## 12.a Services

The drainage and services will need to be placed in a trench that is set well outside the crown spread and rooting zone of the trees to be retained. Should it be necessary to dig within the protected area at any time, the developers arboricultural consultant should be present to ensure only hand digging is undertaken.

All services work on site will follow the National Joint Utilities Group's Guidelines for Planning, Installation and Maintenance of Utility services in Proximity to trees.

## 12.b No Dig Construction

Successful retention of trees even when adopting a no dig method, particularly within the protected zone, depends upon the condition of the trees, which should be assessed by a qualified arboriculturist, and on adherence to three simple rules.

- Roots must not be severed
- Soil must not be compacted
- Oxygen must be able to diffuse into the soil beneath the engineered surface

Damage to trees can only be avoided if the construction embraces the above principles and (within the protected zone) is no more than 4m wide.

Construction should incorporate two main components: a geogrid and an aggregate sub-base. Geogrid are high tensile strength synthetic grids designed to support roads on soft ground. When placed on the geogrid, appropriate granular sub-base material penetrates the mesh, but is unable to pass through it, forming positive interlock. This interlock between aggregate and geogrid provides a reinforced platform and efficient load spread into the underlying ground. A suitable geogrid/aggregate combination will prevent rutting of the ground beneath the construction.

Granular sub-base material Type 1. As specified by the Department of Transport (Department of Transport, 1991: clause 803) is the recommended aggregate. This has a relatively low fines content, which means that even when it is compacted it should be freely draining and will allow oxygen to diffuse into the soil.

For site-specific prescriptions and materials specifications advice may be sought from a qualified geotechnical or civil engineer.

Tensar SS30 Geogrid is manufactured by Netlon Ltd, New Wellington Street, Blackburn, BB2 4PJ.