design
The use of wide vertical batten patterns is a classic design technique, introducing subtle optical rhythms into any space as perspective effects alter the apparent profile of the repetitive pattern. A strong vertical element is introduced into the total design, while gaps between battens preserve a sense of space and light.

Arden's V1 vertical batten style locates the battens just clear of the bulkhead or staircase tread / stringer. Balustrade infill overlapping or overhanging the bulkhead may be desired to create a more sophisticated style in its own right, but most importantly; this promotes maximum flexibility for the architect in determining the length of overhang to accomplish specific functional or visual goals. These may include linking the balustrade with a full height partition, screen, or staircase balustrade in the same style. Satin stainless frames, stanchions and CHS handrail provide a welcome contrast with the warm tones of the timber.

Figure 1. Front elevation. Vertical battens overhang void edge floor to create a long profile. Amount of overhang may be varied within a single run for specific architectural statements. Top extent of battens is usually placed approximately 100mm above the handrail level.

Figure 2. Back elevation. Stainless steel handrail stanchions and cross-bars contrast agreeably with the timber infill. Spacing of stanchions and battens is managed so that stanchions occur at the mid-point between battens.

※ indicated on dimensions denotes a nominal dimension that typically varies according to specific application, engineering requirements or client preferences.
Vertical timber batten balustrade

- 90x25 timber battens at 100-140mm spacing
- Intermediate stanchions spaced at equal intervals
- Max 1500 centres
- 300mm Nominal overhang of timber battens wrt lower floor ceiling

- 50.8 stainless steel SHS
- Top cap of stanchion welded and ground smooth
- Battens fixed from rear

- 50 x 12mm plate stainless steel fixing rails
- Floor coverings
- Structural floor
- Ceiling plaster line

- Design elements
**technical**

Standard installation is 90x32mm or 90x25mm pre-finished select grade premium hardwood species battens mounted to satin stainless frames, and continuous 38.1mm or 50mm CHS stainless steel handrail.

Heavy duty mild steel base plates concealed beneath edge trim or floor coverings transfer the potential loads to fixings located away from the void edge.

Figure 3. Plan view. Offset base plates (see figure (4)) allow stanchions to be situated close to the void edge, maximising traversable floor space. Vertical battens are generally set up so as be virtually flush with the bulkhead plaster line.

Figure 4. Stanchion section showing fixing and fabrication details.

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Figure 5. Isometric view of void edge balustrade section.

90x25 timber battens at 80-110mm spacing

Typical 38\(\text{Ø}\) stainless steel CHS handrail. A range of other handrail profiles available.
compliance

Arden is a BSA licensed contractor for carpentry, joinery, glass, glazing and aluminium as well as structural metal fabrication and erection. Arden supplies a Form 16 (Licensed Contractor) on all projects. In design and construct contracts, a Form 15 (Design Engineer) certification is supplied upon request. For products and services incorporating the V1 system, this table shows compliance with relevant codes and standards.

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Applicability</th>
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<tr>
<td>BCA</td>
<td>The Building Code of Australia</td>
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<td>AS NZS 1170.1-2002</td>
<td>Structural Design Actions – Permanent, imposed and other actions</td>
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<td>AS NZS 1554.1-2004</td>
<td>Structural steel welding - Welding of steel structures</td>
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<td>AS 1554.6-1994</td>
<td>Welding stainless steels for structural purposes</td>
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<tr>
<td>AS NZS 4586-2004</td>
<td>Slip resistance classification of new pedestrian surface materials</td>
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<tr>
<td>AS 1428.1-2009</td>
<td>Design for access and mobility</td>
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Key
- full compliance with the code
- not applicable to this element

design note

For all commercial applications, it is important that sufficient space for the stairwell cavity be allowed to satisfy Australian Standards and BCA requirements.

The footprint is primarily driven by the floor to floor rise, as well as the staircase configuration chosen. However, stringer and balustrade style design may increase the amount of space required. Allowing too small a cavity can restrict the design options of the staircase. Also, points at where the staircase interacts with other structures are best addressed early in the design cycle.

Consultation with Arden early on will help ensure that these design issues can be addressed in a cost-effective manner.