1.5x1.5	2	2	2	2	2	2
		2.5x2.5	2	2	2	2	2	2
		3.5x3.5	2	2	2	2	2	2
		4.5x4.5	2	2	2	2	2	2
		5.5x5.5	2	2	2	2	2	2
	16.2	1.5x1.5	2	2	2	2	2	2
		2.5x2.5	2	2	2	2	2	2
		3.5x3.5	2	2	2	2	2	2
		4.5x4.5	2	2	2	2	2	2
		5.5x5.5	2	2	2	2	2	2

Notes on fasteners

Head to post fasteners

Screws: Metal Teks, 14—20 x 22 to AS 3566 Class 4

Bolts: M12 x 100mm galvanised mild steel

Fin plate to bearer fasteners

Screws for timber bearers:

Type 17, 14—10 x 65 to AS 3566 Class 4

Screws for steel bearers:

Metal Teks, 14—20 x 22 to AS 3566 Class 4

Bolts: M12 galvanised mild steel

Bracing

See drawings on Page 10

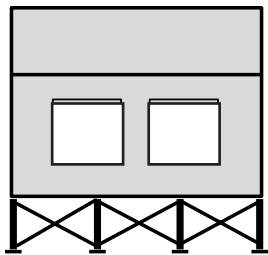
Bracing must be used in both directions ① and ② (drawing below), and each is designed separately.

Angle bracing (50 x 50 x 2.5mm DURAGAL or equivalent) has greater bracing capacity than strap bracing, and is recommended.

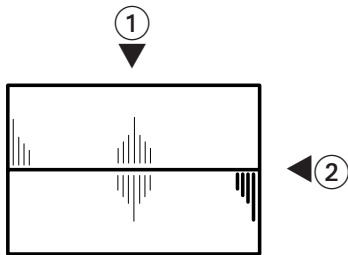
Strap bracing 51 x 1.6 mm may be used. It must be tightened using tensioners (drawing on Page 11).

Both types of bracing are typically fixed to Uni-Piers with two screws at each end, no more than 20 mm from the top or bottom of the Uni-Pier (Page 11). Where the braces cross, fix with one screw.

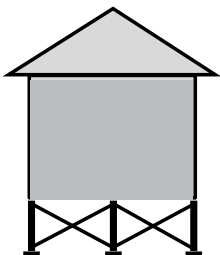
It is important to remember that bracing seen on Elevation ① resists wind loads from Direction ②, and vice-versa (drawing below).



ELEVATION ①
Area ① is shaded
3 bracing sets shown



PLAN



ELEVATION ②
Area ② is shaded
2 bracing sets shown

1 Find areas

Calculate Area ① and Area ② (drawing at left).

If a house is L-shaped, divide it into two separate blocks and calculate the wind loading on each block.

2 Calculate the total bracing capacity required

For Area ①, and then for Area ②, use the formulas appropriate to the wind region of the job (tables ①&② below).

3 Determine the capacity of bracing-sets that match the height and spacing of your piers

For Area ① and then for Area ②, get the values from the Capacity table on Page 9.

If the pier heights or pier spacings are not the same throughout the job, you will need to determine more capacities (see examples on Page 9).

4 Determine the number of bracing sets required

For Area ① and then for Area ②, divide the capacities obtained in Step 3, into the total bracing required (from Step 2). Always round a fractional answer up to the nearest whole value.

Formulas to calculate total bracing capacity required (in kN)

Table ①

Wind regions	Formulas
N1	Area ① x Ka x 1.2 Area ② x Ka x 0.858
N2	Area ① x Ka x 1.63 Area ② x Ka x 1.17
N3	Area ① x Ka x 2.56 Area ② x Ka x 1.83
N4 & C1	Area ① x Ka x 3.81 Area ② x Ka x 2.72
N5 & C2	Area ① x Ka x 5.61 Area ② x Ka x 4.01

Table ②

Reduction factors (Ka)			
Area ① or ②	Ka	Area ① or ②	Ka
10 m²	1.0	60 m²	0.853
15 m²	0.966	65 m²	0.84
20 m²	0.933	70 m²	0.84
25 m²	0.913	75 m²	0.833
30 m²	0.893	80 m²	0.827
35 m²	0.887	85 m²	0.82
40 m²	0.88	90 m²	0.813
45 m²	0.874	95 m²	0.807
50 m²	0.867	100 m²	0.8
55 m²	0.86	200 m²	0.8

Capacity of one pair of braces (kN)

Pier spacing (mm)	Angle braces											Strap braces										
	Pier heights (mm)											Pier heights (mm)										
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
900	27.4	23.4	19.8	17	14.8	13	11.6	10.4	9.4	8.6	8	13.7	11.7	9.9	8.5	7.4	6.5	5.8	5.2	4.7	4.3	4
1200	28.4	26.4	23.4	20.6	18.4	16.4	14.8	13.4	12.2	11.2	10.4	14.7	13.2	11.7	10.3	9.2	8.2	7.4	6.7	6.1	5.6	5.2
1500	30.6	28.2	25.8	23.4	21.2	19.2	17.4	16	14.8	13.6	12.8	15.3	14.1	12.9	11.7	10.6	9.6	8.7	8	7.4	6.8	6.4
1800	31.4	29.4	27.4	25.4	23.4	21.4	19.8	18.2	17	15.8	14.8	15.7	14.7	13.7	12.7	11.7	10.7	9.9	9.1	8.5	7.9	7.4
2100	31.8	30.2	28.6	26.8	25	23.4	21.8	20.2	18.8	17.8	16.6	15.9	15.1	14.3	13.4	12.5	11.7	10.9	10.1	9.4	8.9	8.3
2400	32	30.8	29.4	28	26.4	24.8	23.4	21.8	20.6	19.4	18.2	16	15.4	14.7	14	13.2	12.4	11.7	10.9	10.3	9.7	9.1
2700	32.2	31.2	30.2	28.8	27.4	26	24.6	23.4	22	20.8	19.8	16.1	15.6	15.1	14.4	13.7	13	12.3	11.7	11	10.4	9.9
3000	32.4	31.6	30.6	29.4	28.2	27	25.8	24.4	23.4	22.2	21	16.2	15.8	15.3	14.7	14.1	13.5	12.9	12.2	11.7	11.1	10.5
3300	32.4	31.8	31	30	29	27.8	26.6	25.4	24.4	23.4	22.2	16.2	15.9	15.5	15	14.5	13.9	13.3	12.7	12.2	11.7	11.1
3600	32.4	32	31.2	30.4	29.4	28.4	27.4	26.4	26.2	24.2	23.4	16.2	16	15.6	15.2	14.7	14.2	13.7	13.2	12.6	12.1	11.7
3900	32.6	32.2	31.4	30.8	30	29	28	27	26	25.2	24.2	16.3	16.1	15.7	15.4	15	14.5	14	13.5	13	12.6	12.1
4200	32.6	32.2	31.6	31	30.2	29.4	28.6	27.8	26.8	26	25	16.3	16.1	15.8	15.5	15.1	14.7	14.3	13.9	13.4	13	12.5
4500	32.6	32.4	31.8	31.2	30.6	29.8	29	28.2	27.4	26.6	25.8	16.3	16.2	15.9	15.6	15.3	14.9	14.5	14.1	13.7	13.3	12.9
4800	32.6	32.4	32	31.4	30.8	30.2	29	28.6	28	27.2	26.4	16.3	16.2	16	15.7	15.4	15.1	14.5	14.3	14	13.6	13.2
5100	32.8	32.4	32	31.6	31	30.4	29.8	29.2	28.4	27.6	26.8	16.4	16.2	16	15.8	15.5	15.2	14.9	14.6	14.2	13.8	13.4
5400	32.8	32.4	32	31.8	31.2	30.6	30	29.4	28.8	28	27.4	16.4	16.2	16	15.9	15.6	15.3	15	14.7	14.4	14	13.7
5700	32.8	32.6	32.2	32	31.4	30.8	30.4	29.8	29.2	28.6	28	16.4	16.3	16.1	16	15.7	15.4	15.2	14.9	14.6	14.3	14
6000	32.8	32.6	32.4	32	31.6	31	30.6	30	29.4	28.8	28.2	16.4	16.3	16.2	16	15.8	15.5	15.3	15	14.7	14.4	14.1

Example for Area ① with all piers the same

Job specifications

Dimensions for Area ① are 25 m x 4 m

Wind region = N2

All piers are at 2700 spacing and 1200 mm high

Angle braces will be used.

1 Find area

$$\text{Area ①} = 25 \times 4 = 100 \text{ m}^2$$

2 Calculate the total bracing required

From Tables 1 and 2 on previous page:

$$\begin{aligned} \text{Total bracing capacity required} &= \text{Area ①} \times K_a \times 1.63 \\ &= 100 \times 0.8 \times 1.63 \\ &= 130.4 \text{ kN} \end{aligned}$$

3 Determine the capacity of bracing-sets that match the height and spacing of the piers

From the table above, we find piers at 2700 spacing and 1200 mm high have a capacity of 30.2 kN.

4 Determine the number of bracing sets required

Provide 5 sets of bracing.

Total Capacity of 5 sets of bracing:
 $30.2 \times 5 = 151 \text{ kN}$ is safe.

Example for Area ① with piers in 3 sets

Job specifications are the same as the other example except:

2 sets of piers 2700 spacing and 600 mm high

1 set of piers 2700 spacing and 1200 mm high

2 sets of piers 2700 spacing and 1800 mm high

1 Find area

$$\text{Area ①} = 25 \times 4 = 100 \text{ m}^2$$

2 Calculate the total bracing required

Total bracing capacity required = 130.4 kN (see example at left)

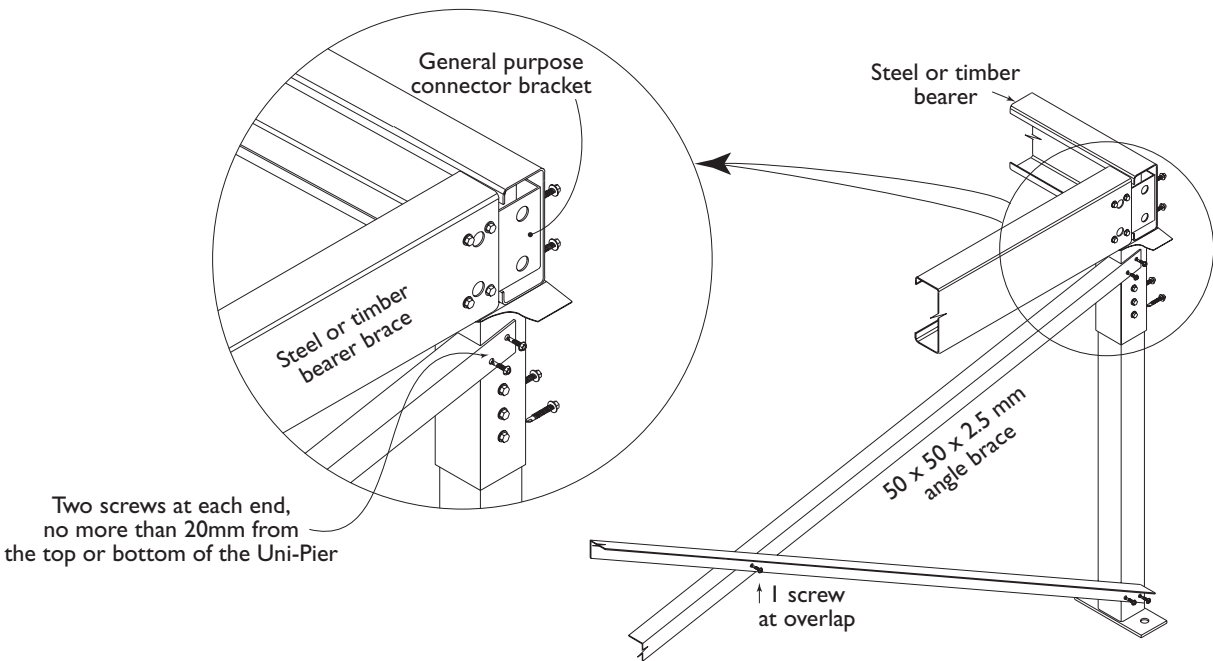
3 Determine the capacity of bracing-sets that match the height and spacing of the piers

From the table above:

Sets of piers	Capacity
2 off 2700 spacing and 600 mm high	$2 \times 32.2 = 64.4 \text{ kN}$
1 off 2700 spacing and 1200 mm high	$1 \times 30.2 = 30.2 \text{ kN}$
2 off 2700 spacing and 1800 mm high	$2 \times 27.4 = 54.8 \text{ kN}$
TOTAL CAPACITY	= 149.4 kN

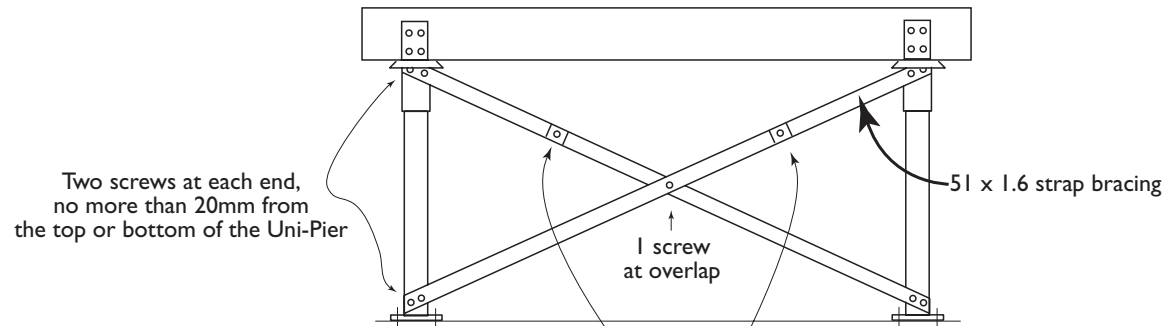
Step 2 requires 130.4 kN, so the total capacity of all 5 sets (149.4 kN) is safe, and no other combination of these sets will do.

Bracing details

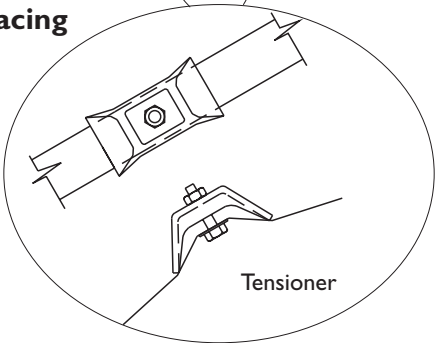


Typical angle bracing

All screws on this page are
Metal Tek's 14-20 x 22 to AS 3566 Class 4



Typical strap bracing



Design advantages of LYSAGHT Uni-Pier®

- Termite proof and will not burn in a bushfire
- Available in 14 post lengths from 200-2800 (65 x 65 mm) and 200 - 4000 mm (75 x 75 mm) in 200 mm increments
- Each post has adjustable end (up to 200mm) with integrated ant cap
- Pre-engineered load tables together with BCA and Australian Standard compliance makes obtaining council approval easier
- Uni-Pier posts can be used in any wind area
- Very cost competitive with cost-saving features: such as pre-drilled integrated cleats and welded base plates which save fabrication time and labour
- Hot dipped galvanised steel strength and durability

On behalf of BlueScope Lysaght, I certify that this document has been prepared in accordance with the relevant Australian Standards.

Uni-Pier must be used within their design limits and the published engineering specifications for the product.

BlueScope will not be held responsible for an product failure due to misapplication or misuse of the product or any consequential damages. Engineering data shows typical details.



Santan Pathmanandavel

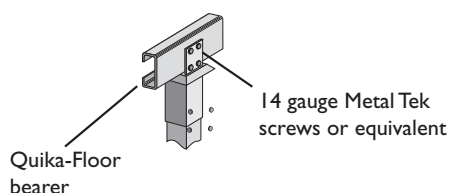
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