

Engineering Specification

Specifications for Pavement and Drainage of Trafficable Areas in Industrial Areas

Subgrade

Sub grade soil needs to be compacted to at least 95 % of maximum dry density or to at least 7 blows with a Perth Sand penetrometer, calibrated to establish relation between number of blows and relative density of sandy soil. Perth sand penetrometer to be strictly used for sandy soils. For clayey soil other modes, such as nuclear density meter for finding relative compaction may be used. Soil to be compacted shall be free from vegetation and other deleterious material.

Subbase

Limestone material used in the subbase shall be free from sand, roots, capstone and other foreign material and shall comply with grading requirement as determined in accordance MRWA standards/AS standards. The degree of compaction for limestone Subbase to be at least 95% of MDD. The minimum thickness requirement for Subbase material is 150mm and the tolerance in level of the prepared surface shall be ± 15 mm.

Base Course

The Base course material shall consist of either Rock base, Ferricrete or 2% Bitumen stabilised limestone. Rockbase material for the base course shall be crushed Granite of good quality free from weathered rock, flaky material and other deleterious materials. The material shall be of uniform quality and the particle size distribution needs to conform to AS/MRWA standards. The base course shall be compacted to 98% relative compaction. The minimum thickness requirement for Rockbase or ferricrete to be **100mm** but for Bituminous Stabilized Limestone it may be reduced to **75mm**.

Sealing

The sealing shall be preferably achieved with dense graded asphalt (7mm or 10mm size aggregate) Marshall mix of 50 blows or 75 blows depending on the traffic volume & type of traffic. Other modes of sealing like Slurry sealing or double / double sealing could be used but prior approval for any sealing other than Dense Graded Asphalt shall be obtained from Manager of

Engineering services. The minimum compacted thickness of DGA to be **30 mm** if used directly over compacted road base. If Primer sealing with 5mm/7mm aggregate is applied over Base course before Asphalt then the compacted thickness of DGA could be reduced to **25 mm**.

Drainage

All sealed areas must be drained to Council's requirement of 1 in 20 year storm intensity. For soak wells Council's requirement for 1 in 20 year storm is 1 m³ capacity of soak well capacity for every 45 m² of catchment area, but the depth of Soakwell to be determined on the basis of water table level. The bottom of the Soakwell in all weather conditions to be above the water table level. If soak wells are not used and the drainage is achieved by providing Swales/Sump/Infiltration Basins, then proper design for 1 in 20 year storm intensity must be submitted to Council's Manager of Engineering Services for approval.

Any alternative materials must not be installed without the prior approval of Council's Manager Engineering Services. Note all non trafficked areas must be sealed and drained to comply with Council's specification for non trafficable lay down and/or storage areas.

For further information please contact Council Engineering Officers on 9439 0200.