Acoustic Fencing – Advice on Specification

All solid fencing has the potential to perform an acoustic function. In most cases, a well-constructed timber fence will be adequate as an "acoustic" fence. However, certain constructions (shiplap timber for example) should be avoided and there are certain minimum requirements for a fence to provide successful, long-term acoustic screening.

Of key importance is that the specification for a "close-boarded fence" contained in BS1722 (often specified as the standard for timber fencing) is not an adequate construction for a fence from which an acoustic function is required.

As a minimum standard, the construction of the fence should be as follows:

> The fence should be solid construction, with good quality timber (no warping, knot holes or damage) of at least 20mm (ideally 25mm) thickness in all places, including where the boards overlap.
>
> Boards should continue across the front of posts to minimise gaps and wide overlaps (minimum 25mm is recommended) allow for timber expansion and contraction whilst minimising the possibility of gaps appearing over time.
>
> The superficial mass of 25mm thickness of timber is approximately 10 to 15 kg/m^2, and this is sufficient to prevent a reduction in performance by noise leaking through the fence itself.

The attached drawing details an example of an acoustic fence which would comply with the above criteria for site-built acoustic fencing.

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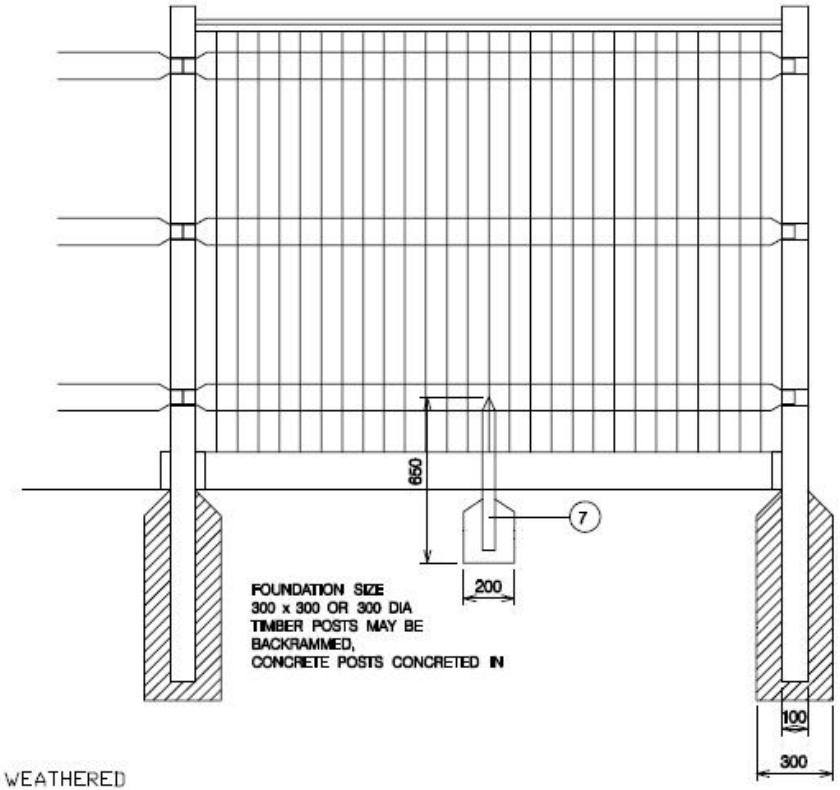

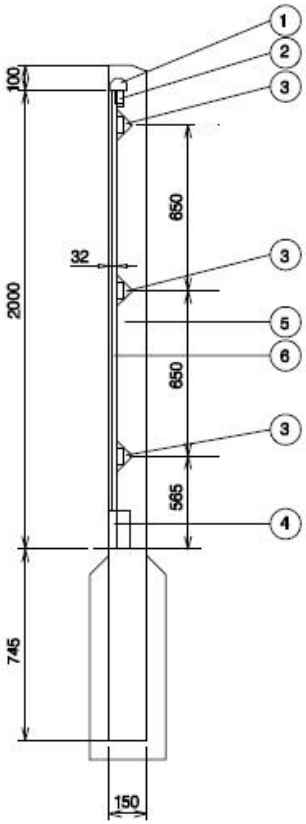

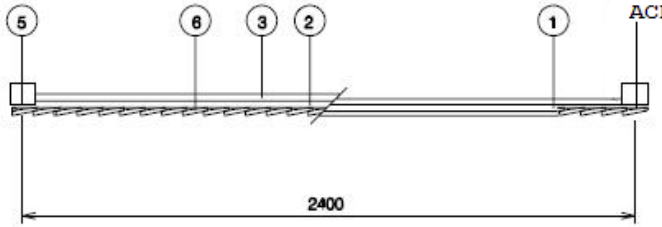

BOARDS TO CONTINUE ACROSS POSTS

LEGEND

1-CAPPING 75x38 TWICE WEATHERED

2-COUNTER RAIL 65x25 (65x25 MORTICE)

3-ARRIS RAIL ex 87x87 TENNONED (DRIVE IN)
(65x25 MORTICE)

4-GRAVEL BOARD 150x32
CLEATS 150x50x38

5-POSTS 2850x150x100 HALF WEATHERED
(4 TIMES MORTICED)
CORNER POSTS 2950x150x150 HALF WEATHERED
(8 TIMES MORTICED)

6-FEATHER EDGE BOARD 150MM BOARD
MIN DIM 20MM THICK WITH 50MM OVERLAP

7-CENTRE STUMP 600x50x50 CUT AT TOP
TO FIT BOTTOM RAIL

DETAILS BASED ON BS1722 Part 5
TYPE BW 180 A
ALL TIMBER TREATED TO
BS5589 CAT A 40 YEAR LIFE

SPECIES IN ACCORDANCE WITH
BS5589 CAT A 40 YEAR LIFE