

Registration certificate

Environmental Protection Act 1994

Registration certificate

No: ENRE02786111

This registration certificate is issued by the administering authority and is a replacement document for the approval issued on: 6 June 2011

The anniversary day for the purposes of the Annual Return remains: 6 June.

This registration certificate is a requirement of section 73F of the *Environmental Protection Act 1994* and authorises the registered operator to undertake the activity listed below at the following places; subject to the conditions set out in a development approval attached to the premises, or the relevant code of environmental compliance.

Registered Operator:-

Coastal Dredging and Construction Pty Limited
T/A CDC Pty Limited
Q Port Marine, 1517 Lytton Road
HEMMANT QLD 4174

Development Approval:- SPDE01443011 and SPDE01611411

Place:-

Lot 1 Plan SP228184, Lot 2 Plan SP228185, Lot 3 Plan SP228186, Lot 3 Plan SP235971,
Lot 504 Plan SP235939, Lot 507 Plan SP239651, Lot 508 Plan SP239683, Lot 7 Plan
SP239683

Registered Activity: -

ERA 16 Extractive and screening activities Threshold 1(d) - dredging, in a year, more than
1000000t of material



David Love

Delegate
Department of Environment and Resource Management
Environmental Protection Act 1994
16-SEP-2011

Permit

Sustainable Planning Act 2009

DERM Permit ¹ number: SPDE01443011

This notice is issued by the Department of Environment and Resource Management pursuant to section 334 (Decision Notice) of the Sustainable Planning Act 2009 ("the Act").

Assessment manager reference):	359623
Date application received:	01-Feb-2011
Permit type:	development permit
Date of decision:	11 April 2011
Decision:	Development Approval for a MCU involving an ERA.
Relevant laws and policies:	Sustainable Planning Act 2009
Jurisdiction(s):	Material change of use of premises – For an environmentally relevant activity <i>Sustainable Planning Regulation 2009 - Schedule 3, Part 1, Table 2, item 1</i>

Development Description(s)

Property	Lot/Plan	Aspect of Development
	Lot 1 Plan SP228184, Lot 2 Plan SP228185, Lot 3 Plan SP228186, Lot 3 Plan SP235971	ERA 16 Extractive and screening activities Threshold 1(d) - dredging , in a year, more than 1000000t of material

Reason(s) for inclusion of conditions

In accordance with section 289 of the *Sustainable Planning Act 2009*, the reason(s) for inclusion of conditions stated in this permit required by the concurrence agency response for the application are as follows.

The conditions are included pursuant to section 73B of the Environmental Protection Act 1994.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Department of Environment and Resource Management.

Additional comments or advice about the application

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which a development approval is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by a development approval as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

To the extent of any inconsistency between the Dredge Management Plan and the associated Water Quality Management Plan and Fauna and Flora Management Plan, and the conditions of this permit, the conditions of this permit shall prevail.

A development permit authorising the carrying out of an ERA does not authorise any environmental harm unless a condition stated by the permit specifically authorises environmental harm.

A person carrying out an ERA must hold a registration certificate issued under the *Environmental Protection Act 1994*, or must be acting under a registration certificate, for the ERA.



Don Arnold

Delegate, Chief Executive administering the
Environmental Protection Act 1994,
Department of Environment and Resource Management

11 April 2011

CONDITIONS

Interest: General

Limit of Dredging Approved

- (G1) Dredging activities which constitute the environmentally relevant activity ERA 16.1(c) hereby approved are limited to:
- (a) The removal of up to 6.0 Million cubic metres of dredged material from the Western Basin (Stage 1) dredge area, Port Curtis, Gladstone as shown in Map 1.
 - (b) Placement of dredge spoil at East Bank Sea Disposal Site (EBSDS), Port Curtis, as shown in Map 2.
- (G2) Any dredging must be conducted using equipment that is in survey, registered and, in relation to environmental performance, is equal to or better than the following equipment:
- (a) Trailing Suction Hopper Dredge (TSHD) that is equipped, as a minimum, with:
 - (i) below keel discharge of tail waters via an anti-turbidity control valve; and
 - (ii) on-board systems for determining solids to water ratio or density of dredged material; and
 - (iii) electronic positioning and depth control system for defining the location and depth of dredging activities; and
 - (iv) dredge heads fitted with turtle exclusion devices (e.g. turtle deflectors); and
 - (v) "green valves" in the overflow pipes to control the amount of air contained in the discharge water and thereby reducing the sediment load discharged to waters.
 - (b) Cutter Suction Dredge that is equipped, as a minimum, with:
 - (i) electronic positioning and depth control system for defining the location and depth of dredging activities; and
 - (ii) continuous delivery connection (e.g. floating or submerged pipeline) to an approved placement site; and
 - (iii) a system or process to ensure the delivery system integrity is maintained at all times.
 - (c) Grab or Backhoe Dredge that is equipped, as a minimum, with electronic positioning system for defining the location and depth of dredging activities.
- (G3) A TSHD must not operate in 'overflow mode' except during the final hour of any flood (incoming) tide and/or during the first three (3) hours of any ebb tide.
- (G4) Dredged material must not be 'rehandled' in waters.
- (G5) Provide to the administering authority written notification of the date when dredging will commence at least five (5) business days prior to starting the dredging activity.

External Audit

- (G6) You must engage an appropriately qualified Environmental Auditor, independent of contractual arrangements for the design and construction of the project, for the duration of works covered by this development approval.

- (G7) The Environmental Auditor must audit key stages of the works (subject to this approval) against the:
- Conditions of this development approval;
 - Dredge Management Plan (DMP) as required by condition (G12); and
 - General Environmental Duty (GED) under the *Environmental Protection Act 1994*.
- (G8) Audits by the Environmental Auditor are to be carried out:-
- Within one month of the commencement of the works;
 - Every three (3) months; and
 - Until all relevant monitoring is completed.
- (G9) A copy of each Audit Report must be provided to the administering authority within twenty (20) business days of completion of the audit, accompanied by a statutory declaration, stating that the report accurately represents the findings of the Environmental Auditor .
- (G10) The registered operator must ensure that a person or body possessing appropriate experience and qualifications determines the cross sections of the dredged area to confirm the works have been carried out in accordance with the plans referred to in condition (G1) and report the results of the survey determinations to the administering authority within three months of the completion of the project.
- (G11) A copy of the conditions of this development permit must be kept in a location readily accessible to personnel carrying out the activity.

Dredge Management Plan

- (G12) From commencement of activities authorised under this approval, a Dredge Management Plan (DMP), approved by the administering authority for the activities subject to this development approval must be implemented. The approved DMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused.

The DMP must provide for at least the following functions:

- a) significant and sensitive receptors (including for example wetland and ecosystem features) in the port area are identified and mapped;
 - b) environmental aspects and potential impacts are identified;
 - c) control measures that minimise the potential for environmental harm are in place;
 - d) contingency plans and emergency procedures are in place;
 - e) organisational structures, accountability and responsibility is recorded;
 - f) arrangements for effective communication are documented and undertaken;
 - g) all contaminant releases are monitored;
 - h) staff are trained and aware of the requirements of this permit;
 - i) appropriate records are kept; and
 - j) reviews of environmental performance and continual improvement are undertaken periodically.
- (G13) The approved DMP must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this approval.

Prevent and/or Minimise Likelihood of Environmental Harm

- (G14) In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and/or to minimise the likelihood of environmental harm being caused.

Maintenance of Measures, Plant and Equipment

- (G15) The registered operator of an ERA to which this approval relates must:
- install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and
 - maintain such measures, plant and equipment in a proper and efficient condition; and
 - operate such measures, plant and equipment in a proper and efficient manner.

Alterations

- (G16) No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided for by this approval.

Records

- (G17) Record, compile and keep all monitoring results required by this development approval and present this information to the administering authority upon request.
- (G18) All records required by the development approval must be kept for at least five (5) years, except where stated otherwise in a condition of this approval.

Cease Activities in Event of Material or Serious Environmental Harm Occurring

- (G19) If the registered operator of an environmentally relevant activity to which this approval relates becomes aware of material environmental harm or serious environmental harm as a result of carrying out the environmentally relevant activity then the said activities must cease immediately.

Notification

- (G20) Telephone the DERM Pollution Hotline (1300 130 372) or local office (4971 6500) as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this development approval or any event where environmental harm has been caused or may be threatened.

Information to follow notification

- (G21) Written advice detailing the following information must be provided to the administering authority within fourteen (14) days following any notification in accordance with condition (G20)
- (a) the name of the registered operator, including the development approval number;
 - (b) the name and telephone number of a designated contact person;
 - (c) the location of the release / event;
 - (d) the time of the release / event;
 - (e) the time you became aware of the release / event;
 - (f) the suspected cause of the release / event;
 - (g) a description of the resulting effects of the release / event;
 - (h) the results of any sampling performed in relation to the release / event;
 - (i) actions taken to mitigate any environmental harm and or environmental nuisance caused by the release / event; and
 - (j) proposed actions to prevent a recurrence of the release / event.

Incident Recording

- (G22) A record must be maintained of at least the following events:
- the time, date and duration of equipment malfunctions where the failure of the equipment resulted in the release of contaminants to the environment; and
 - any uncontrolled release of contaminants to the environment.

Spill Kit(s)

- (G23) Appropriate spill kit(s) and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the environmentally relevant activity must be kept at the site.
- (G24) All relevant personnel operating under this approval must be trained in the use of the spill kit(s).

Trained/Experienced Operator(s)

- (G25) All persons engaged in the conduct of the activity, including but not limited to employees and contract staff, must be:
- (a) trained in the procedures and practices necessary to:
 - i. comply with the conditions of this development approval, and
 - ii. prevent environmental harm during normal operation and emergencies; or
 - (b) under the close supervision of such a trained person.

Sample Analysis

- (G26) All analyses and tests required to be conducted under this development approval must be carried out by a laboratory that has NATA certification for such analyses and tests, except as otherwise authorised by the administering authority.

Monitoring

(G27) An experienced and suitably qualified person(s) must conduct any monitoring required by this approval.

Quarterly Monitoring Report

(G28) A monitoring report must be prepared every three (3) months and upon completion of dredging. This report shall include but not be limited to:

- (a) a summary of the previous three (3) months monitoring results obtained under the monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the previous three (3) months monitoring results to both this approvals limits and to relevant prior results;
- (b) an evaluation and interpretation of the data from any monitoring programs;
- (c) a summary of any remedial actions required to ensure compliance with this approval;
- (d) a summary of the record of equipment failures or events recorded for any site under this approval; and
- (e) actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.

(G29) The monitoring report required by condition (G28) must be submitted to the administering authority upon request.

Acid sulfate soils

(G30) The work shall be carried out in accordance with provisions of the approved Dredge Management Plan relating to management of acid sulfate soils and to prevent release of acidic water (pH <6.5) to any waters.

Interest: Noise

Noise Nuisance

(N1) Noise from the dredging activities must not cause environmental nuisance at a nuisance sensitive place.

Interest: Land

Preventing Contaminant Release to Land

(L1) Contaminants must not be released to land, except where otherwise stated in a condition of this approval.

- (L2) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

(Note: All flammable and combustible liquids including petroleum products/fuels must be stored in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids. Storage for flammable and combustible liquids must be constructed and maintained in accordance with AS 1940.)

Interest: Water

- (W1) The registered operator must not allow turbidity levels at sensitive receptors (QE4, ST1, P2, BG10, SGM1 and SDM2) to exceed the turbidity levels contained in Table 1 – *Maximum allowable (6 Hour EMWA) Turbidity levels* for a period of greater than 48 hours, unless it can be demonstrated to the satisfaction of the administering authority that the elevated turbidity is the result of errors of measurement or natural background variations.

Table 1 – Maximum allowable (6 Hour EMWA) Turbidity levels

Sensitive Sites (GPS Co-ordinates)	Maximum 99 th Percentile Turbidity (NTU)	
QE4 (S23 44.689' E151 09.676')	34 (Wet)	28 (Dry)
ST1 (S23 47.987' E151 11.750')	38 (Wet)	24 (Dry)
P2 (S23 48.514' E151 12.950')	69 (Wet)	40 (Dry)
BG10 (S23 47.859' E151 14.121')	56 (Wet)	46 (Dry)
SGM1 (S23 50.037' E151 25.702')	12 (Wet)	10 (Dry)
SGM2 (S23 47.639' E151 22.958')	11 (Wet)	9 (Dry)

NOTE: "Wet" season is from 20 November to 31 March inclusive. The remainder of the year is taken to be the "Dry" season.

- (W2) In the event that turbidity levels exceed the above level(s) stated in Table 1, it is not a contravention of condition (W1) when it can be demonstrated to the satisfaction of the administering authority that elevated turbidity is the result of external factors, (for example, erroneous or invalid data, wave height, rainfall, tides, wind, etc) and not affected by sediment from the dredging to a greater extent than the modelled turbidity increase used for the purpose of developing the Dredge Management Plan.

Placement of dredge material at sea

- (W3) Material dredged under this permit must not be placed at sea except at a place authorised under an authority, licence or other permit issued by either or both the Commonwealth or Queensland governments to receive the dredged material.

Monitoring

- (W4) All determinations of water quality must be carried out on samples that are representative of the discharge and made in accordance with, but not limited to, methods prescribed in the *DERM Monitoring and Sampling Manual 2009* or more recent editions or supplements to that document as such become available.

 11/4/11

Interest: Waste

Waste Management

- (WA1) Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this development approval.
- (WA2) Waste generated in the carrying out of the activities must be stored, handled and transferred in a proper and efficient manner.

Waste Handling

- (WA3) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.

Off-site Movement of Waste

- (WA4) Where regulated waste is removed from the site (other than by a release as permitted under another condition of this development approval), the registered operator must monitor and keep records of the following:
- (a) the date, quantity and type of waste removed;
 - (b) the name of the waste transporter and/or disposal operator that removed the waste; and
 - (c) the intended treatment/disposal/destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.

Notification of Improper Disposal of Regulated Waste

- (WA5) If a person removes regulated waste associated with activities at the site and disposes of such waste in a manner which is not authorised or is improper or unlawful, the registered operator must notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal as soon as practicable.

Interest: Social

Complaint Response

- (S1) The registered operator of an ERA to which this approval relates must record the following details for all complaints received and provide this information to the administering authority on request:
- (a) time, date, name and contact details of the complainant;
 - (b) reasons for the complaint;
 - (c) any investigations undertaken;
 - (d) conclusions formed; and
 - (e) any actions taken.

END OF CONDITIONS

 11/4/11

Definitions

Words and phrases used throughout this development approval are defined below. Where a definition for a term used in this development approval is sought and the term is not defined within this development approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

"6 Hour EWMA" means exponentially weighted mass average, calculated by using a 60:40 weighting system, where the mean turbidity for the most recent 6 hours comprises 60% of the EWMA and the mean turbidity for the 6 hours previous to that comprises 40% of the EWMA.

"administering authority" means the Department of Environment and Resource Management (DERM) or its successor.

"commercial place" means a place used as an office or for business or commercial purposes.

"decant waters" – means settled dredge spoil waters released from release point, W1 following settlement or other management requirements.

"dwelling" means any of the following structures or vehicles that is principally used as a residence-

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

"general environmental duty" means general environmental duty as defined in section 319 of the *Environmental Protection Act 1994*

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"material environmental harm" means material environmental harm as defined in section 16 of the *Environmental Protection Act 1994*.

"NTU" means nephelometric turbidity units.

"noxious" means harmful or injurious to health or physical well being.

"nuisance sensitive place" means –

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

"protected area" means –

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

"registered operator" means the holder of a Registration Certificate for the site(s) and activity (ERA 16) to which this approval relates and includes any person acting under this approval.

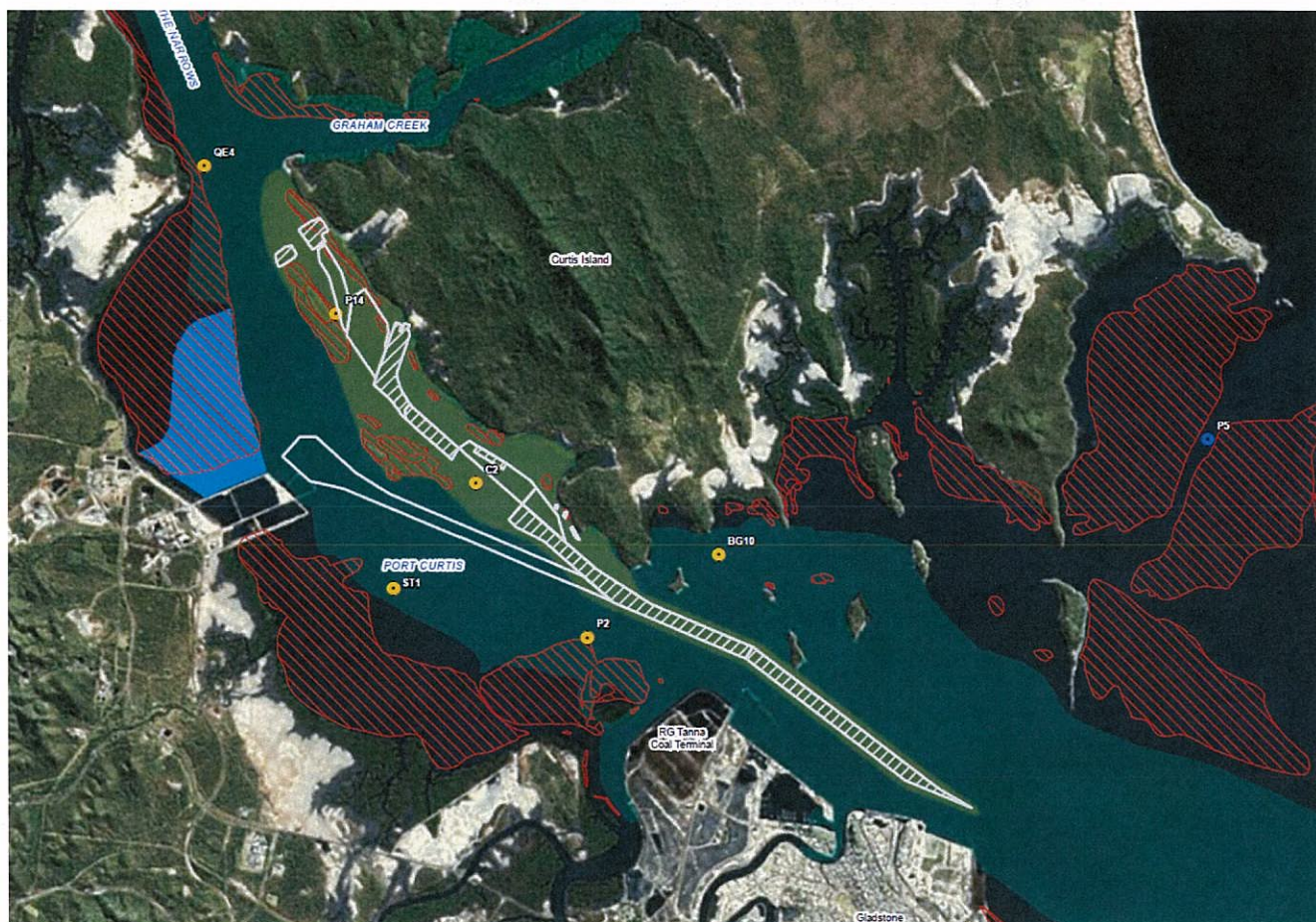
“regulated waste” means non-domestic waste in Schedule 7 of the *Environmental Protection Regulation 1998* and includes:

- for an element - any chemical compound containing the element; and
- anything that has contained a regulated waste; and
- regulated waste that has been treated or immobilised.

“rehandle” means dropping dredged material from the bottom of a Trailer Suction Hopper Dredge for rehandling, for example, by a Cutter Suction Dredge. It does not refer to ocean disposal where approved.

“serious environmental harm” means serious environmental harm as defined in section 17 of the *Environmental Protection Act 1994*.

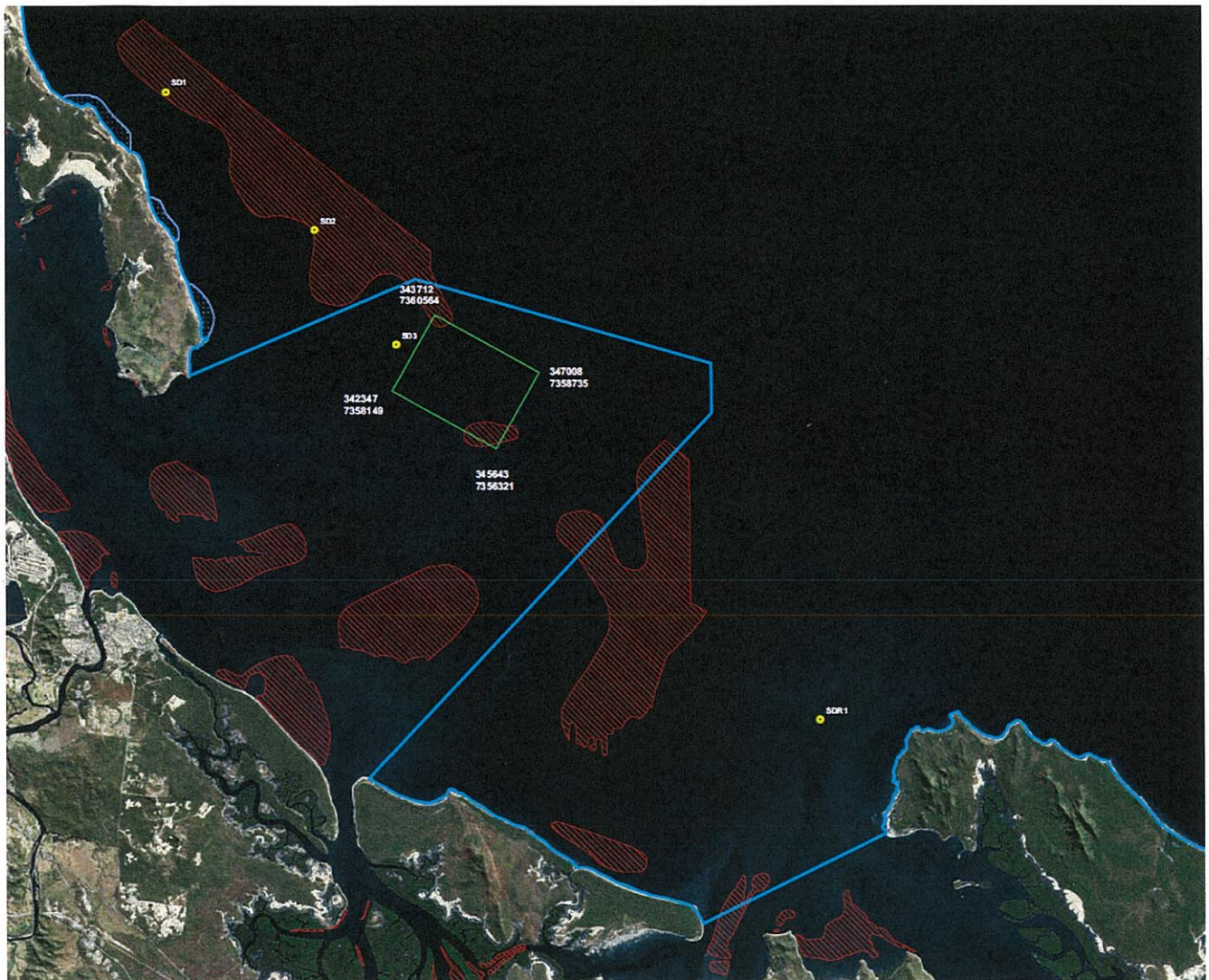
“waters” includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and any under groundwater, any part thereof.



Legend

- Dredge Areas for Offshore Disposal (Stage 1)
- Western Basin Dredge and Offshore Disposal Footprint
- Western Basin Reclamation Area
- Seagrass Mapping Extent 2002 and 2009
- Seagrass Impact Zones (Total Suspended Solids)
- Low (1-10 mg/L + Background)*
- Medium to High (>10 mg/L + Background)*
- Background water quality (Reference sites)
- Water quality monitoring sites

Map 1. Stage 1 Dredge Area for ocean disposal



Legend

-  East Banks Sea Disposal Site (Coordinates shown in eastings and northings)
-  Great Barrier Reef Marine Park
-  Seagrass Mapping Extent 2002 and 2009
-  Reef
-  Continuous water quality monitoring site

Map 2. East Bank Sea Disposal Site (EBSDS).

END OF APPROVAL

File/Ref SPDE01611411
Your Ref

06 September 2012

Gladstone Ports Corporation Limited
Planning Department
PO Box 259
GLADSTONE Q 4680

Attention: Sarah Hunter

**Re: Errors in Decision Notice to amend Development Approval SPDE
01611411.**

The Department of Environment and Heritage Protection has become aware of some errors in the Decision Notice (03 September 2012) to amend the Western Basin Dredging and Disposal Project (WBD&DP) development approval for dredging (SPDE01611411).

The error was on page 3, where the omitted Condition (W1) incorrectly refers to site P2B, rather than P2. GPS co-ordinates have been corrected for ST1 (Table 1) and QE4, BG10 and SGM1 (Table 3). Other changes relate to updated addresses and/or contacts. **Please replace the earlier document with this attached corrected version.**

Also included for your operational convenience is a 'converted' Development Approval SPDE01611411 which contains all current applicable conditions in the single document.

Should you discuss this or any other related matters, please liaise with Arthur Dahl, Principal Environmental Officer on telephone (07) 4971 6509, via email (arthur.dahl@ehp.qld.gov.au) or at the address below.

Yours sincerely



Don Arnold
Manager,
Environmental Services, Gladstone

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136 Goondoon Street, Gladstone
Queensland 4680 Australia

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C.C. Project Director
Dredging International (Australia) Pty Ltd and
Van Ord Australia Pty Ltd
PO Box 1399
GLADSTONE QLD 4680
Attention: Hedwig Vanlishout

Department of Agriculture, Forestry and Fisheries
PO Box 5396
CAIRNS QLD 4870
Attention: Richard Stewart

Regional Harbour Master
Maritime Safety Queensland
PO Box 123
GLADSTONE QLD 4680
Attention: Capt. Mike Lutze

Notice

Sustainable Planning Act

Decision to change development approval conditions

This notice is issued by the Department of Environment and Heritage Protection (EHP) acting as assessment manager or concurrence agency under section 73C of the Environmental Protection Act 1994 and s376 and s378 of the Sustainable Planning Act 2009 to advise you of a decision to proceed with proposed changes to development condition(s) of a development approval.

Your reference :

Our reference : SPDE01611411

Gladstone Ports Corporation Limited Planning Department PO Box 259 GLADSTONE Q 4680 Attention: Sarah Hunter	C.C. Project Director Dredging International (Australia) Pty Ltd and Van Ord Australia Pty Ltd PO Box 1399 GLADSTONE QLD 4680 Attention: <u>Hedwig Vanlিশout</u>
	Department of Department of Agriculture, Forestry and Fisheries PO Box 5396 CAIRNS QLD 4870 Attention: <u>Richard Stewart</u>
	Regional Harbour Master Maritime Safety Queensland PO Box 123 GLADSTONE QLD 4680 Attention: <u>Capt. Mike Lutze</u>

Re: Amendments to Development Approval number SPDE01611411

The Department of Environment and Heritage Protection (the department), received a written submission from Gladstone Ports Corporation Limited, on behalf of the registered operators, Dredging International (Australia) Pty Ltd and Van Oord Australia Pty Ltd and the Dredging Technical Reference Panel (DTRP) proposing to move towards a light-based management approach, as per the condition 42(d) of the Co-ordinator General's conditions.

This application for a permissible change was made on 25 July 2012. The original application for a material change of use for an environmentally relevant activity 16.1(d) (Dredging) was properly made on 15 February 2011.

 6/9/12

The department has reviewed all submissions and undertaken its own review. As a result of the departmental review and in consultation with the stakeholders, the approval has been amended as stated below.

Additional changes by agreement have also been included in this Notice. The changes made to the development approval are:

OMIT

Quarterly Monitoring Report

(G30) A monitoring report must be prepared every three (3) months and upon completion of dredging. This report shall include but not be limited to:

- a) a summary of the previous three (3) months monitoring results obtained under the monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the previous three (3) months monitoring results to both this approvals limits and to relevant prior results; and
- b) an evaluation and interpretation of the data from any monitoring programs;
- c) a summary of any remedial actions required to ensure compliance with this approval;
- d) a summary of the record of equipment failures or events recorded for any site under this approval; and
- e) actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.

ADD

Monthly Monitoring Report

(G30) Unless agreed to in writing by the administering authority, a monitoring report must be prepared every month until completion of dredging. This report shall include but not be limited to:

- a) a summary of monitoring results obtained under the monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the monitoring results to both limits of this approval and to relevant prior results; and
- b) an evaluation and interpretation of the data from any monitoring programs; and
- c) a summary of any remedial actions required to ensure compliance with this approval; and
- d) a summary of the record of equipment failures or events recorded for any site under this approval; and
- e) actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.

 6/9/12

OMIT

- (W1) The registered operator must not allow turbidity levels at sensitive receptors (QE4, ST1, P2, BG10) to exceed the turbidity levels contained in Table 1 – *Maximum allowable (6 Hour EMWA) Turbidity levels* for a period of greater than 48 hours, unless it can be demonstrated to the satisfaction of the administering authority that the elevated turbidity is the result of errors or natural background variations.

ADD

- (W1) The registered operator must not allow turbidity levels at sensitive receptors (QE4, ST1, P2B, BG10) to exceed the turbidity levels contained in Table 1 – *Maximum allowable (6 Hour EMWA) Turbidity levels* for a period of greater than 48 hours, unless it can be demonstrated to the satisfaction of the administering authority that the elevated turbidity is the result of errors or natural background variations.

OMIT

- (W2) Should turbidity levels exceed the above level(s) it is not a contravention of condition (W1) when it can be demonstrated to the satisfaction of the administering authority that elevated turbidity is the result of external factors, (for example, erroneous or invalid data, wave height, rainfall, tides, wind, etc) and not affected by sediment from the dredging to a greater extent than the modelled turbidity increase used for the purpose of developing the Dredge Management Plan.

ADD

- (W2) Should turbidity levels exceed the above level(s) it is not a contravention of condition (W1) when it can be demonstrated to the satisfaction of the administering authority that:
- a) elevated turbidity is the result of external factors, (eg., erroneous or invalid data, wave height, rainfall, tides, wind, etc); or
 - b) clearly the result of other dredging activities, (eg. CSD or BHD dredging being undertaken within 500m of a monitoring site); or
 - c) all benthic PAR monitoring sites (TC1, BS1, DC1, GC1, WI5-2 and PM1) are receiving the minimum light requirement.

 6/9/12

OMIT

Table 1 – Maximum allowable (6 Hour EMWA) Turbidity levels

Sensitive Sites (GPS Co-ordinates)	Maximum 99 th Percentile Turbidity (NTU)	
QE4 (S23 44.689' E151 09.676)	55 (Wet)	30 (Dry)
ST1 (S23 47.987' E151 11.750')	65 (Wet)	35 (Dry)
P2 (S23 48.514' E151 12.950')	69 (Wet)	40 (Dry)
BG10 (S23 47.859' E151 14.121')	56 (Wet)	46 (Dry)
SGM1 (S23 50.037' E151 25.702)	12 (Wet)	10 (Dry)
SGM2 (S23 47.639' E51 22.958)	11 (Wet)	9 (Dry)

ADD

Table 1 – Maximum allowable (6 Hour EMWA) Turbidity levels

Sensitive Sites (GPS Co-ordinates)	Maximum 99 th Percentile Turbidity (NTU)	
QE4 (S23° 44.863' E151° 09.722')	55 (Wet)	30 (Dry)
ST1 (S23° 48.073' E151° 12.262')	65 (Wet)	35 (Dry)
P2B (S23° 48.304' E151° 12.571')	69 (Wet)	40 (Dry)
BG10 (S23° 47.700' E151° 14.323')	56 (Wet)	46 (Dry)
SGM1 (S23° 50.037' E151° 25.702')	12 (Wet)	10 (Dry)
SGM2 (S23° 47.639' E151° 22.958')	11 (Wet)	9 (Dry)

OMIT

- (W3) Dredge Decant Waters must only be released to surface waters in compliance with the release limits listed in Table 1 – Dredge Decant Water release limits and at the following discharge location(s).

ADD

- (W3) Dredge Decant Waters must only be released to surface waters in compliance with the release limits listed in Table 2 – *Dredge Decant Water Release Limits* at discharge location W1, Port Curtis Outfall (s).

 6/9/12

OMIT

Table 1 – Dredge Decant Water Release Limits

Monitoring Point(s)	Discharge Location	Quality Characteristics	Type of Release Limit		Minimum Monitoring Frequency
			Minimum	Maximum	
W1	Port Curtis Outfall	Suspended Solids	-	100 mg/L	Weekly
W1	Port Curtis Outfall	Turbidity	-	-	Hourly
W1	Port Curtis Outfall	pH	6.5	9.0	Hourly ²
W1	Port Curtis Outfall	Ammonia		1 mg/L	Weekly
W1	Port Curtis Outfall	Cadmium (filtered)	-	0.7 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Chromium (filtered)	-	4.4 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Copper (filtered)	-	1.3 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Lead (filtered)	-	4.4 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Mercury (filtered)	-	0.1 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Nickel (filtered)	-	7.0 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Silver (filtered)	-	1.4 ¹ µg/L	Monthly
W1	Port Curtis Outfall	Zinc (filtered)	-	15 ¹ µg/L	Monthly

1. These maximums are trigger values only, requiring interpretation in respect of historical sediment analysis data when exceeded.

2.. While pH is to be sampled hourly, limits apply to pH as a 6 hour rolling average.

6/12

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Table 2 – Dredge Decant Water Release Limits

Monitoring Point(s)	Quality Characteristics	Limit Type			Monitoring Frequency
		Minimum	Investigation Trigger	Maximum	
W1	Suspended Solids	-		100 mg/L	Weekly
W1	Dissolved Oxygen	2.0 mg/L		-	Daily
W1	Turbidity	-		-	Hourly
W1	pH	6.5		9.0	Hourly ³
W1	Total Petroleum Hydrocarbons			10 mg/L	Weekly
W1	Ammonia		1.38 ¹ mg/L	2.30 mg/L	Weekly
W1	Aluminium (filtered)	-	10 ¹ µg/L	-	Monthly ²
W1	Cadmium (filtered)	-	2.1 ¹ µg/L	3.5 µg/L	Monthly ²
W1	Chromium (filtered)	-	13.2 ¹ µg/L	22 µg/L	Monthly ²
W1	Copper (filtered)	-	3.9 ¹ µg/L	6.5 µg/L	Monthly ²
W1	Lead (filtered)	-	13.2 ¹ µg/L	22.0 µg/L	Monthly ²
W1	Mercury (filtered)	-	0.3 ¹ µg/L	0.5 µg/L	Monthly ²
W1	Nickel (filtered)	-	21 ¹ µg/L	35 µg/L	Monthly ²
W1	Silver (filtered)	-	4.2 ¹ µg/L	7.0 µg/L	Monthly ²
W1	Zinc (filtered)	-	45 ¹ µg/L	75 µg/L	Monthly ²

1. These values are trigger values only. If three or more of the last five test results exceed these values, results must be reported to the administering authority and further investigation may be required.
2. While pH levels are outside the above range, monitoring for the above metal species is to be carried out daily.
3. While pH is to be sampled hourly, limits apply to pH as a 24 hour rolling average.

ADD

Dissolved Metals

(W6) Until advised otherwise in writing by the administering authority, the dissolved metal(s) component(s) is required to be determined, recorded, and reported in the relevant monthly monitoring report. Table 3 – *Monthly Monitoring Sites for Metals* shows the locations of monitoring sites where monthly metals sampling is required. The location of these sites can only be changed with the prior written approval of the administering authority.

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Table 3 – Monthly Monitoring Sites for Metals

Site	GPS	Site	GPS
QE8	S23° 39.555' E151° 06.401'	P5	S23° 46.986' E151° 18.372'
QE6	S23° 40.887' E151° 08.607'	B7	S23° 50.759' E151° 20.460'
QE2-1	S 23° 43.668 E 151° 08.073	RB1	S24° 04.077' E151° 39.053'
QE3	S23° 42.945' E151° 08.591'	RB2	S24° 04.423' E151° 39.342'
QE4	S23° 44.863' E151° 09.722'	RB3	S24° 04.938' E151° 39.667'
C7-1	S23° 44.360' E151° 10.682'	SGI1	S23° 52.027' E151° 27.187'
C3	S23° 46.470' E151° 10.020'	SGM1	S23° 50.037' E151° 25.702'
C2B	S23° 47.582' E151° 12.367'	SGM2	S23° 47.639' E151° 22.958'
ST1	S23° 48.071' E151° 12.262'	SGW1	S23° 53.660' E151° 22.021'
P2B	S23° 48.304' E151° 12.571'	SGW4	S23° 53.321' E151° 28.569'
BG10	S23° 47.700' E151° 14.323'	SGR1	S23° 59.913' E151° 34.987'

OMIT

“6 Hour EWMA” means exponentially weighted moving average, calculated by using a 60:40 weighting system, where the mean turbidity for the most recent 6 hours comprises 60% of the EWMA and the mean turbidity for the 6 hours previous to that comprises 40% of the EWMA.

ADD

“6 Hour EWMA” means exponentially weighted moving average, calculated by using a 60:40 weighting system, where the current EWMA (Z_i) is computed by adding 60% of the mean turbidity for the preceding 6 hour interval (X_i mean) to 40% of the preceding 6 hour EWMA value (Z_{i-1}).

Mathematically, given data $X_1, \dots, X_n$, values of the EWMA statistic (Z) are computed using the following equation:

$$Z_i = 0.6X_{i \text{ mean}} + 0.4Z_{i-1}$$

where $X_{i \text{ mean}}$ is the mean of the data for the i^{th} period (in this case, the current 6 hour period).

“Minimum light requirements” means that it can be demonstrated that no benthic PAR meter (TC1, BS1, DC1, GC1, W15-2 or PM1) has experienced more than seven (7) consecutive days of less than 6 mol/m²/day as a 14 day rolling average, unless it can also be demonstrated to the satisfaction of the administering authority that these low light levels are the result of excessive cloud cover.

 2/9/12

Notice

Decision to change development approval conditions

“PAR” means photosynthetically active radiation and is measured as mol/m²/day. These values are averaged over a 14 day period, updated daily. Benthic PAR is measured at the following sites and is required to be no more than 1.5 metres above the seagrass beds.

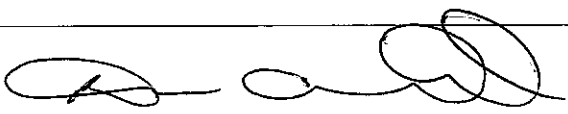
Site name	Location
TC1 - Redcliff Island	23° 42.033' S, 151° 08.004' E
BS1 - Black Swan Island	23° 40.550' S, 151° 07.629' E
DC1 - Duffy Creek	23° 42.998' S, 151° 09.513' E
GC1 - Graham's Creek	23° 43.372' S, 151° 13.395' E
WI5-2 - Wiggins Island	23° 49.020' S, 151° 12.242' E
PM1 - Pelican Banks	S23° 47.374' E151° 17.990' E

The changed condition takes effect from the day the notice is given to the owner of the land.

Review and appeal processes may be available to the applicant in regard to this decision. An extract from the *Sustainable Planning Act 2009* is attached. This attachment details your appeal rights regarding this decision. You should seek independent advice to confirm the procedures available.

Under section 73F(3), (6) and (7) of the *Environmental Protection Act 1994* the appeal provisions of section 467(1) of the *Sustainable Planning Act 2009* do not apply where the registered operator for the development approval has agreed in writing to the addition, change or cancellation.

Should you have any queries in relation to this notice, Arthur Dahl of the department on telephone (07) 4971 6500 would be happy to assist you.



SIGNATURE

Don Arnold
Regional Manager,
Environmental Services and Regulation
Gladstone

06 September 2012

DATE

Enquiries:

Department of Environment and Heritage
Protection
GLADSTONE Q4680
Ph. 07 4971 6500, Fax. 07 4972 1993

This notice is issued by the Department of Environment and Heritage Protection as a courtesy copy of all relevant conditions at the time of printing. It contains all current applicable conditions following amendments made to the original Notice pursuant to section 334 (decision notice) of the Sustainable Planning Act 2009 ("the Act").

Assessment manager reference:	PR# 347914
Date application received:	15-Feb-2011
Permit type:	Development Approval (Converted)
Date of decision:	06-Sep-2012
Decision:	Amended Decision Notice for a Development Approval for a MCU involving an ERA.
Relevant laws and policies:	<i>Sustainable Planning Act 2009</i>
Jurisdiction(s):	<i>Sustainable Planning Regulation 2009 - Schedule 3, Part 1, Table 2, item 1</i>

Development Description(s)

Property	Lot/Plan	Aspect of Development
Access Channels, Swing Basins, Berth Pockets and materials offloading facilities for LNG Facilities, Port Curtis	Lot 1 Plan SP228184, Lot 2 Plan SP228185, Lot 3 Plan SP228186, Lot 3 Plan SP235971, Lot 504 Plan SP235939, Lot 507 Plan SP239651, Lot 508 Plan SP239683, Lot 7 Plan SP239683	ERA 16 Extractive and screening activities Threshold 1(d) - dredging , in a year, more than one million tonnes of material.
Western Basin Dredging - Onshore and Offshore Disposal to Fisherman's Landing and East Bank Sea Disposal Site respectively.		

Reason(s) for inclusion of conditions

In accordance with section 289 of the *Sustainable Planning Act 2009*, the reason(s) for inclusion of conditions stated in this permit are as follows.

The conditions are included pursuant to section 73B of the Environmental Protection Act 1994.

Additional comments or advice about the application

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which a development approval is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by a development approval as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

A development permit authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the permit specifically authorises environmental harm.

A person carrying out an ERA must hold a registration certificate issued under the *Environmental Protection Act 1994*, or must be acting under a registration certificate, for the ERA.

Coordinator-General's report for an environmental impact statement (Coordinator-General's report)

Pursuant to section 37 of the *State Development and Public Works Organisation Act 1971*, the Coordinator-General's report is taken to be a concurrence agency's response for the application under IDAS, and as such, the report can be found at the website:

<http://www.dlqp.qld.gov.au/projects/transport/harbours-and-ports/port-of-gladstone-western-basin-strategic-dredging-and-disposal-project.html>

Delegate

Don Arnold

Delegate, Chief Executive administering the *Environmental Protection Act 1994*
Department of Environment and Heritage Protection

06-Sep-2012

CONDITIONS

Interest: General

Limit of Dredging Approved

- (G1) Dredging activities which constitute the environmentally relevant activity (ERA 16.1(d)) hereby approved are limited to:
- (a) the removal of up to 28 million cubic metres of dredge material from the Western Basin dredge area, Port Curtis, Gladstone as shown in Map 1;
 - (b) Placement of dredge spoil at Western Basin Reclamation Area, Fisherman's Landing Port Curtis, as shown in Map 2;
 - (c) Placement of dredge material at East Bank Sea Disposal site (EBSDS), as shown in Map 3.
- (G2) Any dredging must be conducted using equipment that is in survey, registered, and in relation to environmental performance, is equal to or better than the following equipment:
- (a) Trailing Suction Hopper Dredge (TSHD) that is equipped, as a minimum, with:
 - (i) below keel discharge of tail waters via an anti-turbidity control valve; and
 - (ii) on-board systems for determining solids to water ratio or density of dredged material; and
 - (iii) electronic positioning and depth control system for defining the location and depth of dredging activities; and
 - (iv) dredge heads and depth control capable of, and where appropriate, fitted with fauna exclusion devices (e.g. turtle deflectors); and
 - (v) fitted with "green valves" in the overflow pipe (to control the amount of air contained in the excess water, reducing turbidity).
 - (b) Cutter Suction Dredge that is equipped, as a minimum, with:
 - (i) electronic positioning and depth control system for defining the location and depth of dredging activities; and
 - (ii) continuous delivery connection (e.g. floating or submerged pipeline) to an approved placement site; and
 - (iii) a system or process to ensure the delivery system integrity is maintained at all times; and
 - (iv) systems for determining solids to water ratio or density of dredged material during operations.
 - (c) Grab or Backhoe Dredge that is equipped, as a minimum, with electronic positioning system for defining the location and depth of dredging activities.
- (G3) A maximum of one TSHD may operate together at any time.
- (G4) The TSHD must not operate in 'overflow mode' except during the final hour of any flood (incoming) tide and/or during the first three (3) hours of any ebb tide.
- (G5) The TSHD must not operate in 'overflow mode' for more than 30 minutes in any cycle, with no more than two cycles per tide.
- (G6) Provide to the administering authority written notification of the date when dredging will commence at least five (5) business days prior to starting the dredging activity.

External Audit

- (G7) You must engage an appropriately qualified Environmental Auditor, independent of contractual arrangements for the design and construction of the project, for the duration of works covered by this development approval.

- (G8) The Environmental Auditor must audit key stages of the works (subject to this approval) against the:
- a) Conditions of this development approval;
 - b) Dredge Management Plan (DMP) as required by condition (G14);
 - c) General Environmental Duty (GED).
- (G9) Audits by the Environmental Auditor are to be carried out:–
- a) Within one month of the commencement of the works; then
 - b) Every three (3) months; and
 - c) Until all relevant monitoring is completed.
- (G10) Within 3 months of the completion of the project, the Environmental Auditor must finalise the audits and prepare a summary of the results, in a form acceptable to the administering authority.
- (G11) A copy of each Audit Report must be provided to the administering authority within twenty (20) business days of completion of the audit.
- (G12) The registered operator must ensure that a person or body possessing appropriate experience and qualifications determines the cross sections of the dredged area to confirm the works have been carried out in accordance with the plans referred to in condition (G1) and report the results of the survey determinations to the administering authority within six (6) weeks following the completion of the project.
- (G13) A copy of the conditions of this development permit must be kept in a location readily accessible to personnel carrying out the activity.

Dredge Management Plan

- (G14) From commencement of activities authorised under this approval, a Dredge Management Plan (DMP), approved by the administering authority for the activities subject to this development approval must be implemented. The approved DMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused.

The DMP must provide for at least the following functions:

- a) significant and sensitive receptors (including for example wetland and ecosystem features) in the port area are identified and mapped
 - b) environmental aspects and potential impacts are identified
 - c) control measures that minimise the potential for environmental harm are in place
 - d) contingency plans and emergency procedures are in place
 - e) organisational structures, accountability and responsibility are recorded
 - f) arrangements for effective communication are documented and undertaken
 - g) all contaminant releases are monitored
 - h) staff are trained and aware of the requirements of this permit
 - i) appropriate records are kept
 - j) reviews of environmental performance and continual improvement are undertaken periodically.
- (G15) The approved DMP must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this approval.

Prevent and/or Minimise Likelihood of Environmental Harm

- (G16) In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and/or to minimise the likelihood of environmental harm being caused.

Maintenance of Measures, Plant and Equipment

- (G17) The registered operator of an ERA to which this approval relates must:
- a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and
 - b) maintain such measures, plant and equipment in a proper and efficient condition; and
 - c) operate such measures, plant and equipment in a proper and efficient manner.

Alterations

- (G18) No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided for by this approval.

Records

- (G19) Record, compile and keep all monitoring results required by this development approval and present this information to the administering authority upon request.
- (G20) All records required by the development approval must be kept for at least five (5) years, except where stated otherwise in a condition of this approval.

Cease Activities in Event of Material or Serious Environmental Harm Occurring

- (G21) If the registered operator of an ERA to which this approval relates becomes aware of material environmental harm or serious environmental harm as a result of carrying out the environmentally relevant activity (ERA) then the said activities must cease immediately.

Notification

- (G22) Telephone the DERM Pollution Hotline (1300 130 372) or local office (4971 6500) as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this development approval or any event where environmental harm has been caused or may be threatened.

Information to follow notification

- (G23) Written advice detailing the following information must be provided to the administering authority within fourteen (14) days following any notification in accordance with condition (G21)
- a) the name of the registered operator, including the development approval number;
 - b) the name and telephone number of a designated contact person;
 - c) the location of the release / event;
 - d) the time of the release / event;
 - e) the time you became aware of the release / event;
 - f) the suspected cause of the release / event;
 - g) a description of the resulting effects of the release / event;
 - h) the results of any sampling performed in relation to the release / event;
 - i) actions taken to mitigate any environmental harm and or environmental nuisance caused by the release / event; and
 - j) proposed actions to prevent a recurrence of the release / event.

Incident Recording

- (G24) A record must be maintained of at least the following events:
- a) the time, date and duration of equipment malfunctions where the failure of the equipment resulted in the release of contaminants to the environment; and
 - b) any uncontrolled release of contaminants to the environment.

Spill Kit(s)

- (G25) Appropriate spill kit(s) and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site.
- (G26) All relevant personnel operating under this approval must be trained in the use of the spill kit(s).

Trained/Experienced Operator(s)

- (G27) All persons engaged in the conduct of the activity, including but not limited to employees and contract staff, must be:
- (a) trained in the procedures and practices necessary to:
 - (i) comply with the conditions of this development approval, and
 - (ii) prevent environmental harm during normal operation and emergencies; or
 - (b) under the close supervision of such a trained person.

Sample Analysis

- (G28) All analyses and tests required to be conducted under this development approval must be carried out by a laboratory that has NATA certification for such analyses and tests, except as otherwise authorised by the administering authority.

Monitoring

- (G29) An experienced and suitably qualified person(s) must conduct any monitoring required by this approval.

Monthly Monitoring Report

- (G30) Unless agreed to in writing by the administering authority, a monitoring report must be prepared every month until completion of dredging. This report shall include but not be limited to:
- a) a summary of monitoring results obtained under the monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the monitoring results to both limits of this approval and to relevant prior results; and
 - b) an evaluation and interpretation of the data from any monitoring programs; and
 - c) a summary of any remedial actions required to ensure compliance with this approval; and
 - d) a summary of the record of equipment failures or events recorded for any site under this approval; and
 - e) actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.
- (G31) The monitoring report required by condition (G30) must be submitted to the administering authority upon request.

Acid sulfate soils

- (G32) The transportation of dredge material shall be carried out such that the dredge material is kept wet at all times.
- (G33) Actual acid sulphate soil or drain water with pH less than 6.5 shall not be disposed of at sea.

- (G34) Material placed in the Western Basin Reclamation Area (Map 2) or at sea shall be managed in accordance with an acid sulfate soil management plan (ASSMP) approved by the administering authority.
- (G35) The ASSMP shall be implemented for the duration of the dredging and spoil disposal, and for an additional period as stated in the ASSMP.
- (G36) Any amendments to the ASSMP shall be subject to approval by the administering authority prior to implementation, unless necessary to prevent environmental harm in which case the amendment shall within 24 hours of implementation be referred to the administering authority for approval.

Interest: Noise

Noise Nuisance

- (N1) Noise from the dredging activities must not cause environmental nuisance at a nuisance sensitive place.

Interest: Land

Preventing Contaminant Release to Land

- (L1) Contaminants must not be released to land, except where otherwise stated in a condition of this approval.
- (L2) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.
- (Note: All flammable and combustible liquids including petroleum products/fuels must be stored in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids. Storage for flammable and combustible liquids must be constructed and maintained in accordance with AS 1940.)

Interest: Water

- (W1) The registered operator must not allow turbidity levels at sensitive receptors (QE4, ST1, P2B, BG10) to exceed the turbidity levels contained in Table 1 – *Maximum allowable (6 Hour EMWA) Turbidity levels* for a period of greater than 48 hours, unless it can be demonstrated to the satisfaction of the administering authority that the elevated turbidity is the result of errors or natural background variations.

Table 1 – Maximum allowable (6 Hour EMWA) Turbidity levels

Sensitive Sites (GPS Co-ordinates)	Maximum 99 th Percentile Turbidity (NTU)	
QE4 (S23° 44.863' E151° 09.722')	55 (Wet)	30 (Dry)
ST1 (S23° 47.073' E151° 12.262')	65 (Wet)	35 (Dry)
P2B (S23° 48.304' E151° 12.571')	69 (Wet)	40 (Dry)
BG10 (S23° 47.700' E151° 14.323')	56 (Wet)	46 (Dry)
SGM1 (S23° 50.037' E151° 25.702')	12 (Wet)	10 (Dry)
SGM2 (S23° 47.639' E151° 22.958')	11 (Wet)	9 (Dry)

NOTE: "Wet" season is from 1 October to 31 March inclusive. The remainder of the year is taken to be the "Dry" season.

- (W2) Should turbidity levels exceed the above level(s) it is not a contravention of condition (W1) when it can be demonstrated to the satisfaction of the administering authority that:
- a) elevated turbidity is the result of external factors, (eg., erroneous or invalid data, wave height, rainfall, tides, wind, etc); or
 - b) clearly the result of other dredging activities, (eg. CSD or BHD dredging being undertaken within 500m of a monitoring site); or
 - c) all benthic PAR monitoring sites (TC1, BS1, DC1, GC1, WI5-2 and PM1) are receiving the minimum light requirement.
- (W3) Dredge decant waters must only be released to surface waters in compliance with the release limits listed in Table 2 – Dredge Decant Water release limits at discharge location, W1, Port Curtis outfall(s).

Discharge Location - release point for dredge discharge waters from the Western Basin Reclamation Area, Fisherman's Landing in an easterly direction to Port Curtis, 151° 9' 52.89"E, 23° 45' 50.84"S.

Monitoring Point W1 must be situated so as to comply with the requirements of condition (W5).

Table 2 – Dredge Decant Water Release Limits

Monitoring Point(s)	Quality Characteristics	Limit Type			Monitoring Frequency
		Minimum	Investigation Trigger	Maximum	
W1	Suspended Solids	-		100 mg/L	Weekly
W1	Dissolved Oxygen	2.0 mg/L		-	Daily
W1	Turbidity	-		-	Hourly
W1	pH	6.5		9.0	Hourly ³
W1	Total Petroleum Hydrocarbons			10 mg/L	Weekly
W1	Ammonia		1.38 ¹ mg/L	2.30 mg/L	Weekly
W1	Aluminium (filtered)	-	10 ¹ µg/L	-	Monthly ²
W1	Cadmium (filtered)	-	2.1 ¹ µg/L	3.5 µg/L	Monthly ²
W1	Chromium (filtered)	-	13.2 ¹ µg/L	22 µg/L	Monthly ²
W1	Copper (filtered)	-	3.9 ¹ µg/L	6.5 µg/L	Monthly ²
W1	Lead (filtered)	-	13.2 ¹ µg/L	22.0 µg/L	Monthly ²
W1	Mercury (filtered)	-	0.3 ¹ µg/L	0.5 µg/L	Monthly ²
W1	Nickel (filtered)	-	21 ¹ µg/L	35 µg/L	Monthly ²
W1	Silver (filtered)	-	4.2 ¹ µg/L	7.0 µg/L	Monthly ²
W1	Zinc (filtered)	-	45 ¹ µg/L	75 µg/L	Monthly ²

1. These values are trigger values only. If three or more of the last five test results exceed these values, results must be reported to the administering authority and further investigation may be required.

2. While pH levels are outside the above range, monitoring for the above metal species is to be carried out daily.

3. While pH is to be sampled hourly, limits apply to pH as a 24 hour rolling average.

Placement of dredge material at sea

- (W4) Material dredged under this permit must not be placed at sea except at a place authorised under an authority, licence or other permit issued by either or both the Commonwealth or Queensland governments to receive the dredged material.

Monitoring

- (W5) All determinations of water quality must be carried out on samples that are representative of the discharge and made in accordance with, but not limited to, methods prescribed in the *DERM Monitoring and Sampling Manual 2009* or more recent editions or supplements to that document as such become available. Table 3 - Monitoring Sites shows the locations of monitoring sites where sampling is required through the Dredge Management Plan. The location of these sites can only be changed with the prior written approval of the administering authority.

Dissolved Metals

- (W6) Until advised otherwise in writing by the administering authority, the dissolved metal(s) component(s) is required to be determined, recorded, and reported in the relevant monthly monitoring report. Table 3 – *Monthly Monitoring Sites for Metals* shows the locations of monitoring sites where monthly metals sampling is required. The location of these sites can only be changed with the prior written approval of the administering authority.

Table 3 - Monitoring Sites for Metals

Site	GPS	Site	GPS
QE8	S23° 39.555' E151° 06.401'	P5	S23° 46.986' E151° 18.372'
QE6	S23° 40.887' E151° 08.607'	B7	S23° 50.759' E151° 20.460'
QE2-1	S 23° 43.668 E 151° 08.073	RB1	S24° 04.077' E151° 39.053'
QE3	S23° 42.945' E151° 08.591'	RB2	S24° 04.423' E151° 39.342'
QE4	S23° 44.863' E151° 09.722'	RB3	S24° 04.938' E151° 39.667'
C7-1	S23° 44.360' E151° 10.682'	SGI1	S23° 52.027' E151° 27.187'
C3	S23° 46.470' E151° 10.020'	SGM1	S23° 50.036' E151° 25.702'
C2B	S23° 47.582' E151° 12.367'	SGM2	S23° 47.639' E151° 22.958'
ST1	S23° 48.071' E151° 12.262'	SGW1	S23° 53.660' E151° 22.021'
P2B	S23° 48.304' E151° 12.571'	SGW4	S23° 53.321' E151° 28.569'
BG10	S23° 47.700' E151° 14.323'	SGR1	S23° 59.913' E151° 34.987'

Interest: Waste

Waste Management

- (WA1) Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this development approval.
- (WA2) Waste generated in the carrying out of the activities must be stored, handled and transferred in a proper and efficient manner.

Waste Handling

- (WA3) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.

Off-site Movement of Waste

- (WA4) Where regulated waste is removed from the site (other than by a release as permitted under another condition of this development approval), the registered operator must monitor and keep records of the following:
- (a) the date, quantity and type of waste removed;
 - (b) the name of the waste transporter and/or disposal operator that removed the waste; and
 - (c) the intended treatment/disposal/destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.

Notification of Improper Disposal of Regulated Waste

- (WA5) If a person removes regulated waste associated with activities at the site and disposes of such waste in a manner which is not authorised or is improper or unlawful, the registered operator must notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal as soon as practicable.

Interest: Social

Complaint Response

- (S1) The registered operator of an ERA to which this approval relates must record the following details for all complaints received and provide this information to the administering authority on request:
- (a) Time, date, name and contact details of the complainant;
 - (b) reasons for the complaint;
 - (c) any investigations undertaken;
 - (d) conclusions formed; and
 - (e) any actions taken.

END OF CONDITIONS

Definitions

Words and phrases used throughout this development approval are defined below. Where a definition for a term used in this development approval is sought and the term is not defined within this development approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

"6 Hour EWMA" means exponentially weighted moving average, calculated by using a 60:40 weighting system, where the current EWMA (Z_i) is computed by adding 60% of the mean turbidity for the preceding 6 hour interval (X_i mean) to 40% of the preceding 6 hour EWMA value (Z_{i-1}).

Mathematically, given data $X_1, \dots, X_n$, values of the EWMA statistic (Z) are computed using the following equation:

$$Z_i = 0.6X_{i \text{ mean}} + 0.4Z_{i-1}$$

where $X_{i \text{ mean}}$ is the mean of the data for the i^{th} period (in this case, the current 6 hour period).

"administering authority" means the Department of Environment and Resource Management (DERM) or its successor.

"commercial place" means a place used as an office or for business or commercial purposes.

"decant waters" – means settled dredge spoil waters released from release point, W1 following settlement or other management requirements.

"dwelling" means any of the following structures or vehicles that is principally used as a residence-

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

"general environmental duty" means general environmental duty as defined in section 319 of the *Environmental Protection Act 1994*

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"material environmental harm" means material environmental harm as defined in section 16 of the *Environmental Protection Act 1994*.

"minimum light requirements" means that it can be demonstrated that no benthic PAR meter (TC1, BS1, DC1, GC1, WI5-2 or PM1) has experienced more than seven (7) consecutive days of less than $6 \text{ mol/m}^2/\text{day}$ as a 14 day rolling average, unless it can also be demonstrated to the satisfaction of the administering authority that these low light levels are the result of excessive cloud cover.

"NTU" means nephelometric turbidity units.

"noxious" means harmful or injurious to health or physical well being.

"nuisance sensitive place" means –

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

“PAR” means photosynthetically active radiation and is measured as mol/m²/day. These values are averaged over a 14 day period, updated daily. Benthic PAR is measured at the following sites and is required to be no more than 1.5 metres above the seagrass beds.

Site name	Location
TC1 - Redcliff Island	23° 42.033' S, 151° 08.004' E
BS1 - Black Swan Island	23° 40.550' S, 151° 07.629' E
DC1 - Duffy Creek	23° 42.998' S, 151° 09.513' E
GC1 - Graham's Creek	23° 43.372' S, 151° 13.395' E
WI5-2 - Wiggins Island	23° 49.020' S, 151° 12.242' E
PM1 - Pelican Banks	S23° 47.374' E151° 17.990' E

“protected area” means –

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

“registered operator” means the holder of a Registration Certificate for the site(s) and activity (ERA 16) to which this approval relates and includes any person acting under this approval.

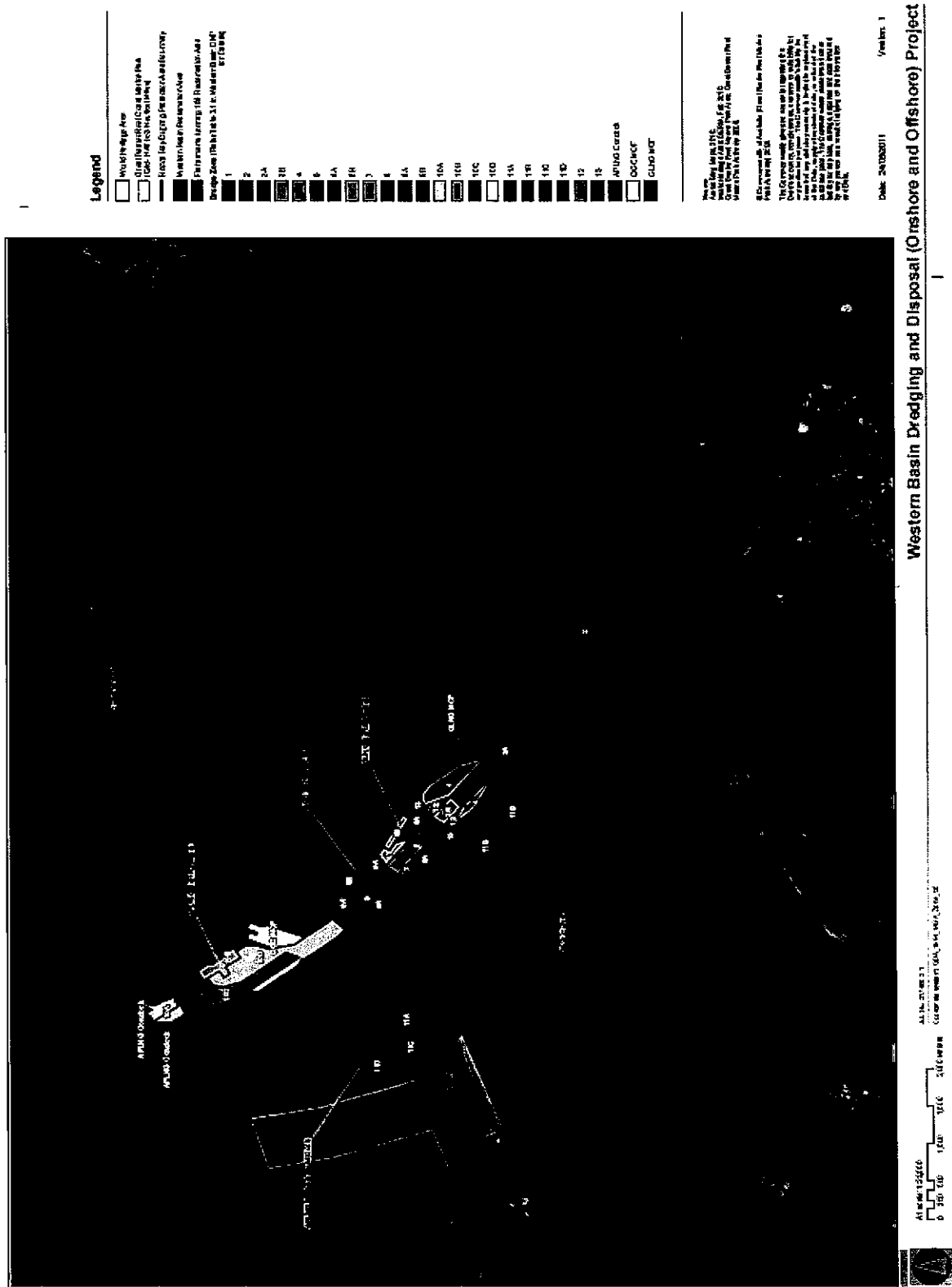
“regulated waste” means non-domestic waste in Schedule 7 of the *Environmental Protection Regulation 1998* and includes:

- for an element - any chemical compound containing the element; and
- anything that has contained a regulated waste; and
- regulated waste that has been treated or immobilised.

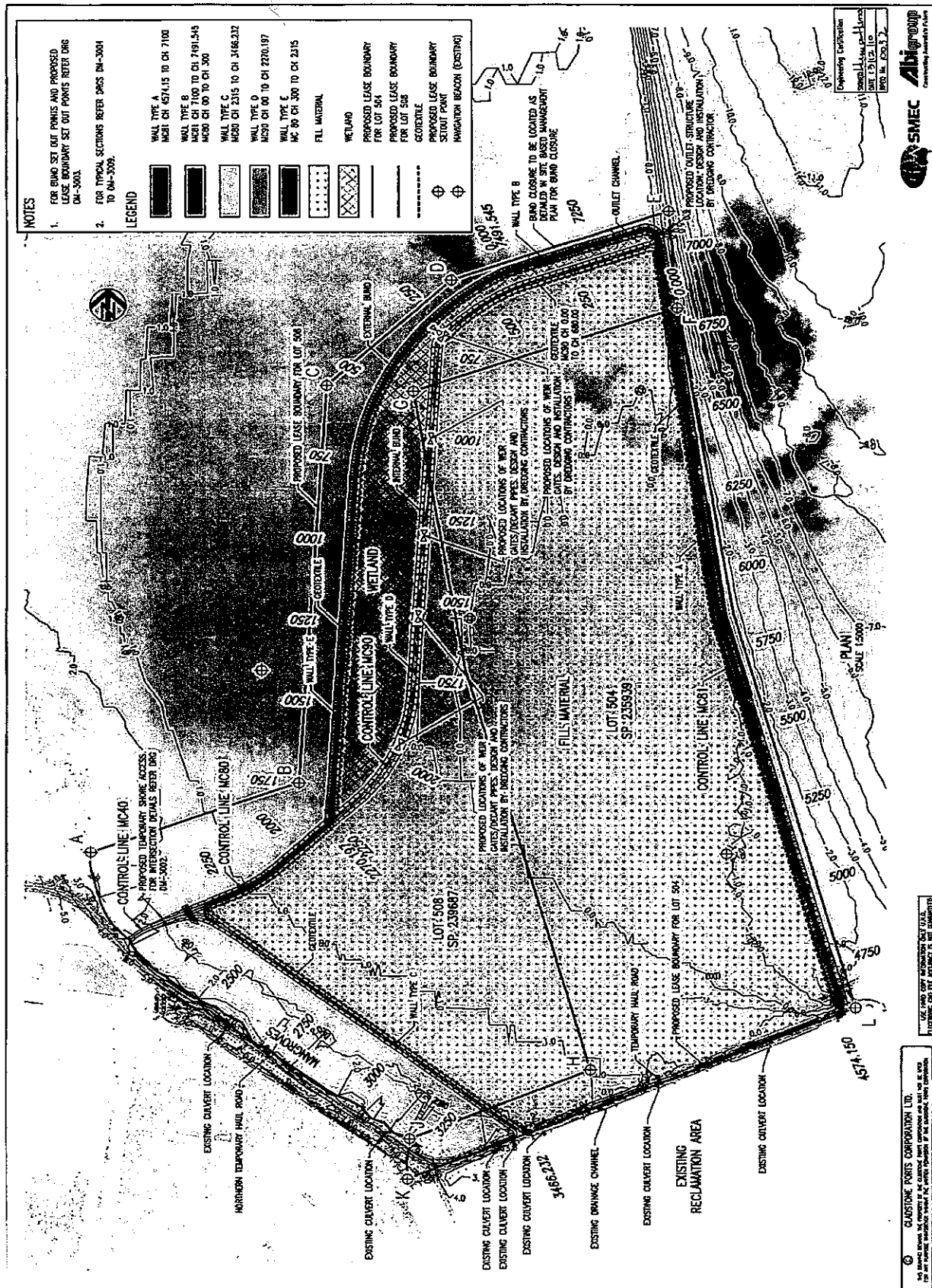
“serious environmental harm” means serious environmental harm as defined in section 17 of the *Environmental Protection Act 1994*.

“waters” includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and any under groundwater, or any part thereof.

Map1. Approved dredge area for ocean disposal and western basin reclamation.



Map 2. Approved dredge disposal area for western basin reclamation, showing discharge point(s).



Map 3. East Bank Sea Disposal Site (EBSDS).



Legend

-  East Banks Sea Disposal Site (Coordinates shown in eastings and northings)
-  Great Barrier Reef Marine Park
-  Seagrass Mapping Extent 2002 and 2009
-  Reef
-  Continuous water quality monitoring site

END OF APPROVAL