Washdown Bay Requirements

Connections to sewers

Where a site is connected to a sewer, a washdown bay requires the approval of the Water Corporation.

Where no sewer is available, an application and approval from the City of Cockburn is required.

Washdown water may contain chemical contaminants such as fuels, oils, detergents, greases, cleaners, and solvents. It can threaten the environment and public drinking water source areas if untreated.

Specific locations within Cockburn will have higher requirements due to the groundwater resource zone. You will need to contact the City to confirm if any additional requirements are required for your property.

Under the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974 and AS/NZS3500.2.2003 Plumbing and Drainage, an application to Construct or Install an Apparatus is required. All plumbing installed with a washdown bay must be approved by the Plumbers Licensing Boards Certificate of Compliance when installation is completed.

If you propose a washdown bay with 100% recycled water, you must still get approval from the City.

Application and Approval Process

Instructions for completing the application form:

- Complete Sections 1-8 in full
- Ensure plans and drawings follow the specifications detailed in Section 7 of the application form
- Upon receipt of your application, the City will provide you with an invoice for payment of application fees.

Compliance with regulations:

- Construction of the apparatus shall follow the requirements Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974.
- Approval will not be given for installing an apparatus where a sewer connection is available as provided by section 72 or section 81 of the Health (Miscellaneous Provisions) Act 1911.

Requirements for Washdown Bay

- **A washdown bay pad should have a constructed retaining wall in the form of a speed hump at the entry/exit point to ensure surface rainwater run-off is diverted away from the wash area**
- **The bay should be graded to drain towards the collection point with a minimum grade of 1:80**
- **If the area of the washdown bay is greater than 20 metres squared, it must be covered to ensure that stormwater is diverted from the system**
- The bay should have a concrete floor and walls on three sides.

Sediment Trap

A sediment trap must remove sediment from the washdown bay wastewater before disposal. Sediment traps should be inspected and cleaned regularly to remove sediment.

Oil/water Separators

An oil/waste separator must remove oil from the washdown bay wastewater before disposal. Washdown bays connected to an approved oil/water separator such as a vertical gravity separator, coalescing plate separator, or hydro cyclone unit to be designed to consistently produce a waste stream (the watery part once the oil has been removed) with a maximum hydrocarbon level of 30ppm.

Leach Drains

Leach drains connected to any washdown bay must be installed following the requirements of the Local Government and the Health (Miscellaneous Provisions) Act 1911. The base of the leach drains must be 2m above the highest known groundwater level. You will also need to comply with the City's Town Planning Scheme.

Backflow Devices

All washdown bays connected to a mains water supply must have a backflow device installed per Water Corporation requirements. Vehicle and machinery washdown bays are deemed a high-hazard backflow risk. Therefore, a boundary containment device is required to comply with the Water Corporation Backflow Prevention Policy.

Washdown Bay Roofing

All washdown bays within the City of Cockburn over 20m^2 must be roofed to contain wash water and prevent stormwater ingress adequately. For areas less than 20m^2 a roof structure is not mandatory. This helps minimise running costs as you do not have to process uncontaminated rainwater.

Sampling Point

An inspection and sampling area should be provided before the washdown bay wastewater is disposed of to the sewer or onsite effluent disposal system.

Typical washdown bay setup

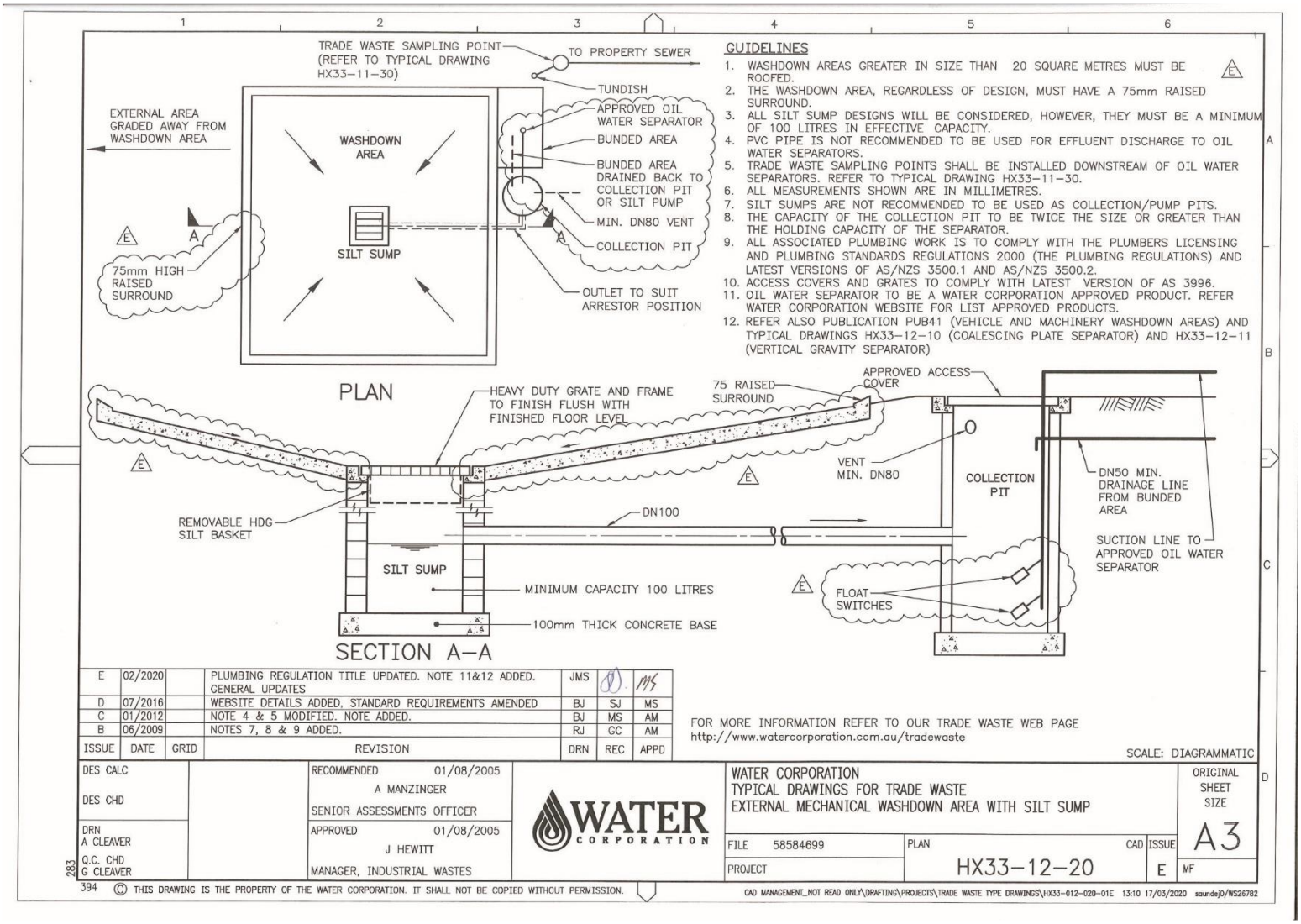

Diagram HX33-12-20, Typical washdown bay setup. Source: www.watercorporation.com.au Image is not to scale.

Typical vertical gravity separator

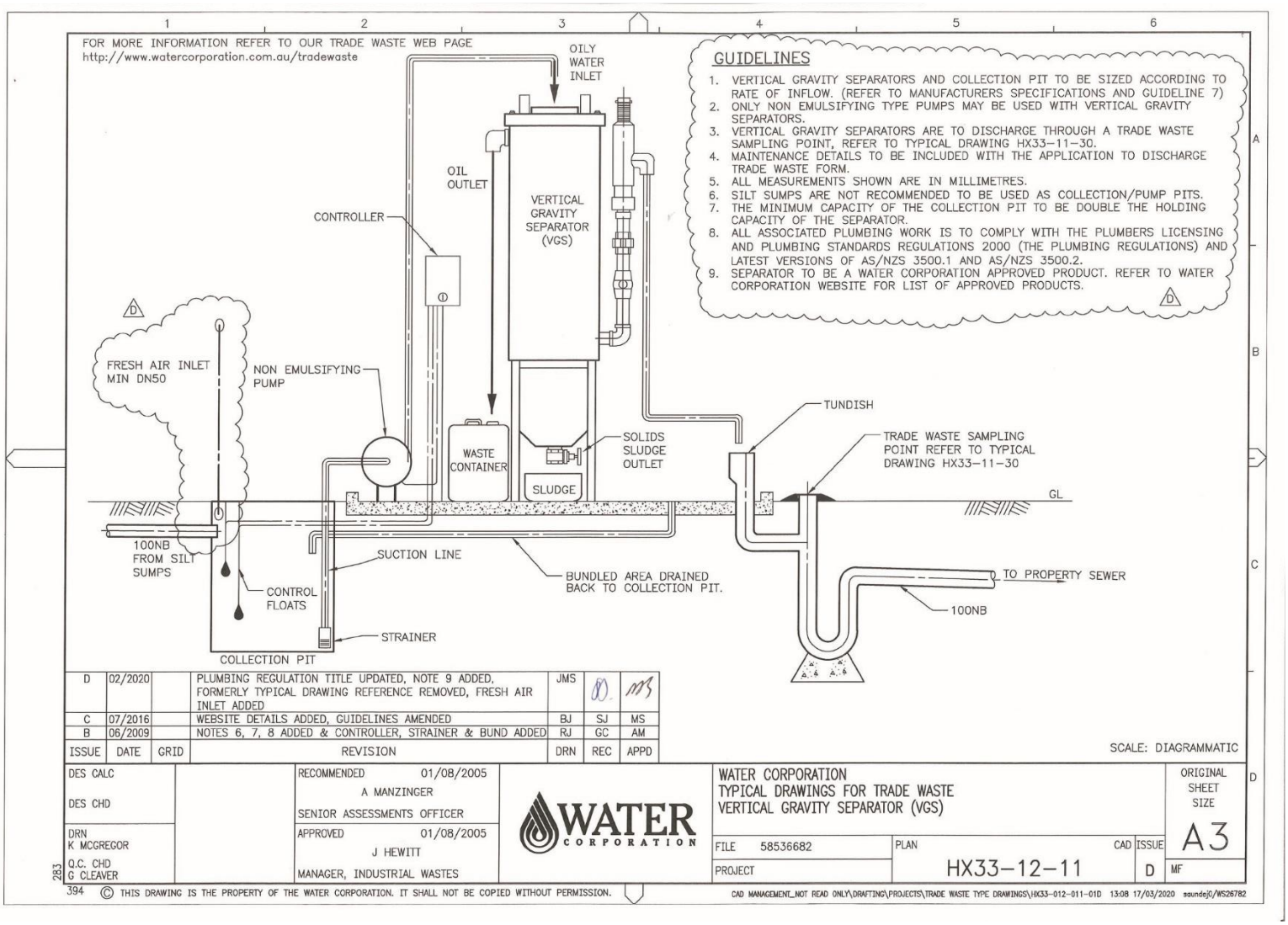

Diagram HX33-12-11, Typical vertical gravity separator. Source: www.watercorporation.com.au Image is not to scale.

Typical small plate separator

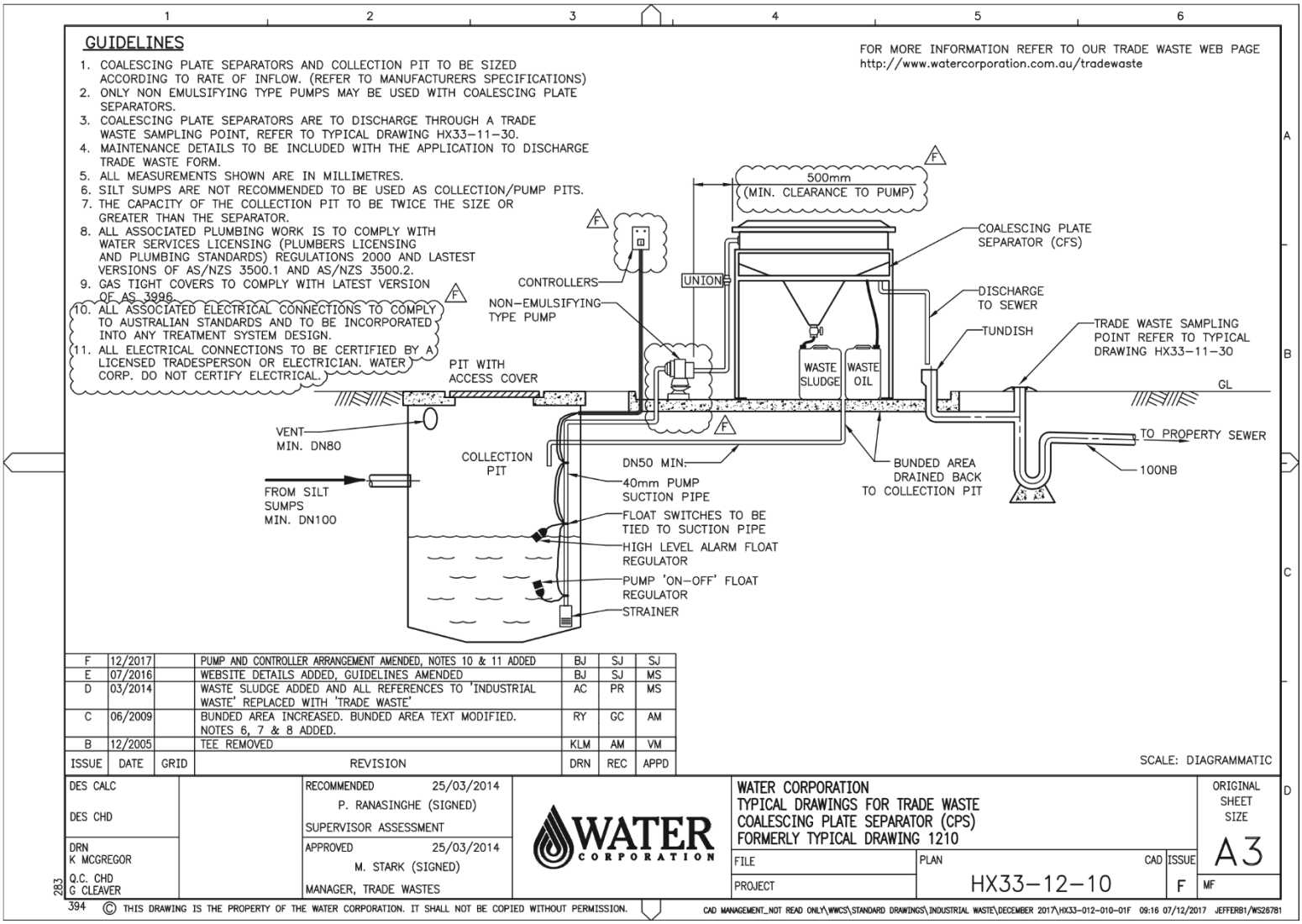

Diagram HX33-12-10, Typical small plate separator. Source: www.watercorporation.com.au Image is not to scale.

Testing

'To ensure the system is operating correctly, owners must periodically undertake testing. Samples should be collected and analysed through a NATA-accredited laboratory to ensure that required discharge criteria are followed. A copy of the sample testing results should be kept onsite for three years and available to the City on request. Acceptable water criteria should be listed on each washdown bay approval.

Discharge Criteria

The following wastewater quality criteria are drawn from the "Indicative Wastewater Discharge Criteria", Table 1, Mechanical Equipment Washdown - WQPN68 Department of Water. In all cases, applicants will be required to satisfy the City that these criteria can be achieved before approval to discharge onsite will be issued.

- PH – in the range of 5.5 to 8.5
- Salinity measured as Electrical Conductivity less than 1800 uS/cm
- Surfactants should not exceed 5mg/L
- Total Petroleum Hydrocarbons should not exceed 15 mg/L
- Benzene, toluene, ethyl benzene and xylene should not exceed 10 micrograms µg/L (cumulative maximum)
- All other toxic soluble contaminants should not exceed ten times the guideline criteria or investigation trigger for local water values as published in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000.

System Maintenance

The City of Cockburn requires maintenance arrangements in line with the manufacturer's recommendations to be implemented for any apparatus connected to a washdown bay. If the washdown bay is connected to the sewer, the Water Corporation may establish its own maintenance requirements. For more information, refer to the manufacturer's directions or contact the Water Corporation.

Quick-break Detergents and Degreasers

All washdown bay operators using detergents or degreasers to wash vehicles or equipment should use quick-break products. This will allow the oily wash water to de-emulsify in the pump tank before entering the oil/water separator. Hydrocarbons and quick-break residues recovered by an oil/water separator should be stored in weather-proof containers for recycling. Waste oil is a controlled waste substance and must be removed by a licensed liquid waste contractor.

Nutrient Reduction Technology

The City of Cockburn encourages the developers of washdown bays designed to dispose of treated wastewater to ground, to incorporate nutrient reduction technology where the soils cannot retain phosphorus (phosphorus retention index below 20). If phosphorus-free quick-break detergents and degreasers are used, the nutrient levels should be minimal, and no further treatment for nutrients may be required. Most detergents and degreasers are high in phosphorus, and this nutrient-rich wash water can damage the environment and contribute to the problem of algal blooms and eutrophication.

Further information

City of Cockburn: 08 9411 3444 | www.cockburn.wa.gov.au
Water Corporation: 13 13 95 | www.watercorporation.com.au
Department of Water and Environmental Regulation: 6364 7000 | www.dwer.wa.gov.au

References and additional reading

Vehicle & machinery wash down areas
https://www.watercorporation.com.au/Help-and-advice/Trade-waste/Trade-waste-in-your-business/Vehicle-and-machinery-wash-down-areas
Guidance notes for wash down facilities using recycled water
https://www.health.wa.gov.au/~/media/Files/Corporate/general-documents/water/Recycling/Guidance-note-for-wash-down-facilities-using-recycled-water.pdf
WQPN 68 - Mechanical equipment wash down -
https://www.wa.gov.au/government/publications/wqpn-68-mechanical-equipment-wash-down