SCOPE OF STORMWATER WORK

The proposed stormwater hydraulic works that form part of the VAPS project are;

STORMWATER DRAINAGE

Vehicle Concourse
The stormwater drainage for the eastern part of the vehicle concourse will be removed, diverted and reinstated to allow for the construction of the loading dock.

Forecourt drainage pipe
The existing 375mm stormwater drainage passes over the existing Carpark pedestrian tunnel in a bulkhead.

The stormwater pipe will require diversion and amplification for approximately 60m to allow to clear the tunnel ramp and to pass over the pedestrian tunnel. This will also involve the reconnection of existing road gullies, the creation of new road gullies and the installation of 3 new access chambers.

Ramp drainage
The access ramp open area will be drained via two (2) grated drains discharging to a stormwater pump out pit in the loading dock.

SUBSOIL DRAINAGE

Loading dock
The loading dock will be a tanked construction and the proposed drainage around inside of the perimeter walls is provided as a precautionary measure to collect any leaks that may occour in the future.

Ramp
The ramp is excavated in rock and it is expected that some subsoil water will permeate from the rock face. This water will be collected in a gravel drain at the perimeter and under the ramp slab and piped to the pump out pit in the loading dock.

PUMP OUT PITS

Loading dock
There will be two(2) pump out pits in the loading dock. The pits will be provided with triplex pump submersible pumps which will pump the subsurface and stormwater to the existing stormwater connection that discharges under the eastern boardwalk.

The two pits will be interconnected to allow for additional redundancy in case of failure of one pump control panel.

POLLUTION CONTROL

Gross pollutant traps

Each of the pump out pits will be fitted with Ecosol® gross pollutant traps to remove sediment, oil and floating debris.

Truck parking

The truck parking area will drain to a waste pump out pit which will be fitted with a general purpose pit. The pumps from the waste pump out pit will discharge to the existing sewer drainage system in the building.

BMS INTERFACE

The pump control panels will provide BMS interface output for the following alarms:

1. Pump fail for each pump
2. High Level Alarm for each pit
3. Flood Alarm for each pit (this level activates once the high level is exceeded and flooding from the pit is imminent.
4. Low level alarm (indicates that pumps have not turned off at low water level in the pit)

The BMS interface is wired to the SOH security and maintenance system.