

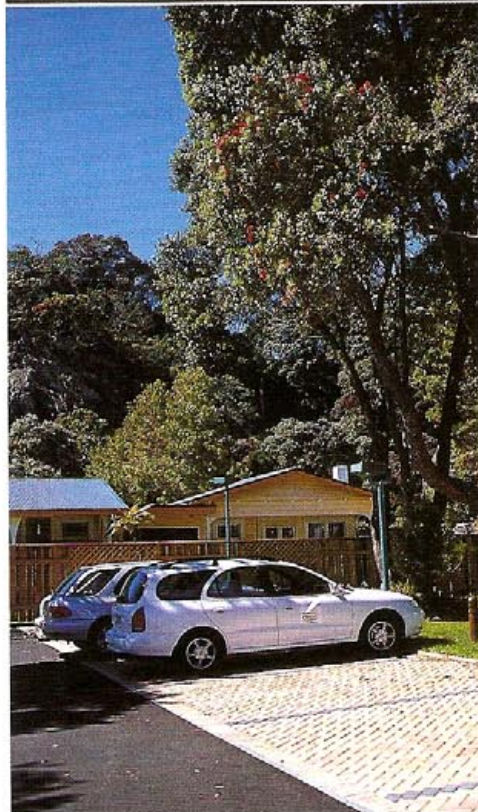
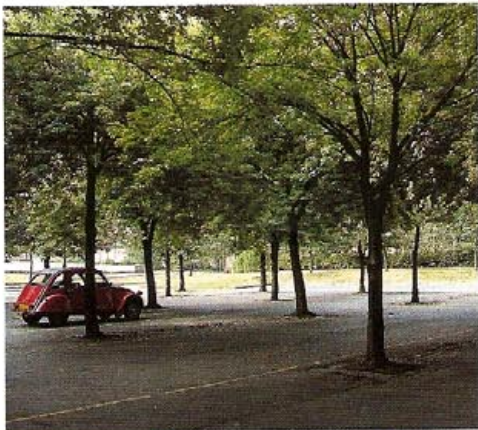
# Car parks

## – a place for trees

*The average car parking lot is a pitiless place – wall to wall asphalt, unbearably hot cars and no refuge for small children and the less physically able while giant 4 wheel drives and people carriers manoeuvre in all directions.*

But car parks need not be such hostile places. With simple design improvements they can be much more pleasant for pedestrians and they represent a major opportunity to plant large trees in urban areas.

Car parks can also be designed to conserve existing trees in good health. A recent Greenspace project for Environment Bay of Plenty illustrates this.



The client purchased a site which was the garden bar of a local hotel in order to provide additional parking capacity for staff and visitors to their Whakatane headquarters. It included a number of fine mature pohutukawa (*Metrosideros excelsa*), some smaller trees including *Photinia*, *Betula* and *Prunus* species and a scattering of ornamental shrubs. It is bordered by residential properties on one side and the hotel on the other. Although small, the site was a significant urban greenspace and made a substantial contribution to the local landscape.

The client's requirement for parking density was high and the car park layout was designed to balance the space efficiency, drivers' convenience and the growth needs of existing vegetation. It was necessary to build some of the pavement under the tree canopies. But rather than excavate and hope for the best, a superficial construction method was used which avoided any excavation within the drip line of the trees.

The levels were designed so that the areas of pavement under the trees could be built on top of the existing topsoil. Sufficient sub-base stability was achieved by the use of geotextiles. A combined filter fabric and geogrid (Maccaferri 'TRC 30') was laid over the existing topsoil after most of the grass foliage had been carefully screeded off by hand or, in the less sensitive areas, with a small machine. There was no other disturbance within the root zone.

Two surface finishes were used. The parking stalls closest to the entrance were paved with 'Holland' pre-cast concrete pavers. In other areas a reinforced grass surface was used with Maccaferri 'Grasscell' units. The 'Grasscell' has the advantage of looking like grass, while allowing storm water to penetrate and so avoid the need for off-site disposal.

Both surfaces, as well as part of the asphalt aisle, were constructed on the topsoil and geotextile sub-base. The 'Hollands' over a standard basecourse of AP40 and the 'Grasscell' on a consolidated coarse river sand. The river sand was 150 mm or more thick to provide both a base course and a bedding medium. It was mixed with 15% composted bark and slow release fertiliser to encourage rooting through the 'Grasscell' units into the layer below. The 'Grasscell' units are filled



with a free draining topsoil and seeded with a hard wearing, low nutrient and drought tolerant grass mix. Dwarf varieties of long fescue are a useful component of this mix and the established grass should not be given the usual weekly 'scalping' but allowed to maintain a more luxuriant length.

Edges of the paved area were approximately 200 mm above the previous ground level and enough space was left to gently grade down to the base of the tree boles. Edge restraint was achieved with substantial timber boards which could be fixed by means of driven stakes. This avoided the excavation associated with a standard poured kerb or the foundation needed for unit kerb construction. The timber edge upstand was kept low for a less intrusive appearance and to minimise its height above the existing ground. Bollards rather than kerbs prevent over running of stalls and prevent access to the lawns.

Planting and climber clad boundary screen fences are an essential part of the development. Planting included the restocking of trees for the next generation.

The end result was not only an efficient car park but also a pleasant environment and positive contribution to the local townscape. Uplighting of the trees was installed to highlight their dramatic forms and the 'car park' has become an important visual feature and

landscape asset in this part of the town.

Perhaps more car parks could make a positive contribution to the quality of our urban environment. All that is needed is a little more by way of resources and imagination. ■■

*Nick Robinson is a landscape architect and principal of Greenspace, a landscape practice specialising in the planning and design of urban greenspace.*

**Opposite above: A parking lot transformed by a simple tree canopy**

**Opposite below: The parking stalls are all constructed above the previous ground level to avoid disturbance to the root zone**

**Above: Low timber kerb and bollard protection  
Below: The 'Grasscell' parking area is behind the bollards on the left**

