



Mechanical Servicing Industry

Introduction

The storage and maintenance of vehicles, plant and equipment can contaminate stormwater with pollutants such as petrol, diesel, kerosene, coolants, solvents, brake fluid, motor oils, lubricating grease, sediment and heavy metals. The washing of vehicles, plant and equipment can also produce highly contaminated wastewater that should not be directed to stormwater or groundwater. The operation of these activities can lead to various waste products for example waste oil, solvents and oil filters.

These guidelines have been developed to ensure the quality of the region's water resources are protected and are applicable to all sites (including minor workshops) where mechanical servicing of vehicles or equipment occurs. The adoption of these practices should result in:

- Reduced loads of pollutants entering stormwater and shallow groundwater, thereby minimising the risk to the health of receiving waters.
- Reduced potential for organisations managing these premises to be subject to complaints from stakeholders or enforcement by environmental regulators.

The Shire of Exmouth's Environmental Health Services assesses applications for the installation of a vehicle/engine parts wash down bays that propose to discharge low volume liquid wastes to on-site soak wells or leach drains.

Where sewer is available, application for an installation of this type must be made to the Industrial Trade Waste division of the Water Corporation 13 13 95. A copy of such approval should be sent to the Shire of Exmouth for records.

Mechanical Activities and Waste Products

Oil Filters

Automotive and marine oil filters that have not been mechanically pressed to extract residual oil are prohibited from being disposed of at the waste site or via the Shire's kerb side bin service. Those that have been pressed can be recycled as scrap metal at the tip for no charge or disposed of via your rubbish service. If a service contractor is used, documentation will need to be kept as evidence.

Oil Drums

Plastic and steel oil drums need to be adequately cleaned prior to being disposed of at the landfill site. Drums need to be cleaned to remove all residual oil and the tops removed or a large hole knocked in the bottom and the bung removed. Once this has been done the steel drums can be disposed of at the tip site as scrap metal, plastic drums can go to landfill, please advise tip attendant so they can be inspected. If this service is being provided by a contractor, documentation needs to be kept as evidence.

Oily Rags

Grease and oil rags should not be disposed of in the rubbish collection service or at the Shire tip site. Alternate arrangements need to be made with an approved service contractor and receipts/documentation kept as a record.

Waste Oil

Waste oil needs to be collected and stored in a bunded waste oil receptor and collected by a licenced waste oil recycling contractor. It is preferred the waste oil receptor be placed in a protected and undercover area, if this isn't feasible evidence of measures taken to prevent stormwater entering into the receptacle need to be demonstrated. A spill kit should be located nearby to clean up any spills. Receipts and contract documentation need to be kept onsite as evidence of this service being used. The Shire tip site can't accept any commercial waste oil.

Automotive and Marine Batteries

All used batteries should be stored in a bunded area. Used batteries need to be removed regularly to ensure quantities stored on site are kept at manageable levels. Automotive and marine batteries cannot be disposed of at the Shire tip site as it is prohibited by environmental regulation. They are recyclable and can be delivered to the Shire tip site (for a fee) where they will be prepared for recycling or you may make alternative arrangements directly with an accredited freight carrier and recycling merchant.

Solvents

When degreasing and cleaning parts a water-based cleaning agent is preferred to those that are solvent based. Although when solvents are used any waste needs to be promptly transferred to drums or hazardous waste containers for recycling or disposal by a licensed waste contractor. All receipts need to be kept as evidence of this occurring. Another option is solvent thinner recycling systems can be used on the premises, reducing purchase and disposal costs.

Mechanical Wash-down Bay

Wash water from wash-down bays typically contains detergents, degreasers and oily residues. This wash water is generally high in nutrients and hydrocarbons and poses a considerable threat to the environment if discharged untreated. Any business proposing to wash vehicles or equipment within a wash-down bay must apply to local government for approval to install a wastewater apparatus (the wash-down bay). For wash-down bays connected to sewer it is recommended developers visit Water Corporation www.watercorporation.com.au for design guidelines.

Any wash down bay on premises that produces over 540L/day of wastewater requires approval from local government and the Department of Health. Local government will process approvals through the Department of Health on behalf of the applicant. Wastewater systems producing less than 540L/day require local government approval only.

Recommendations for Vehicle/Equipment Maintenance

- Design a procedure for accidental spills. Train staff in the correct use of spill absorbents and clean-up procedures.
- Keep drip trays or containers under the vehicles at all times during maintenance. The captured liquids should be disposed of through an approved system and/or recycled.
- Promptly transfer used fluids to drums or hazardous waste containers for recycling or disposal by a licensed waste contractor.
- Drain all fluids from any end-of-life vehicles being kept on-site for scrap metal and/or parts.
- A licensed waste contractor should be used to remove used solvents from site either for recycling or approved disposal. Alternatively, solvent recycling systems can be used on the premises, reducing purchase and disposal costs.
- Store all new and used batteries on sealed ground, in bunded undercover areas.
- When degreasing and cleaning parts, use water-based cleaning agents in preference to those that are solvent-based. Steam cleaning and pressure washing may also be used instead of cleaning agents.

Recommendations for wash-down bays

- Sufficient size to prevent any over-spray or splashes from escaping its confines. A recommended rule is for the wash-down pad being designed to have roughly 2m greater width and length than the largest vehicles to be washed.
- Must be made of impervious material such as concrete and engineered to withstand the loads which will pass over it throughout the life of the pad without structural damage.
- Should have a raised perimeter bund at least 75mm high and 100mm wide surrounding the pad on which the washing is to occur.
- The wash bay floor should be graded to drain towards a collection point or channel connected to the sediment trap or pump tank. The wash water can't pool or flow over the bunds.
- Stormwater access to the wash-down pad is to be minimised. Areas over 20m² must be roofed unless it can be demonstrated that the system can contain all water from a 1:2 year storm event. The following formula is used to calculate volumes to be retained;
 - **Volume (litres to be retained) = 2.90 (expected rainfall 24hrs for a 1:2 year event) x Area (m²) of unroofed wash-down bay**
- Sediment trap, the size of the sediment trap required will depend on the contamination levels of the vehicles being washed, the volume and flow rate of the incoming wash water and the time needed for sediment to drop out of the wash water in the trap. These should be inspected and cleaned on a regular basis to remove sediment.
- Industrial Waste Sampling Points (IWSP) are to be located in between the plate oil separator and the leach drain diverter, sewer connection point or holding tank(s).
- If quick break cleaning agents are used, then only oily waste emulsion should pass into a de-emulsification basin, to allow for natural emulsion breakdown. The water should then be transferred to a gravity oil separator (inclined plate or similar).

Water Quality Requirements

The owner of any wash-down bay discharging to ground is required to sample, at their cost, the quality of the wastewater being disposed. Samples are to be taken annually and tested through a National Association of Testing Authorities (NATA) accredited laboratory. A copy of the sample testing results shall be kept onsite for a minimum of 3 years and presented to local government on request.

System Maintenance, monitoring and reporting

- Maintenance inspections of all wastewater treatment and disposal systems should occur at least weekly. Any necessary remedial action should be taken immediately.
- All inspection results, analytical data and corrective actions should be recorded in an operating log. This data should be retained on-site for a minimum of two years as an operation logbook.
- A Shire officer will conduct audits of liquid waste discharge and wash-down bays associated with vehicle or mechanical equipment activities.

Construction and/or installation of a wash-down bay is not to commence until all necessary approvals have been granted by the Shire of Exmouth. A final inspection of each approved system must be carried out by the Shire Environmental Health Officer and a Permit to Use issued prior to the system being used.

**Further details can be obtained from the
Shire of Exmouth Environmental Health Services
(08) 9949 3000**