



Licence No. 50556

FLINDERS PORTS PTY LIMITED

The approved Dredge Area within the Outer Harbor channel and swing basin to be widened as approved under Development Approval #010/V048/17, the Dredge Material Placement Area approximately 30km from shore within the Gulf St Vincent and includes the transit of vessels between.

ISSUED:

12 Mar 2019

EXPIRY:

28 Feb 2023

ACN:

097 377 172

Environmental Authorisation
under Part 6 of the
*Environment Protection
Act 1993*

**South Australian
Environment
Protection Authority**
GPO Box 2607
Adelaide SA 5001
Tel: 08 8204 2004

EPA

Environment Protection Authority



LICENCE NUMBER 50556

LICENSEE DETAILS

Licence Holder: FLINDERS PORTS PTY LIMITED

ACN: 097 377 172

Registered Address: 296 St Vincent Street, PORT ADELAIDE SA 5015

Premises Address(es): The approved Dredge Area within the Outer Harbor channel and swing basin to be widened as approved under Development Approval #010/V048/17, the Dredge Material Placement Area approximately 30km from shore within the Gulf St Vincent and includes the transit of vessels between.

LICENSED ACTIVITIES

The Licensee is authorised to undertake, at the location(s) shown above, the following prescribed activities of environmental significance under Schedule 1 Part A of the Act, subject to the conditions in this Licence.

7(4)	Dredging
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TERMS OF LICENCE

Commencement Date: 12 Mar 2019

Expiry Date: 28 Feb 2023

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Licence Explanatory Notes – Do Not Form Part of the Licence

Compliance with this licence

The EPA seeks to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment according to the principles of ecologically sustainable development. To achieve this objective, the EPA uses a number of regulatory decision making principles and actions outlined in the 'Compliance and enforcement regulatory options and tools' document available on the EPA website.

Notification – serious or material environmental harm caused or threatened

If serious or material environmental harm from pollution is caused or threatened in the course of an activity, the licence holder must, as soon as reasonably practicable after becoming aware of the harm or threatened harm, notify the EPA (preferably on EPA emergency phone number 1800 100 833) of the harm or threatened harm, its nature, the circumstances in which it occurred and the action taken to deal with it in accordance with section 83 of the [Environment Protection Act 1993](#) (the Act). In the event that the primary emergency phone number is out of order, the licence holder should phone (08) 8204 2004.

Variations, transfers and surrender of a licence

The EPA may impose or vary the conditions of a licence by notice in writing to the licence holder in accordance with sections 45 and 46 of the Act. Public notice may be required where the variation of licence conditions results in a relaxation of the requirements imposed for the protection or restoration of the environment and results in an adverse effect on any adjoining land or its amenity.

If a licence holder wishes to vary the conditions of a licence, transfer a licence to another entity, or surrender a licence, the licence holder must submit an application to the EPA in accordance with the applicable provisions of the Act (sections 45, 49 and 56, respectively). A licence remains in effect and in its original form until such time as any proposed variation, application for surrender, or transfer has been made and approved in writing by the EPA.

Suspension or cancellation of a licence

The EPA may suspend or cancel a licence by notice in writing to the licence holder in accordance with section 55 of the Act if satisfied the licence holder has either obtained the licence improperly, contravened a requirement under the Act or if the holder is a body corporate, a director of the body corporate has been guilty of misconduct of a prescribed kind (whether in this State or elsewhere).

Responsibilities under Environment Protection legislation

In addition to the conditions of any licence, a licence holder must comply with their obligations under all State and Federal legislation (as amended from time to time) including: the [Environment Protection Act 1993](#); the [Environment Protection Regulations 2009](#); all Environment Protection Policies made under the [Environment Protection Act 1993](#); and any National Environment Protection Measures not operating as an Environment Protection Policy under the [Environment Protection Act 1993](#)

Public Register Information

The EPA maintains and makes available a Public Register of details related to its determinations and other information it considers appropriate (i.e. excluding trade processes or financial information) in accordance with section 109 of the Act. These details include, but are not limited to:

- licensing and beverage container applications and approvals
- enforcement actions
- site contamination
- serious or material environmental harm caused or threatened in the course of an activity
- environment improvement programmes and environment performance agreements
- environment assessment reports; results of testing, monitoring or evaluation required by a licence
- EPA advice or direction regarding development approvals referred to the EPA by a planning authority

Definitions

Unless the contrary intention appears, terms used in this licence that are defined in the Act (including any regulations or environment protection policies made pursuant to the Act) have the respective meanings assigned to those terms by the Act.

THE ACT: The *Environment Protection Act 1993*

PREMISES: The whole of the land comprised in Titles Register - Certificate of Title, Crown Lease and Crown Record.

AUTHORISATION FEE PAYMENT DATE: means the anniversary of the grant or renewal of this authorisation.

AUTOMATIC IDENTIFICATION SYSTEM: (AIS) means an automatic tracking system that uses transponders on vessels to provide information on vessel position, course and speed and must incorporate DGPS enabled transceivers.

BACK HOE DREDGE: (BHD) means a vessel with a hydraulic excavator installed. BHDs are usually supported by a suitable dredge barge(s).

BEFORE AFTER CONTROL IMPACT: (BACI) means a method of evaluating anthropogenic impacts on receiving environments where predicted impact and control sites are monitored before and after a planned activity to infer whether impacts have occurred as result of the activity.

CAUTION ZONE: means an area within 150m of any dredging vessel which is monitored for the presence of marine mammals by the Marine Mammal Observer.

CLOSURE PLAN: means a document to be prepared and implemented by the Licensee which includes the actions to be taken to prevent or minimise environmental harm during the closure and post-closure phase of a licensed activity. See: EPA Guideline 1088/16 Preparation and implementation of closure and post-closure plans.

COMMENCE DREDGING: means the time at which removal of solid matter from the bed of any waters by any approved digging or suction apparatus occurs, excluding the establishment of site offices or other land based facilities, other preparatory work to dredging or any works carried out for the establishment of a visual aid to navigation.

COMPLETION OF DREDGING: means the time at which the removal of solid matter from the bed of any waters by any approved digging or suction apparatus, and any transportation and disposal of the solid matter, ceases.

DREDGE BARGE: means a long flat-bottomed vessel for carrying dredge spoil, either under its own power or towed or pushed by another vessel.

DREDGE MANAGEMENT PLAN: (DMP) means a document to be prepared and implemented by the Licensee, which must confirm the scope, methodology, environmental management, contingency and incident response arrangements for the project.

DREDGE OVERFLOW: means the discharge of supernatant water and entrained fine sediments separated from the dredge spoil on board the dredge vessel(s).

DREDGE SPOIL DISPOSAL: means the placement of any solid matter (which has been removed from the bed of any waters) into waters or on to land.

ENVIRONMENTAL HARM: means the same as is defined in section 5 of the Environment Protection Act 1993.

ENVIRONMENTAL MONITORING PROGRAM: (EMP) means a document to be prepared and implemented by the Licensee, which provides detailed descriptions of the methods to be used to gather data to inform management decisions aimed at minimising impacts to the environment.

GREEN VALVE: means a valve that can be adjusted to reduce air entrainment in the overflow sediments thereby reducing turbidity from the overflow discharged from dredge vessels as sediment settles more directly to the seabed.

MARINE MAMMAL OBSERVER: (MMO) means a person trained in marine mammal observation who informs management responses which minimise risks to marine mammals.

SUPERNATANT: means the water from which solids that have settled have been removed.

TRAILING SUCTION HOPPER DREDGE: (TSHD) means a vessel that combines dredging, transport and disposal in a single vessel. A suction arm(s) with drag heads are used to remove solid matter from the bed of waters. The solid matter collected is then stored in the vessel's hull within a hopper. For disposal the doors of the hopper are opened allowing the solid matter to be discharged under gravity.

TURBIDITY: is the cloudiness in water caused by suspended material. Turbidity is often measured using Nephelometric Turbidity Units (NTU).

WASTE: means -

1. As defined under the Environment Protection Act 1993,

1(a) any discarded, dumped, rejected, abandoned, unwanted or surplus matter, whether or not intended for sale or for purification or resource recovery by a separate operation from that which produced the matter; or

1(b) any matter declared by regulation to be waste for the purposes of this Act (following consultation by the Minister on the regulation with prescribed bodies in accordance with the regulations); or

1(c) any matter declared by an environment protection policy to be waste for the purposes of this Act,

whether or not of value.

2. However, waste does not include—

2(a) an approved recovered resource whilst it is being dealt with in accordance with the declaration of that resource—see section 4A; or

2(b) anything declared by regulation or an environment protection policy not to be waste for the purposes of this Act,

even though the resource or the thing so declared might otherwise, but for the declaration, fall within the definition of waste in subsection (1).

Acronyms

EPA: means Environment Protection Authority

DGPS: (Differential Global Positioning System) means a system for improving the accuracy of GPS using reference stations at precisely known locations, which provide real-time corrections and integrity information for GPS signals from marine vessels.

EPA: Means Environment Protection Authority

NTU: means Nephelometric Turbidity Units.

PIRSA: means Primary Industries and Resources SA.

Conditions of Licence

The Licensee is authorised to conduct the prescribed activities as described in this Licence at the Premises nominated, subject to the following conditions:

1 CONTROL OF EMISSIONS

1.1 OVERFLOW MANAGEMENT (U - 1001)

The Licensee must ensure that any dredge overflow from the Trailing Suction Hopper Dredge (TSHD) is directed under the keel and through a green valve, or other equivalent environmental control measure, otherwise approved in writing by the EPA.

1.2 TURBIDITY MANAGEMENT (U - 1000)

The Licensee must take all reasonable and practicable measures to prevent or minimise environmental harm that may be caused by turbidity resulting from dredging.

1.3 TURBIDITY RESPONSE (U - 1002)

The Licensee must:

- 1.3.1 where turbidity, measured at either of the monitoring locations (Attachment B) (in accordance with U-991, exceeds ALARM criteria (Schedule 2), ensure that the specified actions in the approved Dredge Management Plan (DMP) are undertaken within the specified timeframes;
- 1.3.2 where turbidity measured at either of the monitoring locations (Attachment B) (in accordance with U-991 exceeds HOLD criteria (Schedule 2));
 - a cease dredging, as soon as is reasonably practicable, but no later than 3 hours of turbidity exceeding HOLD criteria;
 - b not recommence dredging until turbidity no longer exceeds HOLD criteria or unless otherwise approved in writing by the EPA;
 - c notify the EPA as soon as is reasonably practicable, but no later than 3 hours of turbidity exceeding HOLD criteria; and
 - d provide a written report to the EPA, no later than 7 days of turbidity exceeding the HOLD criteria, which includes the date, time and duration of turbidity exceeding the HOLD criteria, the associated turbidity (expressed as NTU), the cause(s) for the exceedance, actions taken to rectify the matter and corrective actions identified and taken (or to be taken) to prevent future events of the same or similar kind.

2 OPERATIONAL MANAGEMENT

2.1 APPROVED DREDGE METHODS (U - 989)

The licensee must:

- 2.1.1 only undertake dredging and dredge spoil disposal for the purpose of widening the existing shipping channel and swing basin at Outer Harbor in the Port of Adelaide as approved under Development Approval #010/V048/17 including the Project Location, prepared by ARUP and BMT WBM, Revision A (Attachment E);
- 2.1.2 only undertake dredging and dredge spoil disposal using the following equipment:
 - a one Trailing Suction Hopper Dredge (TSHD);
 - b one Sweeping Vessel;
 - c two Dredge Barges; and
 - d one Back Hoe Dredge (BHD); and
- 2.1.3 only dispose of dredge spoil within the Dredge Material Placement Area (DMPA) (Attachment A) and in a uniform manner which avoids mounding.

2.2 APPROVED DREDGE TIMING (U - 993)

The Licensee must:

- 2.2.1 not undertake dredging during the months of December, January or February in any year; and
- 2.2.2 complete dredging within 6 months of commencing dredging.

2.3 BUNDING (S - 5)

The licensee must ensure that all chemicals or chemical products are stored, loaded or unloaded in an appropriately bunded area.

NOTES

The EPA will assess the appropriateness of any bund against the EPA's 'Bunding and Spill Management Guidelines'.

2.4 CLOSURE PLAN (U - 995)

The Licensee must:

- 2.4.1 prepare to the satisfaction of the EPA a plan (the Closure Plan) for the completion of dredging detailing:
- a decommissioning and removal of all plant and equipment, including vessels, associated with the dredging; and
 - b the management and monitoring of any land and waters on or in which the licensed activity was carried out, after the completion of dredging including:
 - i a bathymetric survey of the Dredge Material Placement Area (DMPA) (Attachment A) and Dredge Area (Attachment E) to be undertaken within one month upon completion of dredging, verifying compliance with U-989 of this licence;
 - ii the 'after' assessment and reporting to the EPA of live seagrass extent and percent cover, in accordance with the method approved under U-989 of this licence:
 - A as soon as reasonably practicable following completion of dredging in a comparable month to the 'before' assessment; and
 - B at an interval 2 years after the assessment conducted in accordance with sub-paragraph a) above.
 - c actions to prevent or minimise environmental harm during the closure and post closure phase, including when decommissioning works are occurring; and
 - d a schedule for assessing and reporting progress of actions in the Closure Plan to the EPA.
 - e Not commence dredging before the Closure Plan is approved in writing by the EPA.
 - f Implement and comply with the Closure Plan or any revised Closure Plan approved in writing by the EPA, forthwith upon approval in writing and until all actions specified in the Closure Plan are complete.

2.5 COMMUNITY ENGAGEMENT PLAN (U - 722)

The Licensee must:

- 2.5.1 develop and implement a Community Engagement Plan in consultation with key stakeholders; and
- 2.5.2 provide public access to the Community Engagement Plan (and any subsequent amended version) by the compliance date listed below.

Compliance Date: 30-Apr-2019

2.6 COMPLAINTS REGISTER (S - 1)

The Licensee must:

- 2.6.1 prepare and maintain a register of all complaints concerning environmental issues.

- 2.6.2 ensure the register includes:
- a the date and time that the complaint was made;
 - b details of the complaint including the likely cause of events giving rise to the complaint;
 - c the contact details of the complainant (if permitted by the complainant); and
 - d details of any action taken in response to the complaint by the Licensee.

2.7 DREDGE MANAGEMENT PLAN AND ENVIRONMENTAL MONITORING PROGRAM (U - 1003)

The Licensee must:

- 2.7.1 develop and submit to the EPA:
- a an Environmental Monitoring Program (EMP) which must include a Zone Validation Monitoring Program (ZVMP) prepared in accordance with U-990, a Water Quality Monitoring Plan prepared in accordance with U-990 and the details documented in the Technical Memorandum prepared by BMT on 6 February 2019; and
 - b a Dredge Management Plan (DMP) which must be prepared in accordance with U-990 of this licence and the details required by condition 4 of Development Approval #010/V048/17.
- 2.7.2 not commence dredging before the DMP and EMP are approved in writing by the EPA;
- 2.7.3 ensure the DMP and EMP include a methodology and framework for providing public access to the approved DMP and EMP and reports generated under these ;
- 2.7.4 ensure that dredging is undertaken in accordance with, and in compliance with, the approved DMP (or any revised version of the DMP approved in writing by the EPA); and
- 2.7.5 implement and comply with the approved EMP (or any revised version of the EMP approved in writing by the EPA).

2.8 DREDGE VESSEL TRACKING (U - 996)

The Licensee must:

- 2.8.1 ensure all vessel(s) used to undertake dredging and dredge spoil disposal are fitted with a continuously operational Automatic Identification System (AIS) unit to monitor their location; and

- 2.8.2 record the following information:
- a all dates, times, locations (DGPS) and durations for which the hopper doors on the dredge vessels are opened and closed for dredge spoil disposal;
 - b vessel movements between the Dredge Area (Attachment E) and the Dredge Material Placement Area (DMPA) (Attachment A); and
 - c DGPS position of the vessel(s) at the time of commencement and completion of dredge spoil disposal.

2.9 PACIFIC OYSTER MORTALITY SYNDROME (POMS) MANAGEMENT (U - 998)

The Licensee must not commence dredging under this licence until:

- 2.9.1 it has prepared to the satisfaction of Executive Director Fisheries and Aquaculture of Primary Industries and Regions South Australia (PIRSA) (see Attachment D), a plan to prevent and minimise the risk of spreading Pacific Oyster Mortality Syndrome (POMS) that may be present within waters where dredging is to occur (the POMS Plan) as required by condition 4(h) of Development Approval #010/V048/17; and
- 2.9.2 the EPA has received notice in writing from the Executive Director Fisheries and Aquaculture of Primary Industries and Regions South Australia (PIRSA), that the measures in the POMS plan have been implemented and complied with to his or her satisfaction.

3 MONITORING AND REPORTING

3.1 DREDGE AREA AND DREDGE MATERIAL PLACEMENT AREA (DMPA) ASSESSMENT (U - 992)

The Licensee must:

- 3.1.1 undertake, to the satisfaction of the EPA, a bathymetric survey to establish the current seabed level of the Dredge Area (Attachment E) and Dredge Material Placement Area (DMPA) (Attachment A) prior to the proposed commencement of dredging and develop and submit a report of this survey to the EPA; and
- 3.1.2 not commence dredging before the EPA has indicated its satisfaction with the survey and report required under paragraph 1 of this condition.

3.2 DREDGE MANAGEMENT PLAN (U - 994)

The licensee must ensure the Dredge Management Plan (DMP) identifies, as far as is reasonably practicable, all environmental risks associated with the dredging and details procedures:

- 3.2.1 to prevent or minimise risks including, but not limited to methodology, contingency plans and responses to:
 - a monitoring of parameters in Schedule 1, including when turbidity data is identified as exceeding ALARM or HOLD criteria (Schedule 2);
 - b the detection of *Caulerpa taxifolia* within the Premises;
 - c plant and equipment failure or break down;
 - d a fuel or chemical spill to the environment; and
 - e detection of contaminants or debris in dredge spoil.
- 3.2.2 to prevent or minimise risks associated with dredge spoil disposal including the use of Automatic Identification System (AIS) units to monitor vessel location and to record:
 - a all dates, times, locations (DGPS) and durations for which hopper doors on dredge vessels are opened and closed for dredge spoil disposal;
 - b vessel movements between the Dredge Area (Attachment E) and the Dredge Material Placement Area (DMPA) (Attachment A); and
 - c DGPS position of dredge vessel(s) at the time of commencement and completion of dredge spoil disposal;
- 3.2.3 to prevent or minimise risks of collision to marine mammals including:
 - a monitoring by Marine Mammal Observers (MMO) within the caution zone;
 - b provision of advice by MMOs to personnel on board dredge vessels;
 - c procedures to delay or pause dredging when marine mammals are observed within 50m of the Back Hoe Dredge (BHD); and
 - d reporting and recording sightings of marine mammals.
- 3.2.4 to prevent or minimise risks associated with biofouling including the transfer and spread of non-native aquatic species through dredge vessel transit and operation including:
 - a a plan for inspecting and cleaning vessel hulls (including sea chests and piping) and equipment (including mooring lines, anchors, chains and warps and unpainted hull appendages such as anodes, velocity probes and echo sounders) to ensure vessels are free from bivalve mollusc species and marine pests;
 - b a procedure for recording inspections and cleaning including dates, methods and locations at which such activities took place, application of antifouling coating including date, location and type of coating applied; and
 - c providing to the EPA the records specified in paragraph 4.b of this condition to demonstrate completion of biofouling management of each dredging vessel prior to entry into South Australian waters.
- 3.2.5 to prevent or minimise, as far as is reasonably practicable, dust, noise and odour resulting from dredging.

NOTES

Further information regarding biofouling can be found in the EPA Code of Practice for Vessel and Facility Management (marine and inland waters)

3.3 SEAGRASS ASSESSMENT (U - 988)

The Licensee must:

- 3.3.1 develop to the satisfaction of the EPA a method for the assessment of live seagrass extent and percent cover within the area defined in Attachment C that is consistent with a 'before, after, control and impact' (BACI) design;
- 3.3.2 undertake the 'before' assessment of live seagrass extent and percent cover in accordance with the approved method for assessment, once approved in writing by the EPA;
- 3.3.3 develop and submit to the satisfaction of the EPA a seagrass report based on the assessment undertaken in paragraph 2 of this condition; and
- 3.3.4 not commence dredging before the EPA has indicated its satisfaction with the assessment and report under this condition.

3.4 WATER QUALITY MONITORING PLAN (U - 991)

The Licensee must:

- 3.4.1 ensure a Water Quality Monitoring Plan (WQMP) is included in the Environmental Monitoring Program (EMP) required by U-1003 of this Licence; and
- 3.4.2 ensure that the WQMP includes:
 - a a method for monitoring and recording each of the parameters detailed in Schedule 1 (Schedule 1 parameters) at each of the background and monitoring locations (Attachment B);
 - b a method for calculating median turbidity;
 - c a method for undertaking a quantitative and qualitative assessment of median turbidity against ALARM and HOLD criteria (Schedule 2);
 - d a framework for, including methods and timeframes, calibrating monitoring equipment and associated infrastructure to be used to monitor and record each of the Schedule 1 parameters in accordance with the specifications of the equipment and infrastructure;
 - e a framework for, including methods and timeframes, providing real time access to the Schedule 1 parameters (excluding Photosynthetic Active Radiation) monitored and recorded under paragraph 2.a of this condition to the EPA and to the public;
 - f a methodology and framework for the development of a water quality monitoring report, which must be submitted to the EPA by the 7th day of each month, in respect of the previous month's Schedule 1 parameters, and all calculations, assessments and calibration required under this condition; and
- 3.4.3 ensure all equipment and associated infrastructure is maintained, repaired or replaced, as the case may be, to ensure accurate and continuous monitoring and recording of the Schedule 1 parameters.

3.5 ZONE VALIDATION MONITORING PROGRAM (U - 990)

The Licensee must:

- 3.5.1 ensure a Zone Validation Monitoring Program (ZVMP) is included in the Environmental Monitoring Program (EMP) required by U-1003 to this licence; and
- 3.5.2 ensure that the ZVMP includes:
 - a methods for the validation of zones of potential seagrass impact predicted in the hydrodynamic modelling documented in the Technical Memorandum prepared by BMT on 6 February 2019. The ZVMP must detail:
 - i how the validation results will be compared with the predicted zones of impact in the modelling which includes the use of satellite imagery taken at a frequency of no more than eight days;
 - ii what actions will be taken if zones of impact vary from the predicted zones of impact;
 - iii identification of any opportunities for improvement in order to rectify the zones of impact; and
 - iv procedures for the development and monthly submission of zone validation reports to the EPA.

4 ADMINISTRATION

4.1 ANNUAL RETURN AND PAYMENT OF ANNUAL FEES (A - 4)

For the purposes of section 48(2)(a) of the Act, the date in each year for the lodgement of the Annual Return is no later than 90 days before the anniversary of the grant or renewal of the Licence; and

- 4.1.1 For the purposes of section 48(2)(b) of the Act, the date in each year for the payment of Annual Authorisation Fee is the anniversary of the grant of the Licence.

4.2 APPROVAL OF OPERATING PROCESSES (A - 6)

The Licensee must not undertake changes to operating processes conducted pursuant to the Licence at the Premises without written approval from the EPA, where such changes:

- 4.2.1 have the potential to increase emissions or alter the nature of pollutants or waste currently generated by, or from the licensed activity; or
- 4.2.2 have the potential to increase the risk of environmental harm; or
- 4.2.3 would relocate the point of discharge of pollution or waste at the Premises.

4.3 APPROVAL OF WORKS (A - 5)

The Licensee must not construct or alter a building or structure, or install or alter any plant or equipment, for use of an activity undertaken pursuant to the Licence at the Premises without written approval from the EPA, where such changes:

- 4.3.1 have the potential to increase the emissions or alter the nature of pollutants or waste currently generated by, or from the licensed activity; or
- 4.3.2 have the potential to increase the risk of environmental harm; or
- 4.3.3 would relocate the point of discharge of pollution or waste at the Premises.

4.4 CHANGE OF LICENSEE DETAILS (A - 3)

If the Licensee's name or postal address (or both) changes, the Licensee must inform the EPA within 28 days of the change occurring.

4.5 DATA AND RECORDS (U - 999)

The Licensee must ensure that all data and records required under this licence are kept and maintained in a central register and made available for inspection by the EPA upon request.

4.6 DREDGING REGISTER (A - 7)

The Licensee must:

- 4.6.1 maintain a Dredging Register that records all days that dredging is undertaken and the location of those works; and
- 4.6.2 submit the Dredging Register (regardless of whether any dredging has occurred) to the EPA according to the following schedule:
 - a for the months of January, February and March, the register must be submitted by the end of April in that year;
 - b for the months of April, May and June, the register must be submitted by the end of July in that year;
 - c for the months of July, August and September, the register must be submitted by the end of October in that year;
 - d for the months of October, November and December, the register must be submitted by the end of January in the following year.

4.7 LICENCE RENEWAL (A - 2)

For the purposes of section 43(3) of the Act, an application for Renewal of the Licence must be made no later than 90 days before the expiry date of the Licence.

4.8 OBLIGATIONS TO EMPLOYEES, AGENTS AND CONTRACTORS (A - 1)

The Licensee must ensure that every employee, agent or contractor responsible for undertaking any activity regulated by the Licence, is informed as to the conditions of the Licence.

4.9 VARIATION OF CONDITIONS OF LICENCE (pursuant to section 45(3) of the Environment Protection Act 1993) (U - 997)

The EPA may:

- 4.9.1 Impose conditions or vary conditions of this licence at any time by notice in writing to the Licensee in the following circumstances:
- a in relation to any approved Plans or Programs required by this licence
 - b progress of the implementation of the Plans or Programs;
 - c the reporting required under the Plans or Programs;
 - d the results of monitoring conducted;
 - e incident management; or
 - f in relation to turbidity from dredging, including conditions requiring revision of any approved Plan or Program based on:
 - i the progress of implementation of those Plans of Programs;
 - ii the reporting required under this licence; and
 - iii the monitoring data and information.

Attachments

ATTACHMENT A - DMPA.pdf"

ATTACHMENT B - Monitoring Locations.pdf"

ATTACHMENT C - Seagrass Assessment Area.pdf"

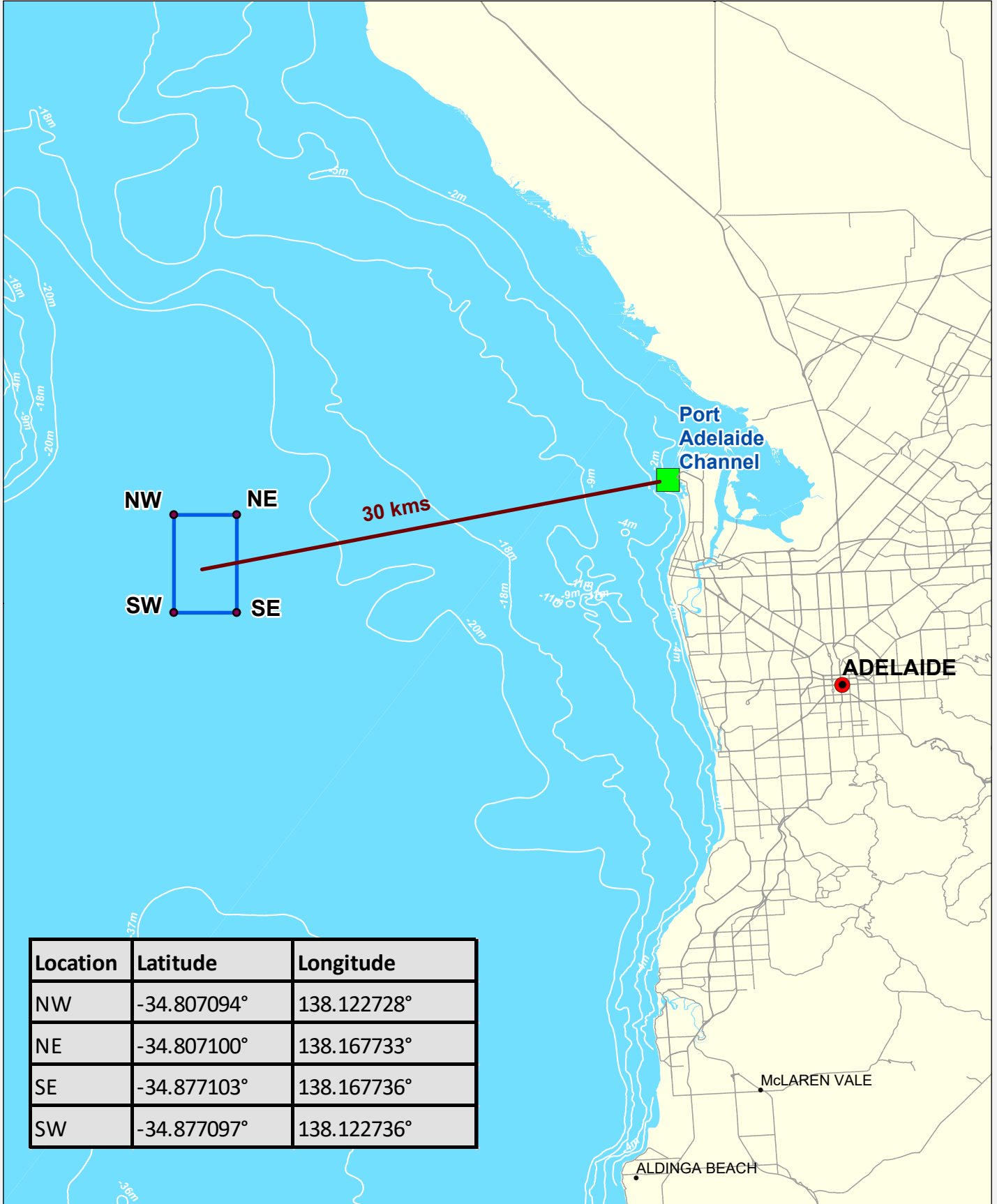
ATTACHMENT D - PIRSA requirements.pdf"

ATTACHMENT E - Site Plan - Project Location - 010 V048 17 - July 2017.pdf"




SCHEDULE 1 - Water Quality Monitoring Parameters.pdf"

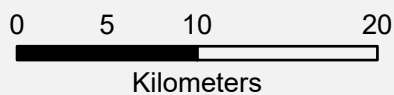
SCHEDULE 2 - Turbidity Response.pdf"

ATTACHMENT A: Outer Harbor Channel Widening Project



Location	Latitude	Longitude
NW	-34.807094°	138.122728°
NE	-34.807100°	138.167733°
SE	-34.877103°	138.167736°
SW	-34.877097°	138.122736°

-  Port Adelaide Channel
-  Contour Bathymetric
-  Dredge Material Placement Area (DMPA)







Produced by Environmental Science
 Environment Protection Authority
 GPO Box 2607 Adelaide SA 5001
 Web: www.epa.sa.gov.au

Data Source EPA, DEW
 Compiled 8 March, 2019
 Datum Geocentric Datum of Australia, 1994

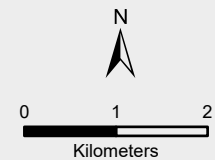
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ATTACHMENT B: Outer Harbor Channel Widening Project Monitoring Locations

-  Background monitoring location
-  Monitoring location
-  Bathymetric Contours
-  Roads

Location	Latitude	Longitude
D1	-34.7774	138.4590
D2	-34.7997	138.4750
B1	-34.8600	138.4568



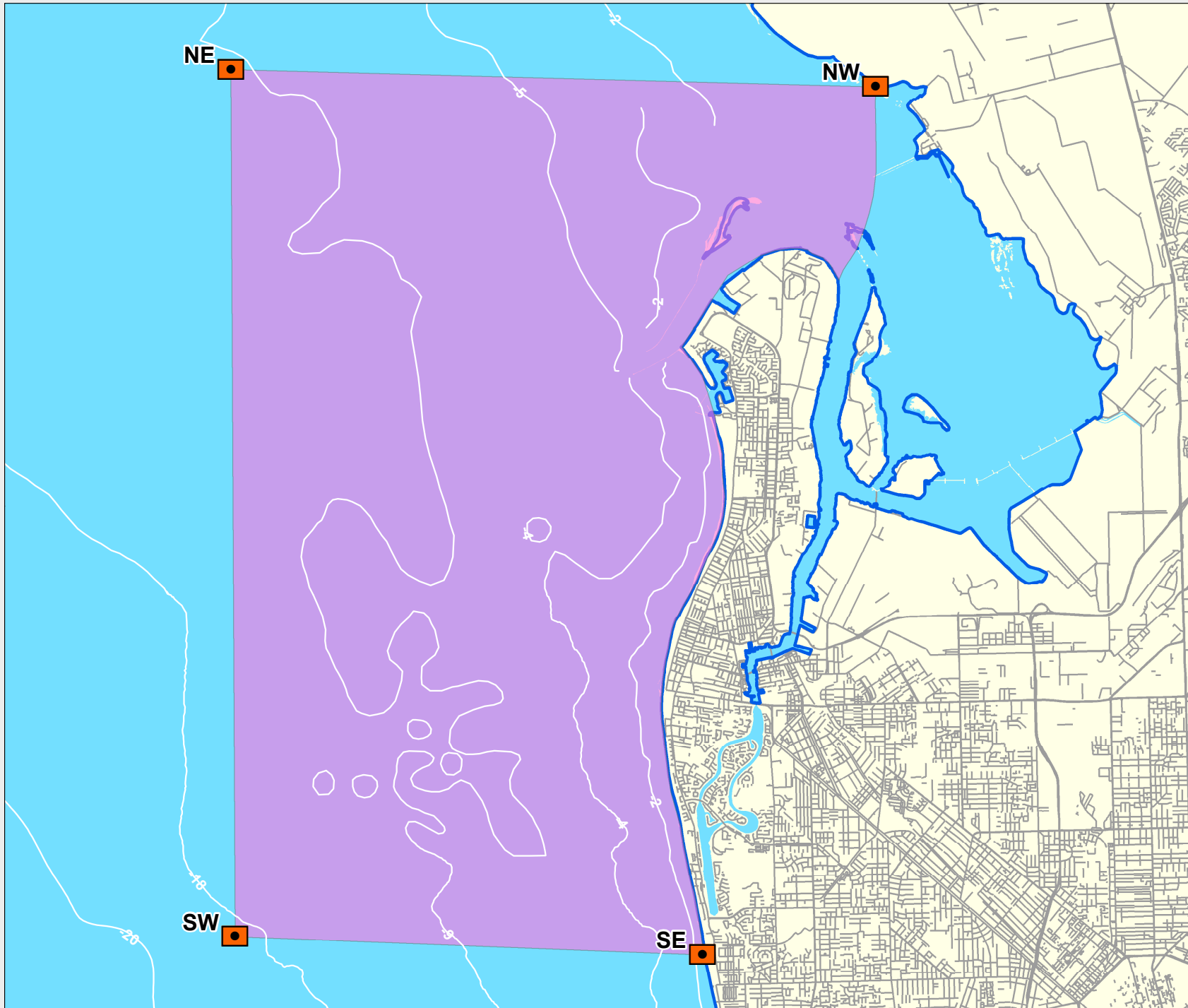
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Data Source DEW, BWT, EPA
Compiled 8 March, 2019
Projection MGA Zone 54
Datum Geocentric Datum of Australia, 1994




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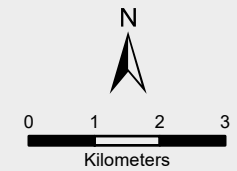




ATTACHMENT C: Area to be Considered in Seagrass Assessment

-  Area to be Considered in Seagrass Assessment
-  Area to be Considered in Seagrass Assessment
-  Bathymetric Contours

Location	Latitude	Longitude
NE	-34.7317	138.3693
NW	-34.7310	138.5221
SW	-34.9010	138.3767
SE	-34.9016	138.4877



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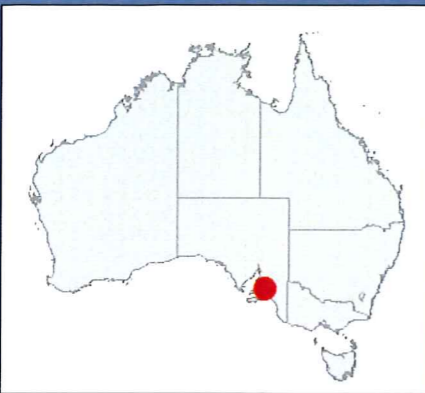


ATTACHMENT D

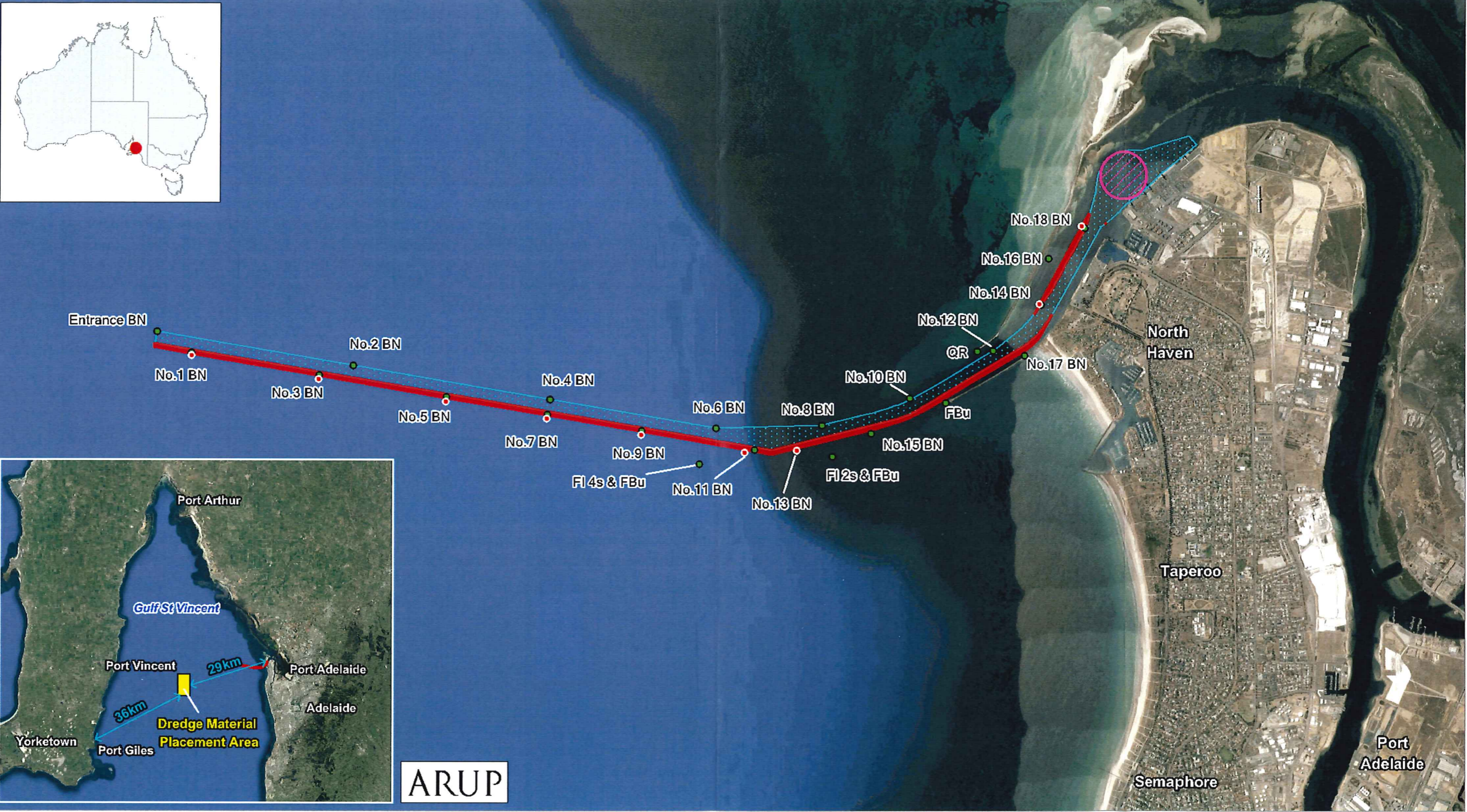
Pacific Oyster Mortality Syndrome (POMS) Plan

Executive Director Fisheries and Aquaculture of Primary Industries and Regional South Australia (PIRSA) has advised that for the POMS Plan to be to its satisfaction it should include:

- a navigational plan to ensure that any vessel associated with the dredging does not navigate within 10 km of a commercial oyster growing area in South Australian waters;
- a methodology to survey the area of waters to be dredged for the presence of bivalves before and after any removal and/or destruction activities have occurred;
- a framework for providing details of the survey methods;
- a methodology to sample and test bivalves in the area of waters to be dredged for the presence of POMS virus (OsHV-1) using qPCR diagnostic tests at a National Association of Testing Authorities (NATA) Accredited laboratory prior to dredging and for these tests to occur when water temperatures in a high density area exceed an average of 18 degrees Celsius;
- reasonable steps to be taken for the removal or destruction of bivalves present within the waters where dredging is to occur, including obtaining any necessary approvals to conduct removal or destruction activities proposed; and;
- steps to be taken to avoid dredging when water temperatures exceed an average of 18 degrees Celsius.



ARUP



LEGEND

- New Location of existing Beacon
- Existing Beacon
- Dredge Material Placement Area
- Proposed Channel Widening Footprint
- Existing Channel Footprint
- Swing Basin

*Aerial Image © Google Earth

Title:
Project Location

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

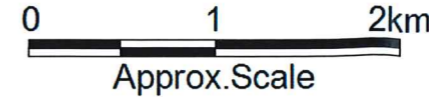


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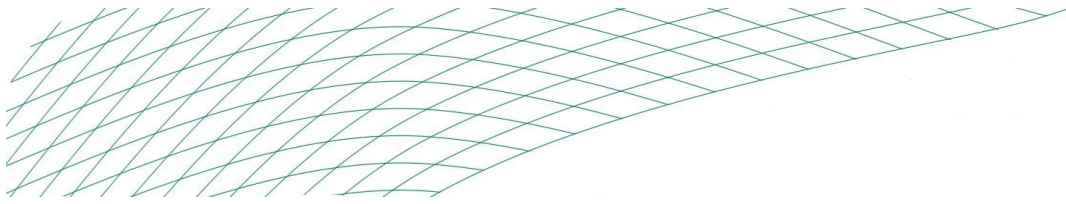
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Schedule 1

Water Quality Monitoring Parameters

Parameter	Units	Frequency of recording
Turbidity	NTU	10 mins
pH	pH	10 mins
Temperature	Degrees Celsius	10 mins
Dissolved oxygen	mg/L	10 mins
Photosynthetic active radiation (PAR)	mol/m ² /day	10 mins



Schedule 2

Turbidity response

ALARM criteria	2.8 NTU, based on a 15 day rolling median, or, 5.8 NTU based on a 6 day rolling median
HOLD criteria	5.8 NTU based on a 15 day rolling median, or, 15.8 NTU based on a 6 day rolling median.