

CERTIFICATE OF STRUCTURAL ADEQUACY

Project: Standard Certification for Fencing

Project No.: 14816

Date: 7th October, 2014

For: Knotwood
Attn: Darren Galway

SCOPE

This report involves the standard certification of residential aluminium slat fencing. Structural calculations were undertaken to assess the adequacy of the proposed member sizes and fixings. Modifications have been designed where necessary.

DESIGN STANDARDS

The fencing has been assessed by this office in accordance with the following Australian Standards:

AS 1170.0:2002	Structural design actions Part 0: General Principles
AS 1170.1:2002	Structural design actions Part 1: Permanent, imposed & other actions
AS/NZS 1170.2:2002	Structural design actions: Wind actions
AS 1664.1:1997	Aluminium structures – Part 1: Limit state design

GENERAL

The fencing is 1800mm high. It is composed of aluminium posts spaced at 1500mm and slats spanning horizontally between the posts. The posts are cast into concrete bored piers.

The fencing was checked for the following guidelines:

- Region C, Terrain Category 2 (site wind speed of $V = 53.5$ m/s). This is suitable for cyclonic areas, such as exposed and coastal regions in the Northern Territory and Queensland.
- Importance level 1 (this is suitable for minor structures with low consequences for loss of human life).
- 25 years design working life.

MEMBER SUMMARY

The fencing members are in detail:

- 100x16x1.4 RHS slat, alloy 6060-T5. Refer drawing no. TS44499/C by Capral. The clear spacing between the slats is to be typically 100mm. Fix to U-channel with 2 no. 10-16x16G Hex head steel screws (galvanised) each end.
- 100x3 SHS posts at 1500mm centres maximum, alloy 6061-T6. Refer drawing no. TS47488/A by Capral.
- 30x30x1.6 U-channel, alloy 6060-T5. Refer drawing no. TS44505/D by Capral. Fix to post with 10-16x16G Hex head steel screws (galvanised) at 150mm centres maximum.

The posts are cast into $\varnothing 450$ x 1250mm deep concrete bored piers. The footing depth is suitable for cohesive and cohesion-less soil. Concrete is to be grade N32; add MasterLife 2006 corrosion inhibiting admixture as per manufacturer's recommendation to prevent chemical interaction between concrete and aluminium. Cast the posts centrally and leave 100mm cover to bottom.

Refer to drawing 14816-1 Rev A for further details on the construction of the fencing.

For Magryn & Associates Pty. Ltd.



Christiane Husmann
CP Eng.

Attachments:

- Drawing TS47488/A showing post
- Drawing TS44499/C showing slat
- Drawing TS44505/D showing channel
- Drawing 14816-1 Rev A