

15th June, 2010

To whom it may concern

and

The General Manager
Harkk Pty Ltd
3 Staite St
WINGFIELD SA 5013

Dear Sir,

***Re: Design Guidelines and Suitability for use
The Harkk System***

The Harkk balustrade system consists of:

The VIEW post system

- can be used for balustrading, handrailing, cafe screens, pool surrounds or partitioning.
- is used at post centres up to 2m, and post and glass heights up to 1.8m.
- has the glass spanning horizontally between posts.
- may be used with an Edge 67 or stainless steel handrail mounted inboard of the posts.

The EDGE 67 post system

- can be used as balustrading or handrailing, for domestic situations
- is used at post centres up to 1.5m, and glass/rail heights to 1.2m
- has the glass spanning vertically between the slab and the underside of the handrail.

The RECT 86 post system

- can be used as balustrading or handrailing
- is used at post centres up to 2m and glass/rail heights to 1.2m
- has the glass spanning vertically between the slab and the underside of the handrail.

All system are comprised of extruded aluminium posts and rails, aluminium and steel components, and glass infill panels. They can fix to existing or new concrete, steel or timber sub-framing, or to new concrete footings placed in ground.

All the handrails on the Harkk systems have a top curved face, to prevent an object (eg a glass) being left on the rail. If this were to happen it would be a safety issue, as the object may topple off and fall outside the balcony.

LOAD CAPACITIES

The systems are designed to comply with the Building Code of Australia, and the relevant Australian/New Zealand Standards. These include:

AS/NZS 1170	Structural Design Actions
- Part 0	General Principles
- Part 1	Permanent, Imposed and Other Activities
- Part 2	Wind Actions
AS 1288	Glass in Buildings
AS/NZS 1664	Aluminium Structures
AS 1926.1	Swimming Pool Safety – Safety Barriers
AS 4100	Steel Structures
AS/NZS 4673	Cold Formed Stainless Steel Structures

In particular AS/NZS 1170.1 Table 3.3 specifies design loads for balustrades and barriers on balconies etc. These can be divided into three categories.

Type C3 – Private (Domestic) areas, with loads of 0.75kN/m horizontally on the rail or 1 kPa infill load on the panels. All the balustrade systems satisfy this loading.

Type C1/C2 – General Public Access areas with fixed seating. Loadings are 1.5 kN/m horizontally on the rail or 1.5 kPa infill load on the panels. The Harkk VIEW and RECT 86 systems are recommended for this type of area.

Type C5 – Areas subject to overcrowding, such as shopping malls, bars, etc. Loadings are 3 kN/m horizontally. The RECT 86 and VIEW systems are recommended for these areas.

AS/NZS 1170.2 specifies wind loads for different regions and building configurations. Depending on rail height and post spacing selected, one or more systems may satisfy the requirements for any area and situation.

Loadings for Pool Fencing is generally less than the comparable loading for a similar balustrade situation.

FIXING

A variety of fixing methods and configurations have been designed and detailed for fixing the various Harkk components to existing frameworks, which may be concrete, steel, timber or masonry.

While the Harkk system in general and the fixing components are designed to meet the required loads, no guarantee or responsibility can be taken by Magryn & Associates Pty

Ltd or Harkk Pty for the strength or suitability of the substructure to support the balustrade or handrailing.

If the strength of the supporting substructure is not known to be adequate, it is recommended that the client or Harkk Pty Ltd engage suitable engineering expertise to prove that it has sufficient strength.

For Magryn & Associates Pty Ltd

A handwritten signature in black ink, appearing to read 'Magryn', with a stylized flourish extending to the right.

Terry Magryn