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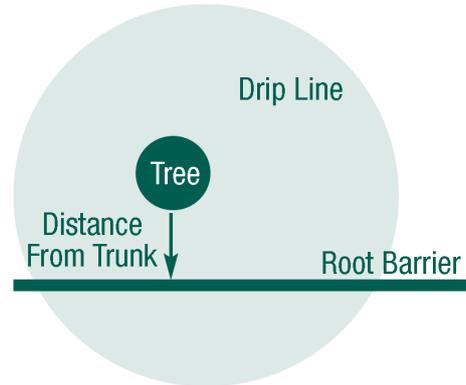
CRITICAL POINTS TO SOLVE PROBLEMS WITH TREE ROOTS, MOISTURE AND REACTIVE SOILS

1. PLACEMENT

Normal placement of the barrier is to locate it around the structure, out from and parallel to the footings of the structure. Try not to surround the tree. Our preferred method is placing the root barrier along beside the building, path, road etc so that the tree roots cannot gain access to the structure. Root Barrier works as a waterproof seal protecting the soil under the structure from moisture loss laterally. The structure prevents loss of moisture vertically and so the moisture content of the soil can be stabilised and will stay constant.

After installation the soil under the building can be rehydrated to return it to the moisture content that it was when the building was built.

Working in from the drip line, the closer you get to the trunk the higher the risk of damaging or destabilising the tree. 50% of the distance from the drip line to the trunk is regarded as the closest you can cut without major risk to plants health. If it is necessary to trench closer than halfway towards the trunk, it would be advisable to engage the services of an arborist to assess the tree prior to the work being carried out, and to help nurse the tree through the period of installation.



2. AREA

The area of good soil that the plant will require to live a healthy life may be calculated by multiplying the radius of the mature plant canopy by $\pi r^2 \times .3m$. The answer will give you the cubic volume of good soil required. If works require the ground surface area is not available for the plant, special pits filled with quality soils, drainage etc may provide the answer.

3. DEPTH

Depth is determined by a civil engineer's assessment of "the zone of influence" in the soil. In "normal" reactive clay depths between 1500mm and 4 metres may be expected, on the other hand if you strike rock at 700mm, the moisture cannot move through it then that is deep enough.

4. SEAL

Seal Sodium Bentonite is used to seal the bottom of the trench and bind the bottom of the root barrier to the undisturbed soil. In summary take the barrier down to soil that nothing will move through and bind the root barrier to it.

5. LENGTH

Sufficient to protect the structure from the effects of moisture change in the soil. BSA guidelines consider the following distances as reasonable. Structures closer than these distances to trees must be protected from, or be specially engineered to withstand the effect of the tree/s.

Height of Tree(h) Distance from house (d)

$d = 1 h$ for class H and M sites.

$d = 1.5 h$ for class E sites.

$d = 2 h$ for rows or groups of trees.

APPROXIMATE TREE HEIGHTS

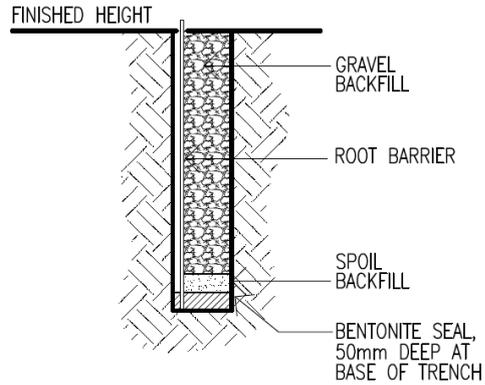
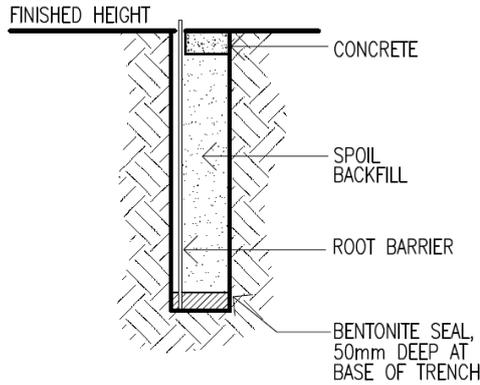
10 to 20m	20 to 30m	30 to 60m
Acacias	But-But	Blue Gum
Ash	Cedars	Cypress
Athel Tree	English Oak	English Elm
Candlebark	Lemon Gum	Figs
Manna Gum	Palms	Karri
Pepper Tree	Planes	Pines
Willows	Sheoaks	Poplars
Yate	Silky Oaks	River Gum
Yellow Gum	Spotted Gum	Sugar Gum
	Casuarina	

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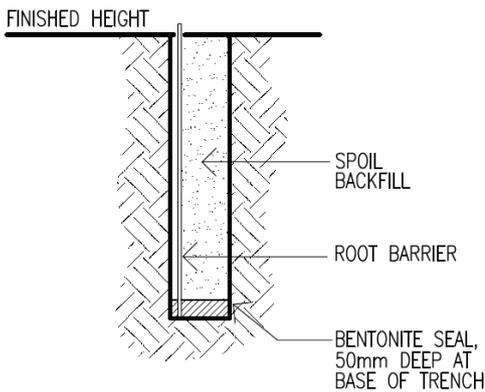
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6. TOP FINISH

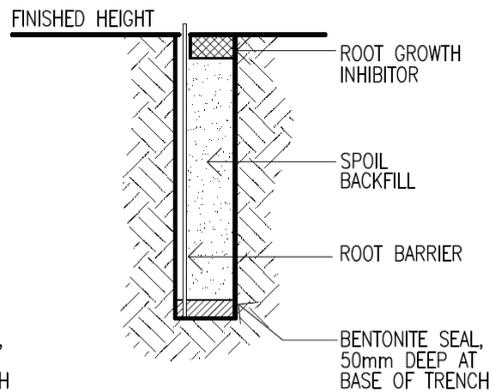
Root Barrier **must** be finished above the ground or sealed **into** concrete so that roots cannot grow over the top of it. See options below.



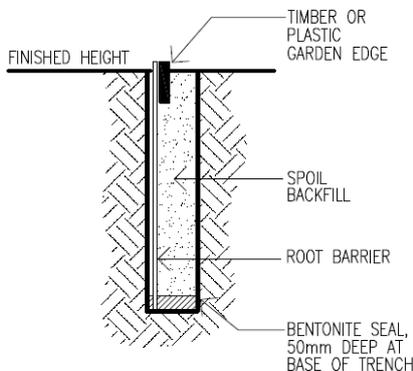
OPTION 1



OPTION 2

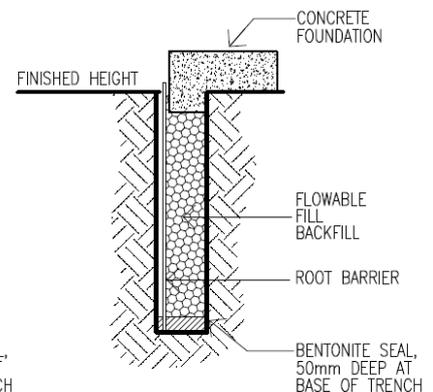
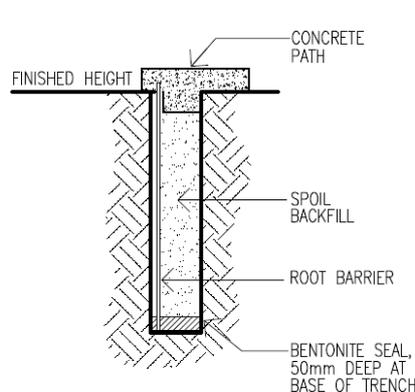


OPTION 3



OPTION 4

(NOT SUITABLE FOR PUBLIC PLACES)



OPTION 5

OPTION 6

OPTION 7