

INSTALLATION OF BOLLARDS

TIMBER
& STEEL

Setting timber and steel posts in concrete could almost be classed as universal practice due to its simplicity.

The following section covers critical information for this type of installation.

Timber

OSA was made aware of decay associated with mixing hardwood and concrete many years ago when we are supplying powerpoles. Decay was aggravated by situations such as a domestic footpath where there was frequent watering and the addition of fertilizer. This is a situation many landscaping projects would experience. As the timber shrinks a gap develops between the post and the concrete, water is trapped while fertilizer promotes decay organisms. The problem is not solved by only specifying (and hopefully receiving) Durability 1 in-ground timber.

For all timber posts in ground we recommend backfilling with:

- Natural earth if suitable,
- Fine crushed rock; or,
- No fines concrete

OSA's recommendation for no fines concrete follows that of Timber Queensland in its Technical Data Sheet No. 9 Timber Retaining Walls for Residential Applications where it says:

"No fines concrete shall be 10mm maximum aggregate size, 450 kg cement per m³ and a water cement ratio of 0.55. The concrete shall be Readymixed or hand mixed manufactured to the requirements of AS 1379. For no fines concrete the concrete shall be well agitated immediately before placing to ensure a complete coating of the aggregate. The concrete shall be discharged



directly into the holes and tamped without delay. All concrete shall be placed within one hour of batching. The no fines concrete shall not be reworked as this destroys the bond. "

It further states (which is more important for structural applications) *"For no fines concrete top the last 100mm with*



*OSA supplied product
Designed by SPLAT*

clay to prevent surface infiltration into the backfill."

Note; Structural posts should have a pole bandage added at ground level.

For large free standing in ground timber structures such as totems the advice of a specialist timber engineer should be sought. Alternatively contact Timber Queensland for advice.

At this stage we are not aware of decay problems related to correctly treated pine set in normal concrete.

Steel

Galvanised steel is prone to rusting at the ground line. Steel set in concrete should have adequate thickness to allow for some degrade. OSA never uses less than 4mm. Specifiers should consider the application of a Tar Epoxy substitute such as Ameron Amercoat 385 to galvanised steel



Photos of poor installation detailing. This can be avoided.