4.5. Contaminated Surface Run-off

Where there is the potential for surface water run-off to be contaminated then appropriate measures shall be included to prevent contamination reaching the network and the receiving body of water. Areas that might produce such run-off are car parks, petrol station forecourts and leaking storage tanks, landfill sites, airports and overland run-off from industrial areas.

For car parks and petrol station forecourts the risk arises from run-off being contaminated with hydrocarbons and petrol/oil interceptors shall be provided.

Interceptors shall be located to give good access for the removal of contaminated material. Interceptors shall be installed in areas with good natural ventilation and shall not be installed in enclosed areas.

Interceptors shall be of a multi-compartment design as shown in Volume 2: Standard Drawings or a proprietary multi-compartment design. They shall include the following features:

- ventilation
- Secure, non-flammable covers
- Uniform flow through the separation compartment

The capacity of petrol/oil interceptors shall be based on the following:

- Size of separator shall be based on double the maximum contaminated water flow.
- For light liquids the retention time shall be a minimum of 3 minutes up to a design flow of 20 l/s. For higher flows an additional minute shall be added per 10 l/s increase.
- The width to length ratio shall be 1:1.8
- Alternatively, in case of mechanical oil separators, the manufacturer's recommended flow rates with a factor of safety of 2.

Domestic wastewater shall not be connected to an interceptor.

Where a pumping station is required in the vicinity it shall be located downstream of an interceptor.

Areas that regularly have contaminated surfaces or regularly produce contaminated run-off such as vehicle washing plants shall have site specific measures installed to limit the contamination entering the storm water network (e.g. oil separators shall be installed prior connection of the drainage lines from contaminated areas to the DMAT main stormwater network).

4.6. Hydrodynamic Separators

In addition to the sumps in inlets, catchbasins and manholes, consideration should be given to the use of hydrodynamic separators to remove settleable solids and floating debris, particularly in networks that have pumped discharges or discharge to public amenity areas.

These are normally proprietary designs and are most effective where the materials to be removed from run-off are heavy particles, such as sand and gravel, which can be settled or floatables which can be captured rather than solids with poor settlability or dissolved pollutants. These can also be located in potential "hotspots" where there is a high likelihood of high sediment loads or debris entering the network.

The separators should be located in areas with safe access for the operators to "dip" the central shaft to measure the depth of accumulated sediment and safe off-road parking for the suction tanker for emptying.