

Landscaping

A CIVIL CONTRACTOR SPECIAL FEATURE

Protecting trees: Don't spoil the soil

ONLY recently has the plight of the environment achieved headline news status, and it makes pretty depressing news at that. Throughout my working life, I've tried to give something back to the environment that supports me.

In "treading lightly on the earth", I take great pleasure in seeing the trees I've planted grow in the landscapes I've created. And I know I'm not alone in this way of thinking.

Many planners, landscape architects, developers and, of course, earthmovers and civil contractors share a passion for the natural environment and a love of trees.

However, it worries me that they often misdirect their energies and concerns into activities that actually prejudice the survival of the trees they wish to save.

I use the word "misdirect" on the basis of the many experiences I have gathered during my working life as a landscape designer, planner and educator.

We all see trees as a dominant element in the landscape. They are big. They are timeless. They have a value that transcends mere dollars. They support other life forms. They give so much and take so little. But they are mistreated and yet are so forgiving. Or are they?

My viewpoint is not based on the global issues of saving the rainforests or neutralising acid rain or curtailing the wood chip industry (I'd love to be able to). I focus much closer to home — the conservation of trees on development sites and planting of trees on such sites is an issue that all designers and developers can address.

I believe conservation begins on our own doorstep — putting our own house in order first, but doing so in a sensible, logical, but pragmatic manner.

I am convinced that many architects, developers and other "lovers of trees" see these arboreal delights as a mere cosmetic after-thought to their



Without proper care during construction, trees subject to preservation orders are unlikely to survive.

Tree preservation orders are becoming increasingly important on many development projects. Yet when carried out in isolation from other key factors, they may serve no useful purpose. Dave Grubb looks at ways to please trees in construction projects.

grand vision; they are pieces of ornamentation retained or placed in the landscape for aesthetic value only.

We design roads, towns, housing lots, dams and a multitude of other environmental intrusions, all of which have one thing in common with the trees. They are rooted firmly in the soil. As earthmoving contractors, readers must be aware of this simple fact.

Unfortunately, trees are perceived

as and treated as lollipops, a stalk with a bush on top. The fact that anything happens below the soil surface is lost on most of these "closet" lovers of trees. And that is the problem.

All trees (and the majority of all other plants), whether old or new, need soil in which to grow. This soil provides anchorage, water, nutrients and oxygen, by which means the roots "breathe". If we destroy the estab-

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lished soil characteristics, we prejudice the survival of existing trees.

At the planning stage of most developments, tree preservation orders are put in place, together with conditions of planning on the retention of trees. Only those trees protected by legislation must be retained; all others may be lost.

Development occurs and in the long run those "protected" trees slowly become stag-headed monsters, with die-back. They shed limbs and finally die or are blown over in the first storm.

But why should this be, when the trees were protected by a preservation order? Simply, development destroys the very life blood of trees — the soil and its structure.

Also, trees naturally grow in clusters, or in support groups if we are to use analogies with our own social fabric. Rarely are groups of trees protected, so that individuals remain, prey



By its nature, the construction process results in fundamental changes to the soil, changes which are rarely beneficial to established trees.

to wind and the encroachment of development. United they stand, divided they fall. In time, no trees remain.

The new soil environment will not support healthy growth and the built environment changes the micro climate. And besides, large trees that do survive will damage poorly designed footings, structures and services, so

they will be removed one day, just to appease those urban guerillas who fear anything natural, seeing it as a threat.

And then along come the flowering trees and shrubs, carefully planted in those vacant little patches of soil.

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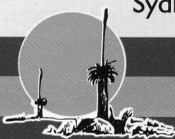
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Don't spoil the soil continued

No problems here. No danger, no intrusion — but no environmental benefit, no associated ecology, no visual benefit to relieve the monotony of the bleak suburban skyline.

Forgive my cynicism, but I do believe that new codes of practice should be put in place for both conserving existing trees and planting new ones.

Planners must accept that, as with old people, old trees do not accept change readily. These are my recommendations:

- do not change the site characteristics within a zone of at least one and a half times the diameter of the crown
- do not permit any work or storage of materials or traversing by mechanised plant in this "no go" area, which should be fenced off
- retain groups of trees
- do not impede or alter surface or sub-surface drainage.

If such conditions cannot be achieved, and enforced, I suggest that the trees should go. But the smaller, more adaptable trees should stay (our children adapt to change quite readily).

New tree planting zones should be established in areas free of above- and below-ground services. In such areas, full site preparation can be implemented and the new trees will romp away.

The urban forestry program in Townsville is a great model for what can be achieved. This is the sensible, pragmatic approach.

New trees for old! Such considerations must be balanced against the need to conserve the old trees for ecological reasons — for example, they act as nesting sites for many bird species and refuge for a much wider range of animals.

We tend to forget the contribution that old trees make to the ecological diversity of our environment.

Obsolescence induced by our neglect of older trees could, in fact, be of benefit to other creatures, and perhaps conservation strategies should be put in place that permit the older trees to age gracefully as part of an integrated



Trees planted after construction are far more adaptable than existing trees. However, any replanting policy needs to focus on using the most appropriate species.

vegetation protection policy.

This would be based on vegetation corridors linking "islands" of significant retained trees with a wide age profile, so that replacement may occur naturally.

But this takes both space and time. Do we have the luxury of both? With strategic planning, anything is possible. Especially if conservation is integrated with replanting.

Any replanting policy needs to be focussed on using the correct species for the new site conditions (the right tree in the right place) with full management and monitoring back-up, to ensure any problems can be

"nipped in the bud".

But any conservation or planting strategies will be doomed to failure, even with a sensible, balanced approach, if designers and conservationists ignore the soil. Without a living soil, there can be no life, there can be no trees — well, no big, healthy ones, at least.

Dave Grubb is a lecturer in landscape management in the Department of Plant Production, University of Queensland, Gatton College. He is also secretary of the Queensland Association of Landscape Industries.

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