

### **WASTE DISCHARGE LICENCE**

(Pursuant to section 74 of the Water Act)

Licensee

Darwin Port Operations Pty Limited

**Licence Number:** 

WDL210-02

Registered Business

Address:

11 Export Drive

Berrimah NT 0822

ACN:

603 472 788

ABN:

62 603 472 788

Premise Address:

Section 07219 Hundred of Bagot, East Arm NT

Anniversary Date:

18 July

Commencement Date:

18 July 2018

**Expiry Date:** 

18 July 2020

Licensed Activity:

- Discharge of wastewater to Darwin Harbour from the East Arm Dredge Spoil Ponds.
- Discharge of wastewater containing dredge spoil to authorised disposal areas within Darwin harbour

Description:

A maximum of 70,000 cubic metres (m³) of seabed sediment from the Tug Pen and Small Vessel Berths Facility dredge campaign will be transported to, and disposed of at, the onshore East Arm Dredge Spoil Ponds via a temporary pipeline. Decant water will be discharged from the ponds to Darwin Harbour via one authorised discharge point.

Disposal of a maximum of 10 000 m³ of accumulated sediment from the Fort Hill Wharf, East Arm Wharf berth pockets, and Marine Supply Base berth pocket, turning basin and access channel at three authorised disposal areas within Darwin Harbour.

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### INFORMATION ABOUT THIS LICENCE

### **Definitions of Terms**

- A section on the definition of terms used in this licence can be found at the end of this licence.
- Terms used in the waste discharge licence which are defined in the Water Act (the Act) have the meaning given in that Act unless specifically indicated otherwise.

### Responsibilities of Licensee

- It is an offence under the Water Act, if the holder of a waste discharge licence contravenes or fails to comply with the conditions of a waste discharge licence.
- In addition to the conditions set out in this licence, general responsibilities of licensees are set out in the Waste Management and Pollution Control Act (WMPC Act), the Water Act and associated Regulations.
- Licensees must comply at all times with the requirements of these Acts and all other applicable laws.
- Except as expressly provided for in this licence, the licensee must not:
  - o cause environmental harm either directly or indirectly;
  - o allow waste to come into contact with water; or
  - o allow water to be polluted.
- Without limiting the conditions of this licence, in conducting the activity, the licensee must do all things reasonable and practicable to:
  - prevent or minimise the likelihood of pollution occurring as a result of, or in connection with, the activity;
  - o prevent or minimise the likelihood of environmental harm occurring as a result, or in connection with, the activity;
  - effectively respond to pollution and the risk of pollution occurring as a result of, or in connection with, the activity;
  - o effectively respond to environmental harm and the risk of environmental harm occurring as a result of or in connection with the activity; and
  - o as far as practicable:
    - avoid and reduce waste produced as a result of, or in connection with the activity;
    - increase the re-use and recycling of waste;
    - effectively manage waste disposal; and
    - apply the principles of ecologically sustainable development.

### **Duration of licence**

- This licence will remain in force until its expiry date, it is surrendered by the licensee, or until it is suspended or revoked by the Controller of Water Resources.
- The licensee must notify the Administering Agency within 14 days after ceasing to conduct the activity.
- The licensee may surrender the licence to the Administering Agency.

### Amendment, Modification or Revocation of Licence (section 93 of the Water Act)

- As set out in section 93 of the Water Act, the Controller of Water Resources may, by notice:
  - o amend or modify the terms and conditions of a licence;
  - o revoke a licence; or
  - o suspend a licence.

### **Public Register**

- A copy of waste discharge licences and any plans for environmental management, reports, submissions or documents required as a condition of a waste discharge licence, will be placed on a register.
- A copy of the Annual Return will be placed on the register.
- The Administering Agency makes this register freely available from the Northern Territory Environment Protection Authority (NT EPA) website.

## Environment Protection Objectives (Part 4 of the WMPC Act) and Beneficial Use Declaration (section 73 of the Water Act)

- An Environment Protection Objective (EPO) is a statutory instrument to establish principles on which:
  - a) environmental quality is to be maintained, enhanced, management or protected;
  - b) pollution, or environmental harm resulting from pollution, is to be assessed, prevented, reduced, controlled, rectified or cleaned up; and
  - c) effective waste management is to be implemented or evaluated.
- In accordance with section 18 of the WMPC Act, a beneficial use, quality standard, criteria or objective declared under section 73 of the Water Act and in force is an environment protection objective for the purposes of the WMPC Act.
- Beneficial Use Declaration (BUD) is a legislated process that reduces the effects of water pollution and assists in the protection and management of water. The community decides how a particular water body should be used by choosing on one or more Beneficial Use categories.

### **Environmental Interests**

 This section highlights the beneficial uses as declared under the Water Act and the sensitivity of the surrounding land use and environment associated with the location of the approved activity.

- Declared beneficial uses and or water quality objectives are: Darwin Harbour Region, Northern Territory Government Gazette No. G27, 7 July 2010
- Sites of Conservation Significance, SOCS Number 6, Darwin Harbour

### **Cultural Interests**

• It is the licensee's responsibility to contact the Aboriginal Areas Protection Authority, appropriate land council or other governing body and ensure that any Authority Certificates required as a result of conducting the licenced activity are obtained and complied with.

### RULES FOR INTERPRETING THE CONDITIONS OF THIS LICENCE

- Where there is a discrepancy between the conditions of this licence and any plan, standard, guideline or other document referred to in this licence, the conditions of this licence prevail to the extent of the inconsistency.
- Any reference to any standard (Australian or international) in this licence means the relevant parts
  of the current version of that standard.
- A reference to any guideline or code of practice (or to the relevant parts of any guideline or code
  of practice) in this licence means the current version of the guideline or code of practice.
- Under section 76 of the *Water Act*, any contravention of or failure to comply with this licence by the licensee may be an offence.
- In this licence, unless the contrary intention appears, words that are defined in the *Water Act* are intended to have the meaning given to them in that Act.

### LICENCE CONDITIONS

### **GENERAL**

- The licensee must ensure the contact details recorded with Administering Agency for this licensee are correct at all times.
- 2. The licensee must at all times have a 24 hour emergency contact.
- 3. The licensee must notify the Administering Agency prior to making any operational change that will cause, or is likely to cause, an increase in the potential for environmental harm.
- 4. The licensee must cause clear and legible signage, in English, to be displayed in a prominent location at each public entrance to the East Arm Wharf, Fort Hill Wharf and the Marine Supply Base that includes the following details:
  - 4.1. waste discharge licence number issued under the Water Act; and
  - 4.2. 24 hour emergency contact details.
- 5. The licensee must cause a copy of this licence to be available for inspection by any person, in hard copy form, on the bridge of the dredge vessel and at the licensee's Darwin office.
- 6. The licensee must provide to the Administering Agency, within 10 business days of a request, a copy of any document, monitoring data or other information in relation to the activity, in the format requested by the Administering Agency.
- 7. All notices, reports, documents or other correspondence required to be provided as a condition of this licence, unless otherwise specified as a condition of this licence, must be provided in electronic form by emailing <a href="mailto:waste@nt.gov.au">waste@nt.gov.au</a>.
- 8. The licensee must maintain and implement the documents listed in Table 1.

Table 1 - Documents Relevant to the licenced Activity

Document Name	Document Reference	
Tug Pen and Small Vessel Berths Dredging and	42214008: R1750/M&C3835/1	
dge Spoil Placement Management Plan (DDSPMP)	Dated: 18 April 2015	
	DENR Ref: NTEPA2017/0067~0043	
Darwin Port Long Term Dredging Management Plan	R1855\M&C4104	
LTDMP)	Dated: 22 January 2018	
	DENR Ref: NTEPA2017/0042~0016	

- 9. Within 10 business days of any amendment being made to a document listed in Table 1, where the amendment is relates to dredging methodology, trigger and response actions, monitoring plans and any change likely to increase the risk of environmental harm, the licensee must provide the amended document to the Administering Agency, along with:
  - 9.1. a tabulated summary of the amendment(s) with document references;
  - 9.2. reasons for the amendment(s);
  - 9.3. an assessment of environmental risk associated with the amendment(s); and
  - 9.4. a copy of the dredging technical advice groups' review of the amended document.

- 10. The administering agency may require the licensee to revise or amend and resubmit any document in relation to this licence. The licensee must resubmit the document to the administering agency by the date requested by the administering agency.
- 11. The licensee must, for the duration of this licence, implement, maintain and follow a Consultation and Communication Plan which includes a strategy for communicating with persons who are likely to have a real interest in, or be affected by, the activity.
- 12. The licensee must operate and maintain a community feedback number.
- 13. The licensee must display the community feedback number:
  - 13.1. where the licensee has a website, in a prominent location on the licensees website;
  - 13.2. in the Consultation and Communication Plan; and
  - in other publicly available documents relating to the activity.
- 14. The licensee must maintain a Complaint Log for all complaints received by the licensee in relation to the activity.
- 15. The licensee must ensure that the Complaint Log includes, for each complaint received by the licensee, the following information:
  - 15.1. the person to whom the complaint was made;
  - 15.2. the person responsible for managing the complaint;
  - 15.3. the date and time the complaint was reported;
  - 15.4. the date and time of the event(s) that led to the complaint;
  - 15.5. the contact details of the complainant if known, or where no details are provided a note to that effect;
  - 15.6. the nature of the complaint:
  - 15.7. the nature of event(s) giving rise to the complaint;
  - 15.8. prevailing weather conditions at the time (where relevant to the complaint);
  - 15.9. the action taken in relation to the complaint, including any follow-up contact with the complainant; and
  - 15.10. if no action was taken, why no action was taken.
- 16. The licensee must implement, maintain and follow an Emergency Response Plan that addresses procedures for responding to emergencies associated with the activity that may cause environmental harm.

### **EARLY SURRENDER OF LICENCE**

17. Any reports, records or other information required or able to be provided by the licensee under this licence must be submitted to the administering agency prior to the licensee surrendering the licence. If the date on which a report, record or other information is required falls after the date the licensee requests to surrender this licence, the licensee must provide the report, record or information as far as possible using data available to the licensee up to and including the date the request to surrender the licence is made.

### **OPERATIONAL**

- 18. The licensee must, without limiting any other condition of this licence, in conducting the activity do all things reasonable and practicable to ensure the activity does not adversely affect the Declared Beneficial Uses and Objectives as declared from time to time, including those applying to:
  - The Darwin Harbour Region.
- 19. The licensee must ensure any plant and equipment used by the licensee in conducting the activity:
  - 19.1. is reasonably fit for the purpose and use to which it is put:
  - 19.2. is maintained; and
  - 19.3. is operated by a person trained to use the plant and equipment.
- 20. No change, replacement or alteration of plant and equipment is permitted if the change, replacement or alteration increases the risk of environmental harm for the licenced activity, unless approved by the Administering Agency.

### **DISCHARGES**

21. This licence authorises the discharge of wastewater from the East Arm Dredge Spoil Ponds to Darwin Harbour via the authorised discharge point identified in Table 2 and shown in Figure 1 of Appendix 1, and as otherwise allowed in accordance with the conditions of this licence.

Table 2 - Authorised Discharge Point

Authorised Discharge Point	Source	Location
Authorised Discharge Point (ADP)	The source of the water in Pond E (South) is stormwater and dredge tail water from dredging activities at the Tug Pen and Small Vessel Berths Facility and where no acid sulphate soils are present,	Overflow Bund Side 1: Easting: 705237.00 Northing: 8618636.00
	the Marine Supply Base berth pocket.  The ADP is the permeable section of the bund wall in Pond E (South).	Overflow Bund Side 2: Easting: 705178.00 Northing: 8618590.0

- 22. Should an exceedance of any of the water quality trigger values at authorised monitoring point Site 1, as specified in Appendix 1, occur prior to the release of waste water from the authorised discharge point identified in Table 2, the licensee must implement corrective actions to ensure that water quality at Site 1 meets the trigger values specified in Appendix 1 prior to further release of waste water.
- 23. The licensee must, at Pond K, measure and record the time pumping commenced and the volume pumped into Pond K for each dredging event.
- 24. The licensee must as soon as practicable, by emailing <a href="waste@nt.gov.au">waste@nt.gov.au</a>, notify the Administering Agency when water begins to flow over the weir boards from Pond E (North) to Pond E (South).
- 25. The licensee must as soon as practicable, by emailing <a href="waste@nt.gov.au">waste@nt.gov.au</a>, notify the Administering Agency when water ceases to flow over the weir boards from Pond E (North) to Pond E (South).
- 26. The licensee must ensure that the discharge from all discharge events at the authorised discharge point does not:

- 26.1. contain any floating debris, oil, grease, petroleum hydrocarbon sheen, scum, litter or other objectionable matter;
- 26.2. cause or generate odours which would adversely affect the use of surrounding waters;
- 26.3. cause algal blooms in the receiving water;
- 26.4. cause visible change in the behaviour of fish or other aquatic organisms in the receiving water;
- 26.5. cause mortality of fish or other aquatic organisms; or
- 26.6. cause adverse impacts on plants.
- 27. This licence authorises the discharge (disposal) of wastewater containing dredge spoil at the authorised disposal sites as specified in Table 3 and as shown in Figures 1 & 2 of Appendix 2, and as otherwise allowed in accordance with the conditions of this licence.

Table 3 - Authorised Disposal Sites

Authorised Disposal Site (ADS)	Source	Corner Location of ADS			
ADS A	Fort Hill Wharf	E: 700879.28 N: 8620141.04			
(Appendix 2: Figure 1)		<b>E:</b> 700924.80 <b>N:</b> 8620052.00			
	2 7	<b>E</b> : 700746.72 <b>N</b> : 8619960.96			
		<b>E:</b> 700701.20 <b>N</b> : 8620050.00			
ADS B	East Arm Wharf berth pockets	E: 703850.36 N: 8618370.36			
(Appendix 2: Figure 2)		<b>E:</b> 704091.36 <b>N:</b> 8618158.36			
		<b>E</b> : 704020.64 <b>N</b> : 8618087.64			
		<b>E:</b> 703779.64 <b>N:</b> 8618299.64			
ADS C	Marine Supply Base berth pocket	<b>E</b> : 705857.00 <b>N</b> : 8618234.98			
(Appendix 2: Figure 2)	(when acid sulphate soils are	<b>E</b> : 705954.98 <b>N</b> : 8618214.98			
	detected)	E: 705915.00 N: 8618019.02			
		<b>E</b> : 705817.02 <b>N</b> : 8618039.02			
ADS D	Marine Supply Base turning basing	E: 705301.71 N: 8617599.74			
(Appendix 2: Figure 2)	and access channel	<b>E:</b> 705234.00 <b>N:</b> 8617599.74			
		<b>E</b> : 705234.00 <b>N</b> : 8617415.29			
		<b>E</b> : 705301.71 <b>N</b> : 8617415.29			

28. The licensee must ensure that upon geochemical assessment, if acid sulphate soils are not detected, dredge spoil from the Marine Supply Base berth pocket, is placed in the East Arm Dredge Spoil Ponds, shown in Appendix 1, Figure 1.

### MONITORING

- 29. The licensee must conduct monitoring in accordance with the DDSPMP, the LTDMP and Table 4 of Appendix 1-Water Quality Monitoring Program.
- 30. The licensee must ensure that, for maintenance dredging activities at Fort Hill Wharf, East Arm Wharf and the Marine Supply Base, that offshore turbidity monitoring is undertaken at the location and tides as described in Section 7.2 of the LTDMP and as shown in Appendix 2, Figure 3.
- 31. The licensee must, in addition to condition 29, ensure that continuous real time turbidity monitoring is undertaken in the water column during dredging and dredge spoil disposal activities and analysed in accordance with LTDMP Section 7.2.

- 32. The licensee must ensure that the continuous monitoring:
  - 32.1. Includes as a minimum, high frequency discrete measurement or continuous measurement averages of no greater than 15 minutes, for the purpose of adaptive management; and
  - 32.2. Include as a minimum, high frequency discrete measurement or continuous measurement averages of no greater than 1 hour, for the purpose of trigger value comparison.
- 33. The licensee must ensure that all samples and field environmental data are representative of the conditions at the time of sampling.
- 34. The licensee must ensure that all samples and field environmental data are collected in accordance with recognised Australian Standards and guidelines (such as AS/NZS 5667, ANZECC/ARMCANZ).
- 35. The licensee must ensure that all monitoring samples are analysed at a laboratory with current NATA accreditation or equivalent.
- 36. The licensee must ensure any samples collected in accordance with the management plans and Table 4 of Appendix 1 or in connection with the licenced activity, are obtained by, or under the supervision of a qualified sampler.
- 37. The licensee must ensure that, for each sample collected in accordance with this licence the following information must be recorded and retained:
  - 37.1. the date on which the sample was collected;
  - 37.2. the time at which the sample was collected;
  - 37.3. the location at which the sample was collected;
  - 37.4. the name of the person who collected the sample:
  - 37.5. the chain of custody forms relating to the sample;
  - 37.6. the field measurements (if any) and analytical results (if any) relating to the sample; and
  - 37.7. laboratory quality assurance and quality control documentation.

### RECORDING AND REPORTING

- 38. The licensee must notify the administering agency at least 10 days prior to commencement of any dredging activities.
- 39. Notification of commencement of maintenance dredging must include:
  - 39.1. name of dredge vessel and contact details for the dredge contractor;
  - 39.2. proposed commencement date of dredging;
  - 39.3. volume of material to be dredged; and
  - 39.4. expected duration of dredging.
- 40. The licensee must notify the administering agency within seven days of completing the dredging campaign. Notification must include:
  - 40.1. the date of completion of the dredging campaign;
  - 40.2. duration and period of dredging;
  - 40.3. the volume of material dredged; and

- 40.4. a summary of compliance against the conditions of this licence during dredging activities, including the documents referred to in Table 1.
- 41. The licensee must provide to the administering agency, by emailing <a href="waste@nt.gov.au">waste@nt.gov.au</a>, certified surveyed bathymetric charts of the final configuration of the offshore spoil disposal areas within 30 days of completion of the dredging campaign.
- 42. The licensee must keep records of all non-compliances with this licence. These records must be adequate to enable the licensee to comply with the non-compliance notification conditions of this licence.
- 43. The licensee must notify the administering agency of any non-compliance with this licence as soon as practicable after (and in any case within 24 hours) first becoming aware of the non-compliance.
- 44. The licensee must include in the notification of non-compliance the following information:
  - 44.1. when the non-compliance was detected and by whom;
  - 44.2. the date and time of the non-compliance;
  - 44.3. the actual and potential causes and contributing factors to the non-compliance;
  - 44.4. the risk of environmental harm arising from the non-compliance;
  - 44.5. the action(s) that have or will be undertaken to mitigate any environmental harm arising from the non-compliance;
  - 44.6. corrective actions that have or will be undertaken to ensure the non-compliance does not reoccur;
  - 44.7. if no action was taken, why no action was taken; and
  - 44.8. a date when an incident investigation report will be submitted to the Administering Agency.
- 45. A non-compliance with this licence includes:
  - 45.1. an exceedance of a trigger value specified in Table 4 of Appendix 1 at an authorised monitoring point on three consecutive sampling occasions; or
  - 45.2. an exceedance of a trigger value specified in Table 4 of Appendix 1 at an authorised monitoring point on a single occasion where the parameter measures greater than or equal to three times or more the trigger value.
- 46. The licensee must notify the administering agency, within 48 hours, if a Darwin Harbour seasonal turbidity trigger value specified in section 7.2.3.4 of the LTDMP, is exceeded at the SSI-West monitoring site and is assessed as attributable to the licenced activity. The notification must include:
  - 46.1. when the exceedance was detected and by whom;
  - 46.2. the actual and potential causes and contributing factors to the exceedance;
  - 46.3. corrective actions that have or will be undertaken to ensure the exceedances does not reoccur;
  - 46.4. the risk of environmental harm arising from the non-compliance; and
  - 46.5. if no action was taken, why no action was taken.
- 47. The licensee must keep records of all exceedances of trigger values specified in this licence.

- 48. The licensee must, for the Tug Pen and Small Vessel Berth Dredge campaign, complete and provide to the Administering Agency a Monitoring Report, as prescribed by this licence, within two 2 months after completion of the activity.
- 49. The licensee must, for the maintenance dredging campaign at Fort Hill Wharf, East Arm Wharf berth pockets, and Marine Supply Base berth pocket, turning basin and access channel, complete and provide to the Administering Agency a Monitoring Report, as prescribed by this licence, within 10 business days after each anniversary date of this licence.
- The licensee must ensure that the Monitoring Report is prepared in accordance with the documents listed in Table 1, in the format described in the National Water Quality Management Strategy, Australian Guidelines for Water Quality Monitoring and Reporting, Chapter 7 and the Administering Agency 'Guideline for Reporting on Environmental Monitoring' and includes:
  - 50.1. a tabulation of all monitoring data required as a condition of this licence:
  - 50.2. for discharges to water, data analysis and interpretation using the National Water Quality Management Strategy, Australian Guidelines for Water Quality Monitoring and Reporting, Chapter 6; and
  - 50.3. includes an assessment of environmental impact from the activity.
- 51. The administering agency may require the licensee to revise or amend and resubmit any Monitoring Report. Where the administering agency requires the Monitoring Report to be submitted the date for resubmission will be specified and will become a condition of this licence.
- 52. The licensee must submit a completed Annual Return within 20 business days prior to the expiry date of this licence, which relates to conditions of the licenced activity.

### PERFORMANCE IMPROVEMENT

- 53. The licensee must, by 03 June 2019, provide to the Administering Agency a long term Acid Sulphate Soil Management Plan that addresses procedures for mitigating risks associated with potential acid sulphate soils within dredge spoil placement ponds.
- 54. The licensee must submit a Long-Term Maintenance Monitoring Plan to the Administering Agency by the first anniversary date of this licence. The Long Term Maintenance Monitoring Plan must:
  - 54.1. outline planned dredging activities within Darwin Harbour for the next five (5) years, including locations, frequency and anticipated spoil volumes;
  - 54.2. include methods to determine and validate natural variability of suspended sediment concentration within the zone of influence;
  - 54.3. include methods to determine and validate sedimentation rates within the zone of influence. Methodology should include provisions to assess the fate of sediment at the dredge spoil ground over several dredge operations;
  - 54.4. Include methods to validate the applicability of adopted trigger values for suspended sediment concentrations;
  - 54.5. include a sub plan, outlining how the licensee will manage each future maintenance dredge campaign, to reduce the likelihood of cumulative impacts to sensitive receptors occurring from similar activities within a similar timeframe or location; and
  - 54.6. be implemented by the date specified by the Administering Agency following submission and assessment of the plan by the Administering Agency.

### **END OF LICENCE CONDITIONS**

This licence is not valid unless signed below:

JOANNE TOWNSEND

Controller of Water Resources

Dated the October 2018

### **DEFINITIONS**

### In this licence, unless a contrary intention appears:

Term	Definition
24 hour emergency contact	the phone number of a person who can be contacted at any time and be capable of responding to and providing information about any incident associated with the activity.
Activity	the Licenced activity as described on the covering page of this licence.
Administering Agency	means the Department of Environment and Natural Resources, or if dissolved, another Government Department with responsibility for administering the Water Act.
Annual Return	an Administering Agency prescribed format for demonstrating and reporting compliance with the conditions of this licence.
ANZECC/ARMCANZ	Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 2000: National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting.
Business days	a day not Saturday, Sunday or a public holiday, in the Northern Territory.
Community feedback number	a telephone number enabling members of the public to contact, at any time, a person or voice mail system that can accept, on behalf of the licensee, enquiries or complaints about the activity, and to which the licensee must respond.
Complaint Log	a register of complaints to be maintained by the Licensee that records the details of each complaint received in relation to the activity.
Consultation and Communication Plan	a written plan documenting proposed consultation and communications for the activity before, during and after the activity which includes a strategy for communicating with members of the public who are likely to have a real interest in, or be affected by, the activity.
Contact details	includes the 24 hour emergency contact, and name, position title and phone number of a representative of the licensee who can be contacted about the licence and activity.
Contaminant	a solid, liquid or gas or any combination of such substances and includes:
	<ul><li>(a) noise, odour, heat and electromagnetic radiation;</li><li>(b) a prescribed substance or prescribed class of substances; and</li><li>(c) a substance having a prescribed property or prescribed class of properties.</li></ul>
Discharges	allow a liquid, gas or other substance to flow out from where it has been confined.
Emergency Response Plan	a written plan documenting the licensee's procedures for responding to emergencies caused by, resulting from or associated with the activity and that may cause environmental harm.
Environmental harm	any harm to or adverse effect on, or potential harm to or potential adverse effect on, the environment

Incident

includes:

- (a) an accident, emergency or malfunction; and
- (b) a deliberate action, whether or not that action was taken by the person conducting the activity in the course of which the incident occurred.

Land

includes water and air on, above or under land.

Maintain

kept in a manner that it does not present or cause a risk of environmental harm or a hazard to persons or property or, for the purposes of documents including plans, a process of reviewing and amending documentation to ensure it is relevant.

Material environmental harm

environmental harm that:

- (a) is not trivial or negligible in nature;
- (b) results, or is likely to result, in not more than \$50,000 or prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the harm or rehabilitate the environment; or
- (c) results in actual or potential loss or damage to the value of not more than \$50,000.

Monitoring Plan

refers to the Tug Pen and Small Vessel Berths Dredging and Dredge Spoil Placement Management Plan (DDSPMP) specified in Table 1.

NATA

National Association of Testing Authorities, Australia.

Non-compliance

failure or refusal to comply, whether by act or omission, with obligations or requirements and includes any exceedance of a licence limit.

Non-compliance notification

an Administering Agency prescribed format for notifying the Administering Agency of a non-compliance.

Point source discharge

means any discernible, confined or discrete conveyance from which contaminants or waste are or may be discharged.

Pollute

in relation to water, means directly or indirectly to alter the physical, thermal, chemical, biological or radioactive properties of the water so as to render it less fit for a prescribed beneficial use for which it is or may reasonably be used, or to cause a condition which is hazardous or potentially hazardous to:

- (a) public health, safety or welfare:
- (b) animals, birds, fish or aquatic life or other organisms; or
- (c) plants.

Pollution

- (a) a contaminant or waste that is emitted, discharged, deposited or disturbed or that escapes; or
- (b) a contaminant or waste, effect or phenomenon, that is present in the environment as a consequence of an emission, discharge, deposition, escape or disturbance or a contaminant or waste.

Premises

the premises identified in this licence which includes equipment, plant and structures, whether stationary or portable, and the land on which premises are situated.

Public entrance

access to the premises that is utilised by the public.

Qualified professional

A person who has professional qualifications, training, skills and experience relevant to the nominated subject matter, and can competently assess, analyse and advise on performance relevant to the subject matter using relevant protocols, standards, methods or literature.

Serious	environmental
harm	

environmental harm that is more serious than material environmental harm and includes environmental harm that:

- (a) results or is likely to result in more than \$50,000 or prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the harm or rehabilitate the environment;
- (b) results in actual or potential loss or damage to the value of more than \$50,000;
- (c) damages an aspect of the environment that is of a high conservation value or of special significance; and
- (d) is irreversible or otherwise of a high impact or on a wide scale.

Stormwater

water flowing over ground surfaces, in natural streams and drains as a direct result of rainfall over a catchment and consists primarily of rainfall runoff.

Trigger values

assigned value for each indicator used to assess the risk to an environmental value, a value that initiates some type of pre-defined management action.

Waste

Includes matter or a thing, whether wholly or partly in a solid, liquid or gaseous state, which, if added to water, may pollute the water.

Wastewater

water that contains a contaminant or waste.

Water

means water, whether or not it contains impurities.

WMPC Act

the Northern Territory Waste Management and Pollution Control Act.

### APPENDIX 1: WATER QUALITY MONITORING PROGRAM

Table 4 – East Arm Dredge Spoil Ponds	Authorised Monitoring Point	Surface Water Monitoring		
Site Code	Site 1	Site 2	Site 3	
Site Description	Pond E (South)	Pond E (North)	Pond K (exit)	
Latitude	-12.4895°	-125886°	-12.4865°	
Longitude	130.8885°	130.8910°	130.8931°	

Parameter	Units	Analysis Type	Frequency			Trigger Values
Field Measurement		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
рН	рН	In Situ	Α	D	В	$8.0 - 8.4^{1}$
Turbidity	NTU	In Situ	Α	D	В	140³
Total Suspended Solids	mg/L	In Situ	А	D	В	54 <sup>3</sup>
Dissolved Metals			The Walter		di - ai gi	
Arsenic (AsIII)			Α	-	В	242
Arsenic (AsV)			Α	-	В	13 <sup>2</sup>
Cadmium (Cd)			Α	-	В	5.5 <sup>1</sup>
Chromium (CrIII)			Α	-	В	27.41
Chromium (CrVI)		Filtered	Α	-	В	4.41
Copper (Cu)	μg/L	(<45µm	Α	-	В	1.3 <sup>1</sup>
Lead (Pb)		filter)	Α	-	В	4.41
Mercury (Hg)			Α	-	В	0.41
Nickel (Ni)			Α	-	В	70.0 <sup>1</sup>
Selenium (Se)			Α	-	В	112
Zinc (Zn)			Α	-	В	15.0 <sup>1</sup>

### Key:

- B Before: Prior to release of tail water to Pond E (North)
- D Daily: Once daily from the commencement of tail water flow from Pond K into Pond E (North) until the cessation of tail water flow from Pond E (North) into Pond E (South)
- A After: Once prior to discharge of wastewater from the authorised discharge point, as identified in Table 2.
- <sup>1</sup> Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 default trigger values for marine water 95% species protection
- <sup>2</sup> Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 default trigger values for fresh water 95% species protection (used where there is insufficient data to derive a reliable trigger value for marine water)
- <sup>3</sup> Site specific trigger value in accordance with the Management Plans listed in Table 1.

Figure 1- East Arm Dredge Spoil Ponds & Authorised Discharge Point

Note: Monitoring Points Site 1, Site 2 and Site 3 shown as numbers 1, 2 and 3. Authorised Discharge Point shown as Main Discharge Point.



# APPENDIX 2: DREDGE AREA AND DREDGE SPOIL DISPOSAL LOCATIONS

Figure 1: Fort Hill Wharf Dredge Area & Authorised Disposal Site A Note: Authorised Disposal Site A shown as ADS A



Figure 2: East Arm Wharf and Marine Supply Base Dredge Area & Authorised Disposal Sites B, C & D Note: Authorised Disposal Sites B, C & D shown as ADS B, ADS C & ADS D



Figure 3: LTDMP Turbidity Figure Authorised Monitoring Points (Dredge and Disposal)



<sup>\*</sup>Monitoring locations:
o Are shown for ebb tides; on flood tides the upstream (U) and downstream (D) sites will be in reverse positions.
o Are shown relative to the dredge and spoil disposal locations depicted; actual monitoring locations will vary in accordance with the positions of the dredge and spoil disposal at the time of monitoring.
o MSB-Sp will only be monitored during harbour disposal of MSB spoil.