

Dewatering is to be managed to prevent the mobilisation of nutrients or contaminants from groundwater or surface water to the Swan Canning development control area, directly or indirectly, and to prevent excessive changes to water levels or flows in nearby water dependent ecosystems, wetlands and waterways.

This guidance note provides a recommended document structure to assist with the preparation of a Dewatering Management Plan (DMP) for dewatering operations within or affecting the Swan Canning development control area.

1 Project overview

Provide essential project information and contact details including:

- project name;
- project location;
- proponent contact details;
- document reference version number;
- project description/proposed development (attach all relevant plans); and
- scope of works.

Outline the objectives of the DMP. The DMP's objectives should align with the requirements of the Department of Biodiversity, Conservation and Attractions (DBCA) [Corporate Policy Statement 50: Planning for Dewatering Management Affecting the Swan Canning Development Control Area](#) (Policy 50) and the Department of Water and Environmental Regulation's (DWER) [Water Protection Note 13 – Dewatering of Soils at Construction Sites](#).

2 Description of required approvals

Include reference to or attach existing approvals or applications lodged with other relevant authorities.

- A water licence may be required from DWER ([exemptions apply](#)).
- An approval from the local government or Water Corporation may be required if discharging to the local stormwater or sewerage system, respectively.
- Reuse of tailwater onsite may require approval from the Department of Health. Further information is provided below in **Section 5.2**.

3 Site conditions

Provide location details including a site map. The site map is to include:

- location of all extraction points, all discharge points, general arrangement and location of treatment system(s).

Provide details of site conditions and investigations, including:

- water dependent ecosystems;
- acid sulphate soils risk assessment;
- soil types and hydrogeology;
- sensitive receptors;
- environmental, social and/or economic values within the vicinity of the proposed dewatering site and the proposed discharge point; and
- estimate profile and radial extent of the cone of depression and predicted impact on the sensitive receptors.

Provide a summary description of the groundwater investigations that were conducted, including:

- groundwater quality results and levels and how they impact management. Include baseline groundwater and discharge point water quality; and
- previous land uses and potential for soil or groundwater contamination. Including, but not limited to, listed contaminated sites.

Demonstrate that dewatering has been minimised through design and construction methods.

4 Dewatering method

Provide details of the dewatering methodology, including:

- dewatering requirements, method, volume and schedule;
- disposal options and justification; and
- volume of tailwater for each of the disposal options in preferential order consistent with Policy 50. Include details of the:
 - proposed dewatering, treatment and disposal methods, including the location and area required for any associated infrastructure; and
 - dewatering timeframes, rates and volumes per discharge option.

5 Monitoring and evaluation

5.1 Sampling and analysis plan

Provide a description of the proposed sampling and analysis plan of the tailwater, including:

- proposed tailwater quality discharge criteria as per Appendix 1 of Policy 50 or

locally derived discharge criteria based on baseline assessments and site investigations in accordance with the [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#) (ANZG 2018). Any proposed variation from Appendix 1 discharge criteria must be assessed against the quality of the receiving waters at the point of discharge. Where the receiving waters are already degraded or fail to meet the ecological condition expected of a slightly disturbed or near-reference system, as defined by ANZG (2018), variations from default guideline values will not be supported. Where it has been demonstrated that tailwater quality varies by less than 10% from the quality of the receiving waters at the discharge point, and this is verified through appropriate baseline data, DBCA may consider the risk to be low. However, justification for alternative discharge criteria must also demonstrate that no adverse ecological impact will occur;

- laboratory analysis to be provided by a [NATA accredited laboratory](#);
- baseline tailwater quality data as per parameters described in Appendix 1 of Policy 50;
- estimated nutrient and contaminant loads (mass/time) derived from measured concentrations and flows to assist with risk characterisation, monitoring frequency, and contingency planning;
- baseline water quality data for pre-discharge, post-treatment tailwater

provided to and assessment by DBCA and the local government **prior** to any discharge from site occurring. Post-treatment water quality data is to be actual measurements rather than modelled or expected values. Post-treatment results are to be provided on the basis of expected dewatering volumes. **Tailwater quality test post-treatment results are to be submitted to DBCA at least 14 days prior to proposed commencement of dewatering;**

- include sampling and testing of phytoplankton to establish a baseline dataset when dewatering sections of the river to enable in-river works. Phytoplankton sampling should be included when dewatering pooled water that has had sediment disturbance;
- pathogen monitoring is required when there is suspected groundwater pathogen contamination or a historical contaminating land use at the extraction point;
- provide monitoring and reporting details. All parameters and observations detailed in Appendix 1 of Policy 50 are to be recorded for submission to DBCA. Laboratory results are to be provided with no more than a 3-day turnaround for all samples. Frequency of water-quality testing will be dependent on the scale of dewatering; however, the following schedule is considered a minimum standard;
 - Daily monitoring of physical and chemical parameters (pH, EC, TDS,

Turbidity) and observations consistent with Appendix 1 of Policy 50.

- If discharge duration will exceed 3 weeks or a total dewatering volume of 25,000 KL, undertake initial (first day of discharge) and weekly monitoring of nutrients and contaminants. Monitoring of nutrients and contaminants if discharging for less than 3 weeks will typically be limited to those contaminants of concern identified in initial tailwater quality testing. The frequency will vary depending on the scale of dewatering.
- **results are to be submitted to DBCA weekly;** and
- the suite of analytes should be site-specific and dependant on previous land uses/contamination. The minimum suite of analytes include:
 - physical and chemical: pH, EC, TDS, TSS, Acidity, Alkalinity, Turbidity, SO₄-2, S-2, Cl-, Ca, Mg, Na, K;
 - heavy metals: Total and Dissolved Ag, Al, As, Cd, Cr, Co, Cu, Fe, Pb, Hg, Mn, Ni, Mo, Se, Zn, Cr;
 - nutrients: total and filterable reactive phosphorus, total nitrogen, total oxidized nitrogen, total ammonia, total organic nitrogen (filterable), total Kjeldahl nitrogen); and
 - toxicants: PFAS, PAHs, PCBs, OC Pesticides, hydrocarbons.

5.2 Disposal method controls

Detail the environmental controls, monitoring and maintenance requirements of each disposal method. The following considerations should be included, depending on the disposal method of the tailwater.

Groundwater recharge – infiltration

- Locate infiltration basins outside of the floodplain to avoid infiltration issues and risk of inundation.
- Basins are to be appropriately bunded and visually monitored on a daily basis to check for spills/overflow.
- Basins should be at least 300mm above the maximum or controlled groundwater level.
- Consideration should be given to the infiltration capacity of the soil and dewatering rates when sizing the infiltration basin.
- Basins should not be located in narrow foreshore areas where public access is restricted.

Reuse

- The reuse activity must be acceptable to the Department of Health and the local government.
- Irrigation of vegetated land should meet the water quality criteria in the [Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 3, chapter 9.2 – Water quality for irrigation and general use](#) (ANZECC and ARMCANZ 2000).
- Runoff from reuse of tailwater onsite should be completely infiltrated onsite and

is not permitted to enter the river or stormwater drains.

Stormwater drains

- Ensure sediment will not be discharged to stormwater drains. Sediment, turbidity/total suspended solids should be considered in treatment, with additional sediment controls put in place if required.
- A silt curtain may need to be installed at the outfall of the stormwater drain to contain turbidity.

Discharge to waters

- Overland flow across a vegetated surface for low volumes and flow rates.
- Install, monitor and maintain a silt curtain, containing turbidity and preventing sediment plumes moving outside the area of discharge.
- Erosion control may be required.

6 Contingency plan

Provide a detailed contingency plan which describes how the project will be managed if any compliance conditions are not achieved. The contingency plan should provide a staged response allowing for the site supervisor to assess, adjust and reassess the performance of the dewatering arrangement. The contingency plan is to include trigger points for notifying both the local government and DBCA in the event the monitoring indicates that approved discharge water quality criteria has not been achieved. The contingency plan is to include a cease discharge response which results in consultation with

DBCA and the local government when compliance criteria are not met.

Additionally, contingency planning should identify maintenance plans for equipment and mitigation plans if equipment fails.

Supporting resources

[Corporate Policy Statement 50: Planning for dewatering management affecting the Swan Canning development control area](#)

(Department of Biodiversity, Conservation and Attractions 2026)

[Water Quality Protection Note 13 – Dewatering of soils at construction sites](#) (Department of Water and Environmental Regulation 2012)

[Deriving guideline values for water quality](#) (ANZG 2018)

[Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#) (ANZG 2018)

[Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 3, chapter 9.2 – Water quality for irrigation and general use](#) (ANZECC and ARMCANZ 2000)