

THE "PIONEER"™ POST

Environmental issues

When enhancing the built environment, attention must be given to the effect on environment from which the raw materials are drawn.

As an example the post illustrated below is 300x300 square and contains no heart (otherwise known as pith). The growth rings show that the log was about 2 metres in diameter!! Logs like this are only available from rain forests in third world countries where logging practices can be scandalous and environmental certificates of questionable value.



Virgin rainforest product



In 1999 a historic agreement was achieved between the Queensland State Government, peak environmental bodies and the timber industry. In Australia, the South East Queensland Forests Agreement (SEQFA) remains the only forestry agreement to have widespread acceptance by environmental groups. Refer to our Boardwalk Design Guide where this remarkable agreement is elaborated upon.

The effect of this agreement is that logs are much smaller and of a different grade than prior to 1999. This impacts design as quantities of large timber sizes are not available and grading has become critically important. A significant change is the difficulty in providing 150x150 conforming to grade specification i.e. free of heart (pith).

The largest size, free of heart, that is available in any quantity from the sustainably managed Queensland forest is 125x125. This is discussed in detail in our external *Timber Design Note No 5* at http://www.outdoorstructures.com.au/pdf/etdn_5.pdf

Design considerations

Larger posts can be striking in appearance and when at least 175x175, AS2086 allows them to be supplied with the heart (pith) in the centre. We have found that 200x200 which contains proportionally less heart is much more stable but this size along with 175x175 invariably splits down the length and the exposed heart eventually deteriorates, OSA has used its experience to develop a large section bollard that overcomes the typical issues associated with large sections.



OSA supplied product
Spotted gum oiled with
Tanacoat Golden Oak.
192mm size.

Pioneer™ Post

The Pioneer™ Post allows designers to utilise a readily available and responsible resource.

When the plantations which were part of the SEQFA are on line the post will be an ideal application for this smaller diameter timber.

The advantage of the Pioneer™ Post;

- Uniform Size – the sawing tolerance of a standard rough-sawn 200x200 post is +8mm, -3mm and this can cause major problems on site
- Improved structure – movement at a single expansion groove can be more than anticipated. The three grooves spread the movement over the post.
- Increased safety all edges are pencil rounded – even the expansion groove are pencil rounded
- One plain face allows for engraving
- A decorative cast cap can be utilised to enhance the aesthetics.
- Sustainable resource

The post is available in two grades, bollard grade (600mm in-ground), and select post – for shelter sheds and similar. When used as bollards the Pioneer™ Post must be capped.

Examples of incorrect use of heart in timber



Split top and side

Deterioration at heart



RevNo	Revision note	Date	Signature	Checked
A	REDRAWN	30/01/2003		

<p>225mm MINIMUM FOR 150x150 PINE</p>	<p>410mm MINIMUM FOR 200x100 HARDWOOD</p> <p>expected unsound heart is 125x125</p>
<p>275mm MINIMUM FOR 175x175 HARDWOOD with heart centre</p>	<p>350mm MINIMUM FOR 100x100 HARDWOOD</p> <p>expected unsound heart is 100x100</p>
<p>350mm MINIMUM FOR 200x75 HARDWOOD</p> <p>expected unsound heart is 112x112</p>	<p>510mm MINIMUM FOR 150x150 HARDWOOD</p> <p>unsound heart is minimum of 150x150</p>

<p>Outdoor Structures Australia Practical solutions that enhance community design projects</p> <p>Old College Road, Gatton, Queensland, Australia PO Box 517, Gatton, Queensland, Australia, 4343 Ph: (07) 5462 4255 Fax: (07) 5462 4077 Email: timber.tex@uq.net.au Website: www.outdoorstructures.com.au</p>	Date 30/01/2003	CUTTING PATTERNS FOR PINE AND HARDWOOD		Description
	Drawn J MILLARD	Scale N.T.S.	Job No OSA	Drawing No CP1
	Approved E.M.S.			

This drawing shows the different size logs needed to cut different size timbers.