AQUAFLOW POROUS PAVING

SPECIFICATIONS

The Specimen Tree Company Ltd is the sole NZ distributor for Porous Paving Solutions, an Australian company that has developed Aquaflow Porous Paving (APP), a resin based permeable paving surface. Aquaflow Porous Paving provides a highly permeable surface, which is both stable and environmentally friendly.

Application

APP is ideal for use around trees where a load carrying surface is required for pedestrians while at the same time meeting the requirements that trees have for the free movement of air and water. It can be applied to existing trees as well as around newly planted trees. Other applications for APP include installations such as footpaths in parks and gardens, beneath outdoor shower or tap outlets, adjacent park benches, along wheelchair access routes, and as a filter for storm water grates.

Installation

- Generally a 100mm excavation is required to allow 70mm of compacted base (6 – 20mm grade aggregate) and 30mm of APP.
- Both the base course and aggregate to be mixed with the resin must be fully dry before the APP can be installed. The temperature must be above 15^{o} Celsius.
- The resin comes in two parts, these are mixed together prior to being combined with the aggregate in a concrete mixer.
- The material is poured over the base course and lightly compacted, then smoothed to the exact level of the surrounding surface.
- Closer to the trunk of semi-mature to mature trees, a weaker mix of APP is installed that will break away as the trunk expands. For newly planted trees a soft collar is installed around the trunk.
- Following installation of the APP the area is barricaded off with temporary fencing for a minimum of 12 hours. The area must be kept dry until the resin has set-off, approximately 4 hours following installation.

Aggregate

Aggregate sizing for APP must be in a grade range of between 3mm to 10mm. We currently have several standard aggregates, but other aggregates could be used as an alternative if they have the required characteristics. Aggregates must be clean and fully dry prior to use. As the resin sets clear, the finished colour will be similar to the colour that the aggregate appears following immersing in water. The finished APP is slightly glossy in appearance.

Porosity

APP made from 3 – 10mm pebble has 50% voids. When installed at 30mm thick, this equates to 29 litres of water per second per m^2 being able to flow through the APP.

Slip Resistance

Under the AS/NZS 4586:1999 – Slip Resistance Classification of New Pedestrian Material, APP, using a rounded aggregate, is given a moderate result when assessed under the 'Contribution of the floor surface to the risk of slipping when wet'. This classification may change dependent upon the type of aggregate used. A sharper edge aggregate has a slightly better slip resistance, although there is some loss of tensile strength.

Vehicle and Pedestrian Loadings

Tensile strength is dependent upon the type of aggregate used. APP has sufficient strength for pedestrian use, however it does not have great resistance to point loading or vehicle traffic. In very heavy pedestrian areas it is recommended that APP is installed at 40mm thickness.

Toxicity

Although one part of the resin mix is corrosive, once the two parts are combined it becomes an inert substance. It has been tested for heavy metals and the test results show that it is below the standards set by the EPA. (Waste Service NSW Analytical Certificate, Report No. 980717, dated 21/09/98.)

Maintenance

Following the installation of APP there is no maintenance required of the product. The surface can be cleaned with a water blaster at low – medium pressure. Most equipment used in the maintenance of footpaths (e.g. mechanical sweepers) can be driven over the APP. If the APP is damaged, the damaged section only requires removal, and the APP re-laid. It is not necessary to replace the entire APP within the pit.

For further information on Aquaflow Porous Paving contact Stuart Barton

at

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