SUPAPURLINS®

QUICK SELECTION GUIDE FOR OPEN CARPORTS IN WIND REGIONS N2-N4

LYSAGHT

TRUSTED BY A NATION
LYSAGHT
EST 1857
FOR OVER 150 YEARS

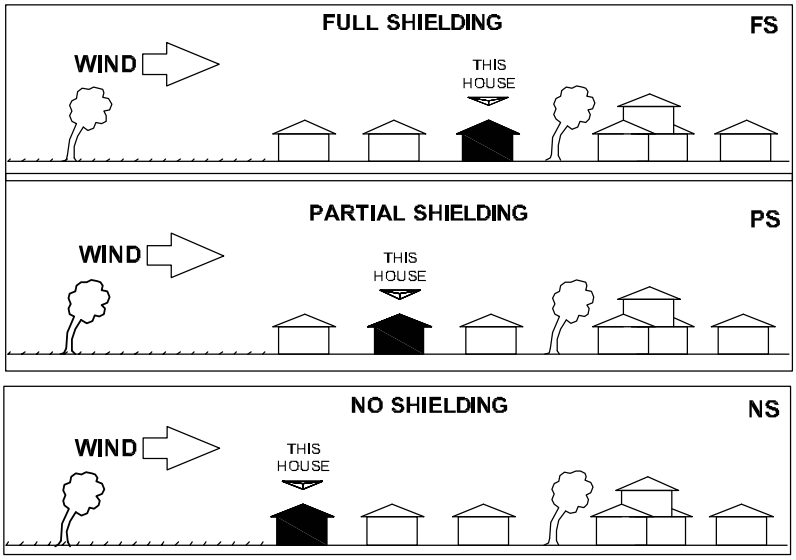
Selecting the correct Wind Classification

Shielding Classifications - adapted from AS 4055:2012

Full shielding is where at least two rows of houses or similar size permanent obstructions surround the house being considered. In regions A & B, heavily wooded areas provide full shielding. The effects of roads or other open areas with less than 100m measured in any direction shall be ignored.

Partially shielded is where there are at least 2.5 houses or sheds per hectare such as acreage type suburban development or wooded parkland. Applies to the second row of houses abutting open areas.

No shielding is where there are no permanent obstructions or where there are less than 2.5 obstructions per hectare, such as the first row of houses abutting open parklands, water or airfields.



Terrain Category adapted from AS 4055:2012

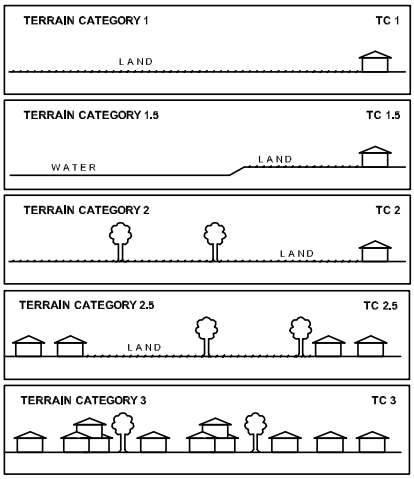
Exposed open terrain with few or no obstructions. This condition exists only for isolated houses in flat, treeless, poorly grassed plains at least 10km wide.

Large open water surfaces in all wind regions. Applies to seas, oceans,large unenclosed bays. Lakes and rivers may be classed as Category 1.

Open terrain including sea coasts, airfields, grassed with a few well scattered obstructions, such as isolated trees and uncut grass with heights of 1.0 - 1.5m.

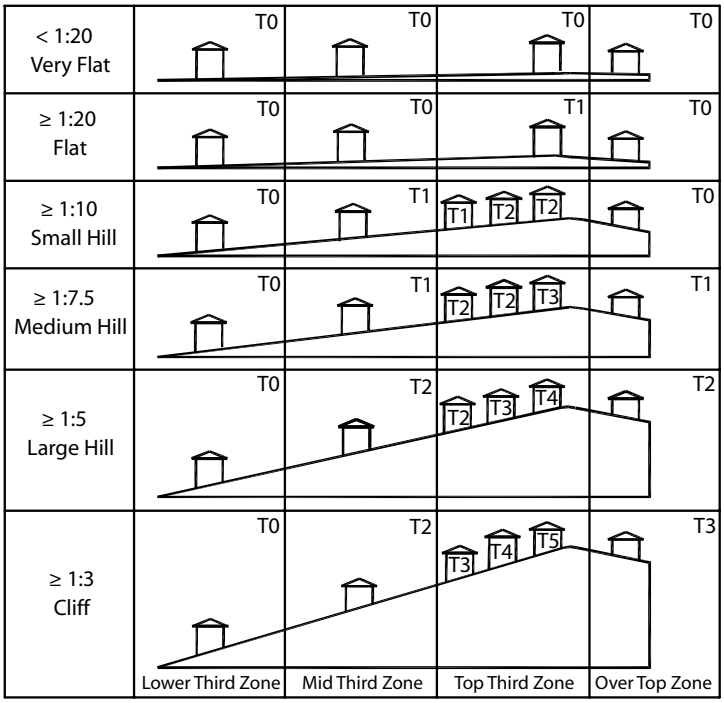
Terrain with few trees, isolated obstructions, such as agricultural land, canefields or long grass. This terrain is intermediate between TC2 & TC3 and represents the terrain in developing outer urban areas.

Terrain with numerous closely spaced obstructions having the size of houses. The minimum density of houses and trees, except for regions C and D, shall be equivalent of 10 house size obstructions per hectare.

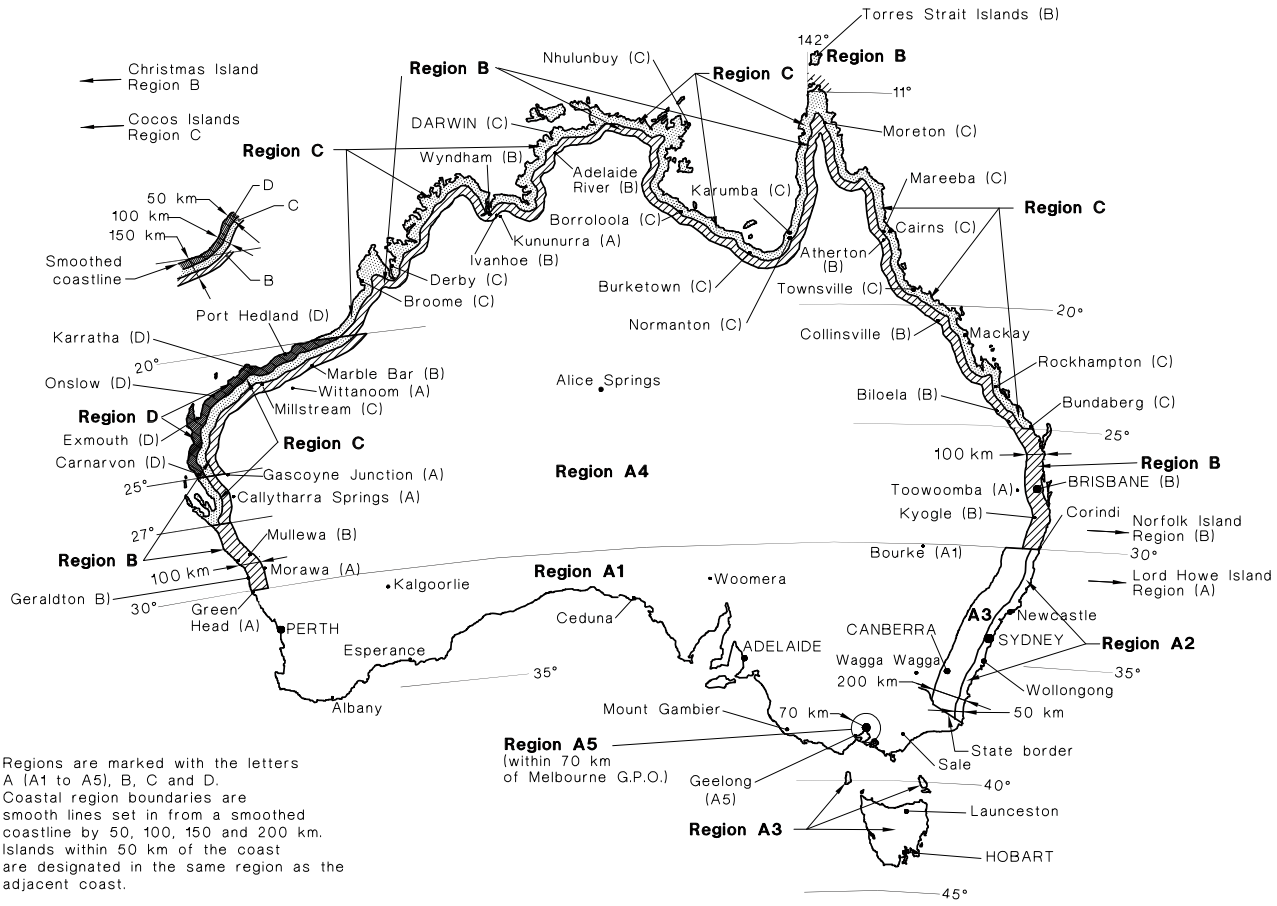


Substantial well established trees shall be considered as obstructions except in regions C & D where a minimum Terrain Category of 2.5 applies for the equivalent 10 house-size obstructions per hectare.

Topographic Class- adapted from AS/NZS 4055:2012



Wind Regions - reprinted from AS 4055:2012



Regions are marked with the letters A (A1 to A5), B, C and D. Coastal region boundaries are smooth lines set in from a smoothed coastline by 50, 100, 150 and 200 km. Islands within 50 km of the coast are designated in the same region as the adjacent coast.

Using the Shielding, Terrain, Topographic and Wind Region data from the information provided here, select your design wind classification from the table below. This allows you to choose the correct Quick Selection table.

Wind Classification from Wind Region and Site Conditions - edited and reprinted from AS 4055:2012 Table 2.2

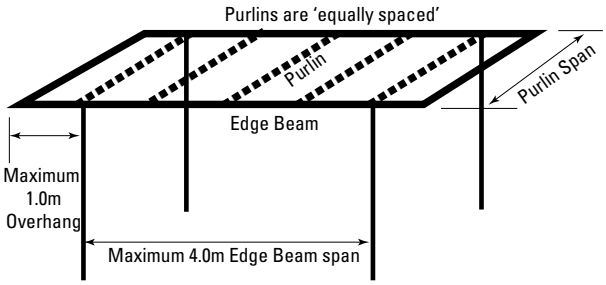
Wind Region	TC	Topographic Class												
		T0			T1			T2			T3		T4	T5
		FS	PS	NS	FS	PS	NS	FS	PS	NS	PS	NS	NS	NS
A	3	N1	N1	N1	N1	N2	N2	N2	N2	N2	N3	N3	N3	N4
	2.5	N1	N1	N2	N1	N2	N2	N2	N3	N3	N3	N3	N4	N4
	2	N1	N2	N2	N2	N2	N3	N2	N3	N3	N3	N3	N4	N4
	1.5	N2	N2	N2	N2	N3	N3	N3	N3	N3	N3	N4	N4	—
	1	N2	N3	N3	N2	N3	N3	N3	N3	N4	N4	N4	N4	—
B	3	N2	N2	N3	N2	N3	N3	N3	N3	N4	N4	N4	N4	—
	2.5	N2	N3	N3	N3	N3	N3	N3	N4	N4	N4	N4	—	—
	2	N2	N3	N3	N3	N3	N4	N3	N4	N4	N4	—	—	—
	1.5	N3	N3	N4	N3	N4	N4	N4	N4	N4	—	—	—	—
	1	N3	N4	N4	N4	N4	N4	N4	—	—	—	—	—	—

LEGEND

TC = Terrain category
FS = Full shielding
PS = Partial shielding
NS = No shielding
N = Non cyclonic
— = Not applicable

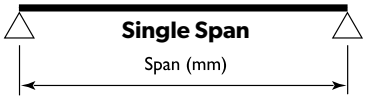
Note: For N1 Wind Classification, use the N2 Tables.

SupaPurlin Open Carport Quick Selection Chart



Purlin Size Required - Number of rows of Bridgings

N2



Purlin Span (mm)	Purlin Spacing (mm)						Edge Beam Size
	600	900	1200	1500	1800	2100	
3000	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-0B	SC15012
3500	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-1B	SC15012-1B	SC15012
4000	SC15012-0B	SC15012-0B	SC15012-1B	SC15012-1B	SC15012-1B	SC15015-1B	SC15012
4500	SC15012-0B	SC15012-1B	SC15012-1B	SC15012-1B	SC15015-1B	SC15019-1B	SC15012
5000	SC15012-1B	SC15012-1B	SC15012-2B	SC15015-2B	SC15019-1B	SC15019-2B	SC15012
5500	SC15012-1B	SC15012-2B	SC15015-2B	SC15019-2B	SC15019-2B	SC15024-2B	SC15012
6000	SC15012-1B	SC15012-2B	SC15015-2B	SC15019-2B	SC15024-2B	SC15024-2B	SC15015
6500	SC20012-1B	SC20012-1B	SC20012-2B	SC20015-2B	SC20019-1B	SC20019-2B	SC20012
7000	SC20012-1B	SC20012-2B	SC20015-2B	SC20019-2B	SC20019-2B	SC20024-2B	SC20012
7500	SC20012-1B	SC20012-2B	SC20015-2B	SC20019-2B	SC20024-2B	SC20024-2B	SC20012

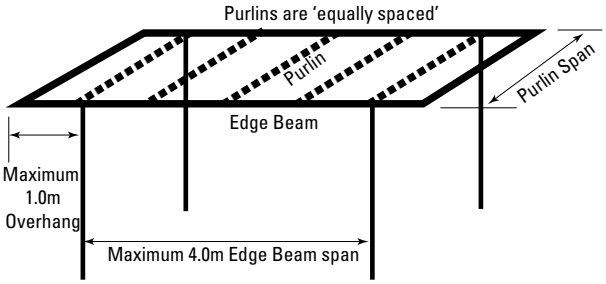
When a traditional 'Cee' is used instead of a SupaCee, the next higher gauge should be used.

Quick Selection Chart – N2

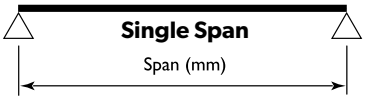
NOTES:

1. This document shall be read in conjunction with the 'LYSAGHT SupaPurlins - SupaZeds and SupaCees Users Guide, as current'.
2. All configurations are based on purlins being connected to the edge beam webs with two LYSAGHT general purpose brackets and LYSAGHT standard purlin bolts.
3. 0B, 1B, 2B & 3B indicate the number of rows of LYSAGHT HOOKLOK II or bolted bridging.
4. Bridging setout shall be as follows:
   1B – 0.5 span : 0.5 span
   2B – 0.35 span : 0.3 span : 0.35 span
   3B – 0.28 span : 0.22 span : 0.22 span : 0.28 span
5. These charts only apply to open carports with the cladding screw fixed to the purlin flange.
6. The user is to confirm the maximum purlin spacing is appropriate for the selected cladding.
7. This data is based on published LYSAGHT load capacities and is to be used only for the LYSAGHT SupaCees range of products.
8. N/A indicates no suitable section is available.
9. All LYSAGHT general purpose brackets shall be fixed using a minimum of four LYSAGHT purlin bolts.
10. SUPAPURLINS up to and including SC250 in size will be fixed using LYSAGHT PB1230 (flanged M12 x 30), 4.6 grade purlin bolts.

SupaPurlin Open Carport Quick Selection Chart



Purlin Size Required - Number of rows of Bridging



N3

Purlin Span (mm)	Purlin Spacing (mm)						Edge Beam Size
	600	900	1200	1500	1800	2100	
3000	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-0B	SC15012-1B	SC15015-0B	SC15012
3500	SC15012-0B	SC15012-0B	SC15012-1B	SC15012-1B	SC15015-1B	SC15019-1B	SC15012
4000	SC15012-0B	SC15012-1B	SC15012-1B	SC15015-1B	SC15019-1B	SC15019-1B	SC15015
4500	SC15012-1B	SC15012-1B	SC15015-1B	SC15019-1B	SC15019-2B	SC15024-1B	SC15015
5000	SC15012-1B	SC15015-1B	SC15019-1B	SC15024-1B	SC15024-2B	N/A	SC15019
5500	SC20012-1B	SC20012-1B	SC20015-1B	SC20019-1B	SC20019-1B	SC20024-1B	SC20015
6000	SC20012-1B	SC20012-2B	SC20019-1B	SC20019-2B	SC20024-1B	SC20024-2B	SC20015
6500	SC20012-1B	SC20015-2B	SC20019-2B	SC20024-1B	SC20024-2B	N/A	SC20015
7000	SC20012-2B	SC20019-1B	SC20019-2B	SC20024-2B	N/A	N/A	SC20019
7500	SC20015-2B	SC20019-2B	SC20024-2B	SC20024-3B	N/A	N/A	SC20019

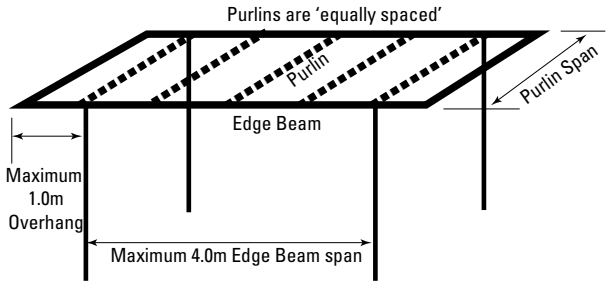
When a traditional 'Cee' is used instead of a SupaCee, the next higher gauge should be used.

Quick Selection Chart - N3

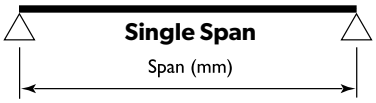
NOTES:

1. This document shall be read in conjunction with the 'LYSAGHT SupaPurlins - SupaZeds and SupaCees Users Guide, as current'.
2. All configurations are based on purlins being connected to the edge beam webs with two LYSAGHT general purpose brackets and LYSAGHT standard purlin bolts.
3. 0B, 1B, 2B & 3B indicate the number of rows of LYSAGHT HOOKLOK II or bolted bridging.
4. Bridging setout shall be as follows:
   1B – 0.5 span : 0.5 span
   2B – 0.35 span : 0.3 span : 0.35 span
   3B – 0.28 span : 0.22 span : 0.22 span : 0.28 span
5. These charts only apply to open carports with the cladding screw fixed to the purlin flange.
6. The user is to confirm the maximum purlin spacing is appropriate for the selected cladding.
7. This data is based on published LYSAGHT load capacities and is to be used only for the LYSAGHT SupaCees range of products.
8. N/A indicates no suitable section is available.
9. All LYSAGHT general purpose brackets shall be fixed using a minimum of four LYSAGHT purlin bolts.
10. SUPAPURLINS up to and including SC250 in size will be fixed using LYSAGHT PB1230 (flanged M12 x 30), 4.6 grade purlin bolts.

SupaPurlin Open Carport Quick Selection Chart



Purlin Size Required - Number of rows of Bridging



N4

Purlin Span (mm)	Purlin Spacing (mm)						Edge Beam Size
	600	900	1200	1500	1800	2100	
3000	SC15012-0B	SC15012-0B	SC15012-1B	SC15015-1B	SC15019-0B	SC15019-1B	SC15015
3500	SC15012-0B	SC15012-1B	SC15015-1B	SC15019-1B	SC15019-1B	SC15024-1B	SC15019
4000	SC15012-1B	SC15015-1B	SC15019-1B	SC15019-2B	SC15024-1B	N/A	SC15019
4500	SC20012-1B	SC20012-1B	SC20015-1B	SC20019-1B	SC20019-1B	SC20024-1B	SC20015
5000	SC20012-1B	SC20015-1B	SC20019-1B	SC20019-2B	SC20024-1B	SC20024-2B	SC20019
5500	SC20012-1B	SC20015-2B	SC20019-1B	SC20024-1B	N/A	N/A	SC20019
6000	SC20012-2B	SC20019-1B	SC20024-1B	SC20024-2B	N/A	N/A	SC20019
6500	SC25015-1B	SC25019-1B	SC25019-2B	SC25024-2B	N/A	N/A	SC25019
7000	SC25015-1B	SC25019-2B	SC25024-2B	N/A	N/A	N/A	SC25019
7500	SC25015-2B	SC25019-2B	SC25024-2B	N/A	N/A	N/A	SC25019

When a traditional 'Cee' is used instead of a SupaCee, the next higher gauge should be used.

Quick Selection Chart – N4

NOTES:

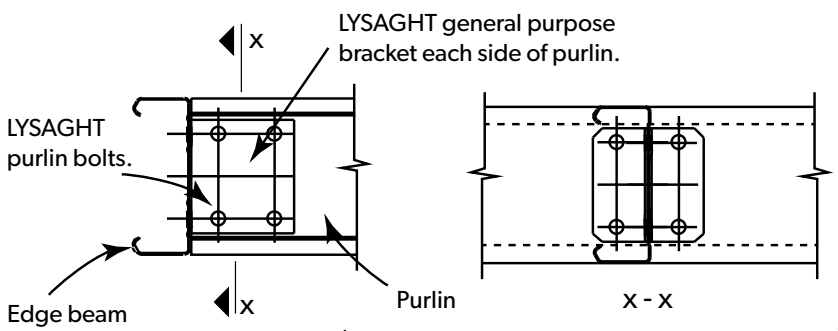
1. This document shall be read in conjunction with the 'LYSAGHT SupaPurlins - SupaZeds and SupaCees Users Guide, as current'.
2. All configurations are based on purlins being connected to the edge beam webs with two LYSAGHT general purpose brackets and LYSAGHT standard purlin bolts.
3. 0B, 1B, 2B & 3B indicate the number of rows of LYSAGHT HOOKLOK II or bolted bridging.
4. Bridging setout shall be as follows:
   1B – 0.5 span : 0.5 span
   2B – 0.35 span : 0.3 span : 0.35 span
   3B – 0.28 span : 0.22 span : 0.22 span : 0.28 span
5. These charts only apply to open carports with the cladding screw fixed to the purlin flange.
6. The user is to confirm the maximum purlin spacing is appropriate for the selected cladding.
7. This data is based on published LYSAGHT load capacities and is to be used only for the LYSAGHT SupaCees range of products.
8. N/A indicates no suitable section is available.
9. All LYSAGHT general purpose brackets shall be fixed using a minimum of four LYSAGHT purlin bolts.
10. SUPAPURLINS up to and including SC250 in size will be fixed using LYSAGHT PB1230 (flanged M12 x 30), 4.6 grade purlin bolts.

Connection Details and General Notes

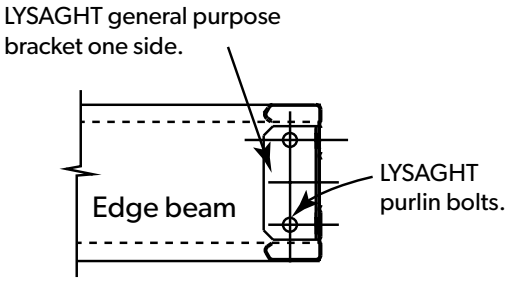
Design Assumptions

1. Design wind to AS4055:2012 (Check with local council for wind classification.)
2. Maximum building envelope—6.0m deep x 7.5m wide x 3.0m high.
3. Maximum 3 degree roof pitch
4. Non trafficable roof— maximum 0.25kPa live load.
5. All purlins sized are for single spans.
6. Edge beams to be maximum 4.0m span and 1.0m overhang. (Both ends)
7. Tables refer to genuine LYSAGHT SupaCee purlins. Substitution invalidates design data.

Connection Details



Typical Purlin/Edge Beam Connection



Typical Purlin/Beam End Connection

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