

PART CH50W
MARINE ENVIRONMENTAL ISSUES

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1. GENERAL

- .1 This part specifies the minimum environmental protection requirements that the Contractor shall comply with and are in addition to the protection measures specified in Parts 6 and 7 of the DPTI Environmental Code of Practice for Construction, Road, Rail and Marine Facilities.
- .2 Documents referenced in this Part are listed below:
 - (a) SA EPA Stormwater Pollution Prevention Code of Practice for Local, State and Federal Government, available from <http://www.epa.sa.gov.au/pdfs/govcop1.pdf>;
 - (b) DPTI Environmental Code of Practice for Construction, Road, Rail and Marine Facilities;
 - (c) DPTI Protecting Waterways Manual;
 - (d) DPTI Environmental Instruction 21.7 "Management of Noise and Vibration: Construction and Maintenance".
 - (e) AS 4373 "Pruning of Amenity Trees"
- .3 DIT publications are available from: <https://www.dit.sa.gov.au/standards>

2. FLORA AND FAUNA PROTECTION**Vegetation**

- .1 The Contractor shall not remove, disturb or damage any vegetation including aquatic vegetation.
- .2 The Contractor shall:
 - (a) restrict all site activities to the minimum area practicable and restrict parking, storage and manoeuvring of machinery to designated areas away from any vegetation;
 - (b) restrict traffic to existing roads and designated access tracks;
 - (c) minimise the number of anchoring points (where applicable);
 - (d) not stockpile materials or store equipment under the dripline or against trees, or on native grasses, shrubs or groundcover plants.;
 - (e) not allow parking of vehicles under the drip line of trees; and
 - (f) minimise root damage of any excavations undertaken within the drip lines of trees.
- .3 Any roots exposed in excavations shall be trimmed with a clean saw cut in accordance with AS 4373.
- .4 Where branches intrude onto the working area and are likely to be damaged during the construction of the works, the branches shall be trimmed to the branch collar with a clean saw cut in accordance with AS 4373. If necessary, work close to trees shall be carried out by hand to avoid damage by equipment.

Fauna Protection

- .5 The Contractor shall minimise the impact on marine mammals and other marine fauna species by undertaking daily visual checks immediately prior to commencement of works. The Contractor shall report any injury to or death of native wildlife, caused through or because of any project activity, to the Principal.

- .6 The Contractor shall instigate work practices which allow fauna that are sensitive to noise to depart without risk of harm.

Weed, Noxious species and Disease Control

- .7 The Contractor shall:
- (a) ensure that all equipment (floating plant, rigs, drill parts and vehicles) have been appropriately cleaned of all vegetative matter prior to leaving and entering site, to ensure no weeds (declared weeds or noxious species) are not transported to or from the construction site;
 - (b) ensure that arine vessels and floating plant should be cleaned in accordance with the "Code of Practice for vessel and facility Management (marine and inland waters)" (EPA 2008) to avoid depositing exotic aquatic plants such as the European Fan Worm (*Sabella spallanzanii*) and *Caulerpa taxifolia* (http://www.epa.sa.gov.au/xstd_files/Water/Code%20of%20practice/vessels.pdf); and
 - (c) ensure that any pests and weeds are not introduced through construction activity or those existing at the site prior to construction commencing are not spread any further.

3. RUNOFF AND SEDIMENTATION CONTROL

- .1 The Contractor shall:
- (a) ensure water entering the marine environment (or other waterway) is consistent with the Environment Protection (Water Quality) Policy, 2003 requirements;
 - (b) minimise and contain suspension of sediment from the seabed, turbid plumes, siltation and the release of pollutants (including heavy metals) from the sediment;
 - (c) minimise the size and number of all stockpiles and the time over which stockpile surfaces are unprotected;
 - (d) use appropriate soil and erosion control methods to avoid material entering the marine environment;
 - (e) protect drainage lines at worksites and avoid stockpiling materials or disposing of excavated spoil in or across drainage lines; and
 - (f) ensure environmental protection measures are installed to protect the marine environment, stormwater drainage systems and natural watercourses (e.g. washing down of construction plant, use of and handling chemicals and hazardous substances and refuelling).

4. WASTE MANAGEMENT

- .1 The Contractor shall regularly remove and dispose all site rubbish and waste. All rubbish and waste materials resulting from the Works including plant maintenance (sump oil, bitumen, kerosene, etc.) shall be disposed of at the nearest licensed waste disposal depot. Hazardous wastes and contaminated material shall be disposed of in accordance with Environment Protection Authority requirements.
- .2 Maintenance of vehicles and machinery shall be carried out off site where practicable. If maintenance is to occur on site, the location and procedure shall be documented in the CEMP.
- .3 The Contractor shall carry out all work under the Contract in such a manner as to minimise the generation of waste materials and wherever possible shall recover or recycle such materials. Re-use of recovered or recycled materials within the Works shall be subject to the approval of the Principal.
- .4 On completion of the works the Contractor shall clear the site of all rubbish and waste and leave the site in a clean and tidy condition. The contractor shall provide sealed/covered bins to prevent wind blown litter and attraction of pest animals.

5. SAND MANAGEMENT

- .1 If the works involve movement of sand, the sand is to be raked/cleaned so that it is free of litter, debris and weeds of any kind generated by the Works.
- .2 All vehicles shall give way to all pedestrian traffic on the beach and at shared use pathways. Appropriate signage indicating heavy machinery in use and the speed of vehicles on the beach shall not exceed 25km/h.

- .3 Access points to the beach shall remain clear of any deposited sand stockpiles so as to allow vehicle and pedestrian access at all times.
- .4 The Contractor shall advise the Local Council when the sand movement will be undertaken.

6. STORAGE AND HANDLING OF HYDROCARBONS AND HAZARDOUS SUBSTANCES

- .1 The Contractor shall ensure that fuel, oil and other chemicals that are stored on site are stored within a bund, with an impervious floor, in an area not subject to flooding and in accordance with AS 1940.
- .2 The Contractor shall ensure that fuel; oil and hydraulic fluids do not leak from machinery and shall apply appropriate methods during refuelling and maintenance to ensure that any spills/leaks are contained. Refuelling shall be undertaken in accordance with "Code of Practice for Vessel and Facility Management (Marine and Inland Waters)" http://www.epa.sa.gov.au/files/47792_vessels.pdf. In the event of a leak, the Contractor shall clean up the contaminated area and dispose of the affected material to the nearest licensed waste depot immediately. The Contractor shall repair leaking machinery.
- .3 Refuelling operations shall not be left unattended while in progress.
- .4 In the event of chemical, fuel or oil spillage, the Contractor shall clean up spills and excavate or remove contaminated soil (where appropriate) to a licensed waste disposal site and replace the contaminated soil with clean fill.
- .5 The Contractor shall provide on site and have access at all times to a hydrocarbon spill kit(s) for the purpose of cleaning up oil and fuel spillage which is suitable for spills onto land and into the marine environment. The Contractor shall also ensure that personnel trained in the efficient deployment of the spill kit are readily available in the event of a spill.
- .6 Any spill into the marine environment shall be treated in accordance with Clause 9 "Contamination of the Marine Environment".

7. CONSTRUCTION NOISE AND VIBRATION CONTROL

- .1 Work shall be programmed to avoid noisy operations outside the hours of:
 - (a) 7.00 a.m. to 7.00 p.m. Monday to Saturday inclusive; and
 - (b) 9.00 a.m. to 7.00 p.m. on Sundays and public holidays.
- .2 The Contractor shall use its best endeavours to minimise noise and vibration impacts of construction works, such as:
 - (a) selecting low noise plant and ensuring that equipment has appropriate measures fitted and effectively maintained to minimise noise and vibration;
 - (b) locating noisy plant, site access roads and site compounds as far away as possible from noise sensitive receptors;
 - (c) orienting plant known to emit noise strongly in one direction so that noise is directed away from noise sensitive areas;
 - (d) limiting truck movements on streets with sensitive receptors such as developed residential areas, educational institutions, hospitals, child care centres and nursing homes, where possible;
 - (e) ensuring that staff adopt noise mitigation practices, such as ensuring that tailgates are cleared and locked at the point of unloading, shutting down or throttling down machines that are used intermittently in the intervening periods between works; etc
 - (f) using noise attenuating enclosures for stationary items of plant normally operating continuously, such as generators and compressors.
- .3 Any works outside customary working hours shall be undertaken in accordance with DPTI Environmental Instruction 21.7 "Management of Noise and Vibration: Construction and Maintenance Activities" and requires approval from the Principal. If required, the Contractor shall prepare and submit a Night Works Management Plan within the timeframes specified in the Environmental Instruction.

8. AIR QUALITY

- .1 The Contractor shall suppress nuisance dust from disturbed sites within the construction area including access tracks, haul roads and stockpile sites and ensure that effective dust control measures are in place, particularly where the safety and convenience of people are affected.
- .2 The Contractor shall cease any activity where that activity create a dust hazard of nuisance to the public, personnel working on the site or properties in the vicinity of the Works.
- .3 All construction plant and equipment shall be effectively maintained such that they do not emit to the atmosphere visible smoke for any period greater than:
 - (a) 15 consecutive seconds (in the case of plant not being registered for the use on public roads); and
 - (b) 10 consecutive seconds (in the case of plant registered for use on public roads).

9. FIRE SAFETY

- .1 The Contractor shall ensure all construction works and associated activities are in accordance with the *Fire and Emergency Services Act 2005* and *Fire and Emergency Services Regulations 2005*, including the requirement to obtain a permit, if necessary under Section 81 of the Act, prior to lighting or maintaining a fire during the Fire Danger Season or during a Total Fire Ban Day.
- .2 Lighting a fire includes heating bitumen, welding, gas-cutting, soldering, grinding and charring.

10. RETRIEVAL OF MATERIALS

- .1 The Contractor shall, at its own cost, retrieve and if necessary dispose of, any item, plant or materials that have entered the marine environment in consequence of the Contractor's activities, irrespective of cause, unless directed otherwise by the Principal.

11. PROTECTION OF SITES OF CULTURAL AND NATURAL SIGNIFICANCE

- .1 The Contractor shall exercise due care and to make the necessary allowance for the preservation of all identified sites or sites that may be encountered whilst constructing the Works.
- .2 The Contractor shall stop work if, at any time, an Aboriginal site or a site containing items associated with Aboriginal occupation is uncovered. The Contractor shall provide notification to the Superintendent immediately and work shall not recommence in the affected area until the Department of the Premier and Cabinet, Aboriginal Affairs and Reconciliation Division has provided direction on site treatment.

12. HOLD POINTS

- .1 There are no Hold Points referenced in this Part.
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