

CITY OF COCKBURN
Specifications for pavement & drainage of trafficable areas/parking areas in
Industrial area

Subgrade

Sub grade soil needs to be compacted to at least 95 % of maximum dry density or to at least to 9 blows with 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 like nuclear density meter for finding relative compaction 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 200mm 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 or Bituminous Stabilized Limestone to be **100mm**.

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 so that no stormwater discharges onto road reserve or adjacent properties. Acceptable treatments are on-site disposal structures designed for a 1 in 100 year, 24 hour storm, with contingency for flooding and a 300mm freeboard. The acceptable on-site disposal structures are soak wells/Swales/Sump/Infiltration Basins. All stormwater drainage shall be designed in accordance with the document entitled "Australian Rainfall and Runoff" 1987 (where amended) produced by the Institute of Engineers, Australia, and the design is to be certified by a suitably qualified practicing Engineer or hydraulic consultant, to the satisfaction of the City.

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 9411 3550.

CITY OF COCKBURN
Specification for pavement & drainage of Non Trafficable lay down Industrial areas

Following are the two options available to choose for utilising non trafficable area as lay down area or storage in Industrial premises of the City of Cockburn

Option 1:

1. Subgrade

Compact the existing soil to at least 92 % of Maximum Dry Density after removing vegetation and other unacceptable material from the soil to be compacted.

2. Sub-base

Limestone Conforming to standard specification of road building to be laid and compacted to the density of at least 93% of MDD with minimum compacted thickness of **100 mm**.

3. Base – Course

Base course could be either Rock base, Recycled Concrete or Recycled Asphalt material but needs to conform to the general specification of road base material. Base course to be compacted to at least 94 % of MDD using minimum compacted thickness of **75 mm**.

4. Sealing (Optional)

The entire area could be sealed with Primer seal or any other mode of cost effective sealing product. Sealing would make the pavement impermeable which would require extra soakage capacity from drainage consideration.

5. Drainage

After compaction of road base material to the required specification , the pavement could be used as non trafficable area but it would need to be drained either by grading the pavement towards some permeable area like Swale / Sump or by installation of Soakwells.

For unsealed Pavement minimum required should be to contain 1 in 100 year storm, over 24 hour duration, within the property.

Option 2 :

1. Subgrade

Compact the existing soil to at least 92 % of Maximum Dry Density after removing vegetation and other unacceptable material from the soil to be compacted.

2. Sub-base/Base – Course

Sub-base/Base course material to be used over compacted soil could be either Rock base, Recycled Concrete or Recycled Asphalt material but needs to conform to the general specification of road base material. Base course to be compacted to at least 94 % of MDD using minimum compacted thickness of **100 mm**.

3. Sealing (Optional)

The entire area could be sealed with Primer seal or any other mode of cost effective sealing product. Sealing would make the pavement impermeable which would require extra soakage capacity from drainage consideration.

4. Drainage

After compaction of road base material to the required specification , the pavement could be used as non trafficable area but it would need to be drained either by grading the pavement towards some permeable area like Swale/ Sump or by installation of Soakwells.

For unsealed Pavement minimum required should be to contain 1 in 100 year storm, over 24 hour duration, within the property.

Any alternative materials must not be installed without the prior approval of Council's Manager Engineering Services. Note all regularly trafficked areas must be sealed and drained to comply with Council's specification for trafficked areas.

For further information please contact Council Engineering Officers on 9411 3550.