

18. COMMERCIAL VEHICLE WASHING

Preface

Liquid waste generated by industry, small business and commercial enterprises is referred to as trade waste. The Water Supply (Safety & Reliability) Act 2008 prohibits the unauthorised discharge of wastes, other than domestic sewage, into the sewerage system.

1. The definition of trade waste is;
 - *The waterborne waste from business, trade or manufacturing property, other than:*
 - *Waste that is a prohibited substance; or*
 - *Human waste; or*
 - *Stormwater.*
2. The definition of Domestic waste is;
 - *Faecal matter and urine of human origin and liquid household wastes from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings*

General

Trade waste discharges from vehicle washing businesses could harm the sewerage system. For the purpose of this guideline 'vehicle washing' refers to the cleaning of any vehicle with water or steam.

This guideline does NOT extend to degreasing operations that use high strength detergents or solvent formulations. Wastewater from those activities typically requires removal for off-site treatment or disposal, or on-site pre-treatment methods that are able to break down emulsions, adjust pH level etc.

Trade waste discharge substance limits are;

- Total Hydrocarbons - <30mg/L
- Total Suspended Solids - <600mg/L
- pH - >6<10
- Total Phosphorus - <50mg/L

Note; flow rate discharge is dependent on capacity of sewers

Only quick breaking detergents/degreasers are permitted in conjunction with those vehicle washing activities within the scope of the guideline. These detergents/degreasers temporarily emulsify oil/grease and suspend solids during cleaning,

but release this material soon afterwards. This allows the final pre-treatment device to operate effectively.

Typical Washbay Requirements

- Vehicles are washed on a hardstand area with a minimum 1:80 grade for wash water drainage.
- Ingress of surface water is prevented
- To exclude stormwater and rainfall,
- Above ground pre-treatment equipment is located within a roofed wash bay bund, or separate approved roofed and bunded area which drains to the pump chamber.

Important Note:

The discharge of stormwater to sewer is not permitted. All broad areas draining to sewer such as wash down bays must be roofed and bunded to prevent the entry of stormwater, including rain descending at an angle of up to ten degrees from the vertical. If bunding is not practical or possible, then grated stormwater drains and/or the grading away of surfaces surrounding the sewered area may be used to achieve the same purpose. In all cases the design must prevent runoff from any storm with an intensity of up to a 20 year Average Recurrence Interval (ARI) from entering the sewer. Where the stormwater catchment threatening the sewered area with inundation, is greater than 100 square metres, the application must be accompanied by a certificate from an engineer who is currently registered on the Queensland Professional Engineers Register, to verify the design's capability. The customer must ensure that stormwater drains remain free from debris and/or other obstructions that would restrict or block the flow of stormwater.

Typical Pre-Treatment Requirements

- **To remove large solids (initial pre-treatment):** Wash water initially drains to a silt trap fitted with a removable basket plate with nominal hole diameter or mesh size of 2mm.
Where heavy loading of soil/mud or large solids is likely (such as washing of earth moving equipment, off-road vehicles, ride-on lawnmowers etc.) a graded channel fitted with weir(s) that retain rapidly settling solids and/or perforated screen(s) for holding large solids is placed before the silt trap.
- **To remove suspended solids and where Total Hydrocarbon exceeds 30 mg/L (final pre-treatment):** (e.g. when steam cleaning chassis or engine bays) the silt trap drains to a solids settling and pump sump of minimum 2000 litres capacity. A positive displacement (non-emulsifying) pump conveys wastewater to an approved oil water separator, before discharge to sewer.



Maintenance

It is the responsibility of site management to ensure the effective operation of all pretreatment equipment, by ongoing removal of accumulated material from channels, silt traps and coalescing plate packs, and timely removal of accumulated solids from settling pits by a licensed liquid waste contractor.