

Environmental Protection Act 1994

Licence No. SR1390

Section 45(1)

Under the provisions of the *Environmental Protection Act 1994* this environmental authority is issued:

To: Boral Resources (Qld) Pty Limited

Address: Boral Resources (Qld) Pty. Limited
Level 1, 147 Coronation Drive,
MILTON QLD 4064

in respect of carrying out the environmentally relevant activity at the following place:

ERA 19(b) - Dredging material - dredging material from the bed of any waters (other than dredging by a port authority of material for which a royalty or similar charge is not payable) using plant or equipment having a design capacity of 5 000t or more, but less than 100 000 t, per year.

Middle Banks as specified and delineated in red on the plan of development - Schedule J and marked with the letter J on the plan.

located at: Middle Banks, Moreton Bay.

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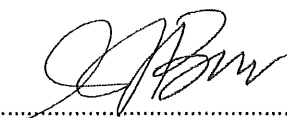
Middle Banks as specified and delineated in red on the plan of development - Schedule J and marked with the letter K on the plan.

located at: Middle Banks, Moreton Bay.

This environmental authority is issued subject to the conditions set out in the schedules attached to this environmental authority.

This licence takes effect from 7 October 1999.

signed



L.J. Bevis
Acting Regional Manager (Environment)
Delegate of Administering Authority
Environmental Protection Act (1994)

date

16.9.99

Environmentally Relevant Activity:
19(b) - Dredging material.

This environmental authority consists of the following schedules -

Schedule A - General Conditions

Schedule C - Water

Schedule F - Noise

Schedule G - Waste Management

Schedule H - Self Monitoring and Reporting

Schedule I - Definitions

Schedule J - Plan of Development



Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE A - GENERAL CONDITIONS

Prevent/Minimise Likelihood of Environmental Harm

- (A1) In carrying out the environmentally relevant activity, the holder of this environmental authority must take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, may cause environmental harm, in a manner that could be prevented, shall be carried out in a proper manner by a competent person in accordance with the conditions of this authority.
- (A2) The holder of this environmental authority must:
- (a) install and operate all works and control equipment, and
 - (b) take all measures, perform all acts and do all things,
- necessary to ensure compliance with the conditions of this environmental authority.

Display of Environmental Authority

- (A3) A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activity.

Records

- (A4) Any record or document required to be kept by a condition of this environmental authority must be kept at the registered place of business by the holder of this environmental authority for a period of at least five (5) years and be available for examination by an authorised person. The record retention requirements of this condition will be satisfied if any daily and weekly records are kept for a period of at least three (3) years and these records are then kept in the form of annual summaries after that period.
- (A5) Copies of any record or document required to be kept by a condition of this environmental authority must be provided to any authorised person or the administering authority on request.

Alterations

- (A6) 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 by this environmental authority.

Calibration

- (A7) All instruments and measurement devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

Environmentally Relevant Activity:
19(b) - Dredging material.

Integrated Environmental Management System (IEMS)

(A8) The holder of this environmental authority must:

(a) implement the Integrated Environmental Management System (IEMS) prepared by WBM Oceanics Australia entitled "Boral Resources (Qld) Pty Ltd, Middle Banks Sand Extraction Environmental Management Plan June 1999" submitted with the application for environmental authority and ensure the IEMS effectively provides for the following functions:

- (i) routine operating procedures for day to day activities;
- (ii) maintenance practices and procedures;
- (iii) contingency plans and emergency procedures to deal with foreseeable risks and hazards;
- (iv) monitoring of the release of contaminants into the environment;
- (v) assessment of the environmental impact of any releases of contaminants into the environment;
- (vi) management of any wastes produced;
- (vii) handling of environmental complaints;
- (viii) keeping and production of environmental records and reports;
- (ix) staff training and awareness of environmental issues; and
- (x) annual reviews of the effectiveness of the IEMS in meeting its objectives;

(A9) An up to date copy of the Integrated Environmental Management System must be kept at the registered place of business and be available for examination by an authorised person on request.

(A10) An up to date copy of elements (i) to (viii) inclusive of the Integrated Environmental Management System (as specified in condition A8) must be kept on each vessel and be available for examination by an authorised person on request.

Dredging

(A11) Dredging must only be carried out in the permit areas, namely:

- (i) Middle Banks as specified and delineated in red on the plan of development - Schedule J and marked with the letter J on the plan.
- (ii) Middle Banks as specified and delineated in red on the plan of development - Schedule J and marked with the letter K on the plan.

(A12) Notwithstanding the design capacity of the plant or equipment used in carrying out the environmentally relevant activity, the quantity of material extracted from the bed of any waters in any permit area must not exceed the rate of extraction specified in Schedule A - Table 1 for that permit area.

Schedule A -Table 1 - Maximum Rates of Extraction for Permit Areas

Permit Areas	Maximum Annual Extraction Rate (cubic metres)
Middle Banks as specified and delineated in red on the plan of development - Schedule J and marked with the letter J on the plan.	40 000
Middle Banks as specified and delineated in red on the plan of development - Schedule K and marked with the letter K on the plan.	75 000

Environmentally Relevant Activity:
19(b) - Dredging material.

- (A13) The holder of this environmental authority must co-operate in any study or investigation conducted by the administering authority (or an agent acting on behalf of the administering authority) into the environmental sustainability of extraction of material in any designated permit areas included in this environmental authority.

Cease activities in event of material or serious environmental harm occurring

- (A14) If the holder of this environmental authority becomes aware of material environmental harm or serious environmental harm as a result of carrying out the dredging activities then the said activities must cease immediately.

Habitat Disturbance

- (A15) Dredging must not occur in any area in which beds of seagrasses occur or where dredging activities are likely to disturb areas in which seagrass beds occur, for example by smothering the seagrass beds or undermining the seagrass beds.
- (A16) Dredging must not occur in any area where shorebird feeding areas are present or where dredging activities are likely to disturb areas in which shorebird feeding may occur, for example intertidal banks.

End of Conditions for Schedule A



Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE C - WATER

Release of Contaminants to Waters

- (C1) The only contaminants permitted to be released to any waters (including the bed or banks of such waters) are:
- (i) wastewaters which overflow from the vessel as a result of loading of the dredge vessel; and
 - (ii) sea bed sediments necessarily disturbed during extraction of dredged material.

Vessel Release Points

- (C2) Contaminants that may cause environmental harm must not be directly or indirectly released from any source on the vessel to any waters at any location other than the contaminants and locations listed below:
- (i) well waters released to Moreton Bay via a discharge pipe during loading of dredge materials.

Release of Wastewater from the Vessel(s)

- (C3) The environmentally relevant activity must be carried out in such a manner that the release of contaminants (including any release caused by extraction of material from the bed of waters) must:
- (i) only occur within the permit areas of Moreton Bay Marine Park specified in condition A12;
 - (ii) not have any properties nor contain any organisms or other contaminants which are capable of causing environmental harm;
 - (iii) not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter;
 - (iv) (a) take all practicable measures necessary to minimise the concentration of suspended solids released during the loading of the vessel(s). Such measures may include but are not necessarily limited to the installation of filter screens, hay bales and/or other devices which act to physically screen solids from the release at the release points; and
 - (b) not cause the concentration of suspended solids in any wastewater released from the dredging vessel to exceed fifty (50) milligrams per litre.

Quality Characteristics of Release of Contaminants to Waters

- (C4) Notwithstanding condition C3 above, the dredging of the said areas of Moreton Bay Marine Park must not, at any down-current point, cause any quality characteristic to exceed the corresponding limit for the quality characteristic specified in Schedule C Table 1.

Environmentally Relevant Activity:
19(b) - Dredging material.

Schedule C - Table 1

QUALITY CHARACTERISTIC	LIMIT AT ANY DOWN-CURRENT POINT
Suspended Solids (mg/L)	Must not exceed 10 mg/L above a background value where the background value is less than 100 mg/L or 10 percent greater than a background value where the background value is greater than 100 mg/L.
Turbidity (NTU)	Must not exceed 2 NTU above a background value where the background value is less than 20 NTU or 10 percent greater than a background value where the background value is greater than 20 NTU.

Provided that for the purposes of this condition:

A background value for a quality characteristic is the value of the quality characteristic measured at a background sampling point in the receiving waters situated between fifty (50) and one hundred (100) metres up current from the release point(s) and further provided that background values must not be determined one hour either side of local high water and local low water.

A down-current sampling point is any sampling point, in the receiving waters situated:

- (i) not more than one hundred (100) metres from the release point(s) in the down-current direction at times when tidal flows or other flows are occurring; and
- (ii) not more than fifty (50) metres distant from the release point(s) during slack water conditions and other times when negligible flow is occurring in receiving waters.

Release of Petroleum Products

- (C5) There must be no release of petroleum products from any vessel used in Moreton Bay dredging operations to any waters.

End of Conditions for Schedule C

Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE F - NOISE**Emission of Noise**

- (F1) In the event of a complaint about noise that constitutes unreasonable intrusive noise being made to the administering authority, that the administering authority considers is not frivolous or vexatious, then the emission of noise from the licensed place must not result in levels greater than those specified in Table 1 of the Noise Schedule.

SCHEDULE F TABLE 1

NOISE LIMITS AT A NOISE SENSITIVE PLACE	
Period	Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj, T}$
7 am - 6 pm	Background noise level plus 5 dB(A)
6 pm - 10 pm	Background noise level plus 5 dB(A)
10 pm - 7 am	Background noise level plus 3 dB(A)
NOISE LIMITS AT A COMMERCIAL PLACE	
Period	Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj, T}$
7 am - 6 pm	Background noise level plus 10 dB(A)
6 pm - 10 pm	Background noise level plus 10 dB(A)
10 pm - 7 am	Background noise level plus 8 dB(A)

End of Conditions for Schedule F

Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE G - WASTE MANAGEMENT

General

- (G1) Waste must not be released to the environment, stored, transferred or disposed of contrary to any condition of this environmental authority.
- (G2) Procedures must be implemented to ensure that the disposal of wastes generated in carrying out the environmentally relevant activity is to an appropriate facility that accepts such wastes, except as specifically provided for under the conditions of this environmental authority.

End of Conditions for Schedule G



Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE H - SELF MONITORING AND REPORTING

Complaint Recording

- (H1) All complaints received by the holder of this environmental authority relating to releases of contaminants from operations at the licensed place must be recorded and kept in a log book with the following details:
- (i) time, date and nature of complaint;
 - (ii) type of communication (telephone, letter, personal etc.);
 - (iii) name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);
 - (iv) response and investigation undertaken as a result of the complaint;
 - (v) name of person responsible for investigating complaint; and
 - (vi) action taken as a result of the complaint investigation and signature of responsible person.

Monitoring of Contaminant Releases to Waters

- (H2) The holder of this environmental authority is responsible for making of determinations of the quality of the contaminants released for the quality characteristics specified in Schedule H Table 1 at sampling point and frequency specified in Schedule H Table 1:

Schedule H - Table 1

QUALITY CHARACTERISTIC DETERMINATION	SAMPLING POINTS	FREQUENCY
Suspended Solids (mg/L).	Vessel release point(s)	Monthly

For the purpose of this condition, the vessel release point(s) is defined as the discharge pipe releasing wastewater that is pumped from the well waters released to Moreton Bay via a discharge pipe during loading of dredge materials.

Receiving Waters Monitoring Program during Dredging

- (H3) The holder of this environmental authority is responsible for the making of determinations and the keeping of records of the quality characteristics of waters and of the receiving waters to check compliance with condition C4 at a frequency not less than the frequency specified in Schedule H Table 2:

Schedule H - Table 2

QUALITY CHARACTERISTIC DETERMINATION	FREQUENCY
Suspended Solids (mg/L)	Quarterly
Turbidity (NTU)	Quarterly

Sampling and In Situ Monitoring Point Details during Dredging

- (H4) Determinations of the quality of contaminants released to receiving waters to check conformity with the release quality characteristics specified in the water schedule of this environmental authority must be undertaken at the sampling and in situ monitoring point(s) described as:
- (i) a background sampling point as defined in condition C4; and
 - (ii) a down-current sampling point as defined in condition C4.

Environmentally Relevant Activity:
19(b) - Dredging material.

Environmental Impact Monitoring Program for Dredging

(H5) The holder of the environmental authority must carry out a program to monitor the impact of the environmentally relevant activity on the environment. The environmental impact monitoring program required by this condition must include but not necessarily be limited to the following:

- (i) Observation and recording the extent and nature of any turbidity plume caused by dredging in the said permit areas.

In conjunction with the water and receiving waters monitoring program, observations and records must be made of the following factors:

- (a) the influence of the wind and tide conditions on dispersal of any plume; and
- (b) the length of time the plume persists.

Quality Assurance: Water Quality Measurements

(H6) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Heritage Water Quality Sampling Manual, 2nd Edition, February 1995, or more recent editions or supplements to that document as such become available.

(H7) All determinations of the quality of contaminants released to waters must be performed by a person or body possessing appropriate experience and qualifications to perform the required measurements.

(H8) All samples collected for turbidity and suspended solids must be sampled from approximately two (2) metres below the waters' surface. If the water depth is less than four (4) metres, samples must be taken from mid depth in the water column.

Noise Monitoring

(H9) For the purposes of investigation of complaint of noise annoyance and for checking compliance with condition F1 of the noise schedule F, the noise levels from the environmentally relevant activity must be undertaken for at least the following descriptors, characteristics and conditions:

- (i) $L_{Amax, adj, T}$
- (ii) $L_{Aeq, T}$ (or $L_{A90, T}$);
- (iii) $L_{AN, T}$ (where N equals statistical levels of 1, 10, 50, 90 and 99);
- (iv) $Max L_{pA, T}$;
- (v) $L_{Aeq, T}$;
- (vi) the level and frequency of occurrence of impulsive or tonal noise;
- (vii) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
- (viii) effects due to extraneous factors such as traffic noise.

(H10) In conjunction with measurement and recordings of the noise, the following parameters and conditions must be recorded:

- (i) location, date and time of recording.

(H11) Noise monitoring must be undertaken to investigate any complaint of noise annoyance upon receipt of a written request from the administering authority to carry out such monitoring.

Environmentally Relevant Activity:
19(b) - Dredging material.

- (H12) The method of measurement and reporting of noise levels must comply with the Department of Environment and Heritage Noise Measurement Manual, Second Edition, March 1995, or more recent editions or supplements to that document as become available.
- (H13) The measurement and reporting of noise levels must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required measurements.

Report Submission

- (H14) The holder of this environmental authority must ensure that the results of all monitoring performed in accordance with this environmental authority for the period covered by an annual return are submitted with the annual return.
- (H15) Notwithstanding condition H14, where an application is made by the holder of this environmental authority for cancellation of the licence under Section 52 of the Act, the results of all monitoring conducted which have not previously been provided to the administering authority must be provided with the application for cancellation or surrender of the licence.

Notification of Emergencies and Incidents

- (H16) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, the holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.
- (H17) The notification of emergencies or incidents as required by condition number H16 must include but not be limited to the following:
- (i) the name of the holder of the environmental authority;
 - (ii) the location of the emergency or incident;
 - (iii) the number of the environmental authority;
 - (iv) the name and telephone number of the designated contact person;
 - (v) the time of the release;
 - (vi) the time the holder of the environmental authority became aware of the release;
 - (vii) the suspected cause of the release;
 - (viii) the environmental harm and/or environmental nuisance caused, threatened, or suspected to be caused by the release; and
 - (ix) actions taken to prevent further any release and mitigate any environmental harm and/or environmental nuisance caused by the release.
- (H18) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of the environmental authority must provide written advice of the information supplied in accordance with condition number H17 in addition to:
- (i) proposed actions to prevent a recurrence of the emergency or incident; and
 - (ii) outcomes of actions taken at the time to prevent or minimise environmental harm and/or environmental nuisance; and
 - (iii) the results of any environmental monitoring performed.

Environmentally Relevant Activity:
19(b) - Dredging material.

Exception Reporting

- (H19) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any licence limit within fourteen (14) days of completion of analysis.
- (H20) The written notification required by condition number H19 above must include:
- (i) the full analysis results, and
 - (ii) any subsequent analysis.

End of Conditions for Schedule H



Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE I - DEFINITIONS

- (11) For the purposes of this development approval any term not otherwise defined in the Act and any subordinate legislation made pursuant to the Act or in the definitions schedule of this development approval has the meaning conferred to that term in its common usage.
- (12) In the event of any inconsistency arising between the meaning of any term provided in the definitions schedule of this development approval and any common usage of that term, the meaning conferred in the definitions schedule of this development approval prevails.

For the purposes of this development approval the following definitions apply:

- (13) "Act" means the Environmental Protection Act 1994.
- (14) "administering authority" means the Environmental Protection Agency or its successor.
- (15) "authorised person" means an authorised person as defined under the Environmental Protection Act, 1994.
- (16) "land" in the land application schedule, means land excluding waters and the atmosphere.
- (17) "holder" means the owner, the owners successors in title and any occupier of the premises to which this development approval relates.
- (18) " $L_{Amax\ adj, T}$ " means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.
- (19) "background noise level" means either:
- $L_{A90, T}$ being the A-weighted sound pressure level exceeded for ninety percent (90%) of the time period not less than fifteen (15) minutes, using Fast response, or
- $L_{Abg, T}$ being the arithmetic average of the minimum readings measured in the absence of the noise under investigation during a representative time period of not less than fifteen (15) minutes, using Fast response.
- (110) " $MaxL_{pA, T}$ " means the maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.
- (111) "commercial place" means a place used as an office or for business or commercial purposes.
- (112) "noise sensitive place" means -
- (i) a dwelling, mobile home or caravan park, residential marina or other residential premises; or
 - (ii) a motel, hotel or hostel; or
 - (iii) a kindergarten, school, university or other educational institution; or
 - (iv) a medical centre or hospital; or
 - (v) a protected area; or
 - (vi) a park or gardens.
- (113) "unreasonable noise" means noise that:
- (a) causes unlawful environmental harm; and
 - (b) is not declared to be reasonable.



*Environmentally Relevant Activity:*19(b) - Dredging material.

(I14) "intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration -

- (a) is clearly audible to, or can be felt by, an individual; and
- (b) annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be had to Australian Standard 1055.2 - 1989 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

(I15) "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 runoff and any underground water, any part thereof.

End of Conditions for Schedule I



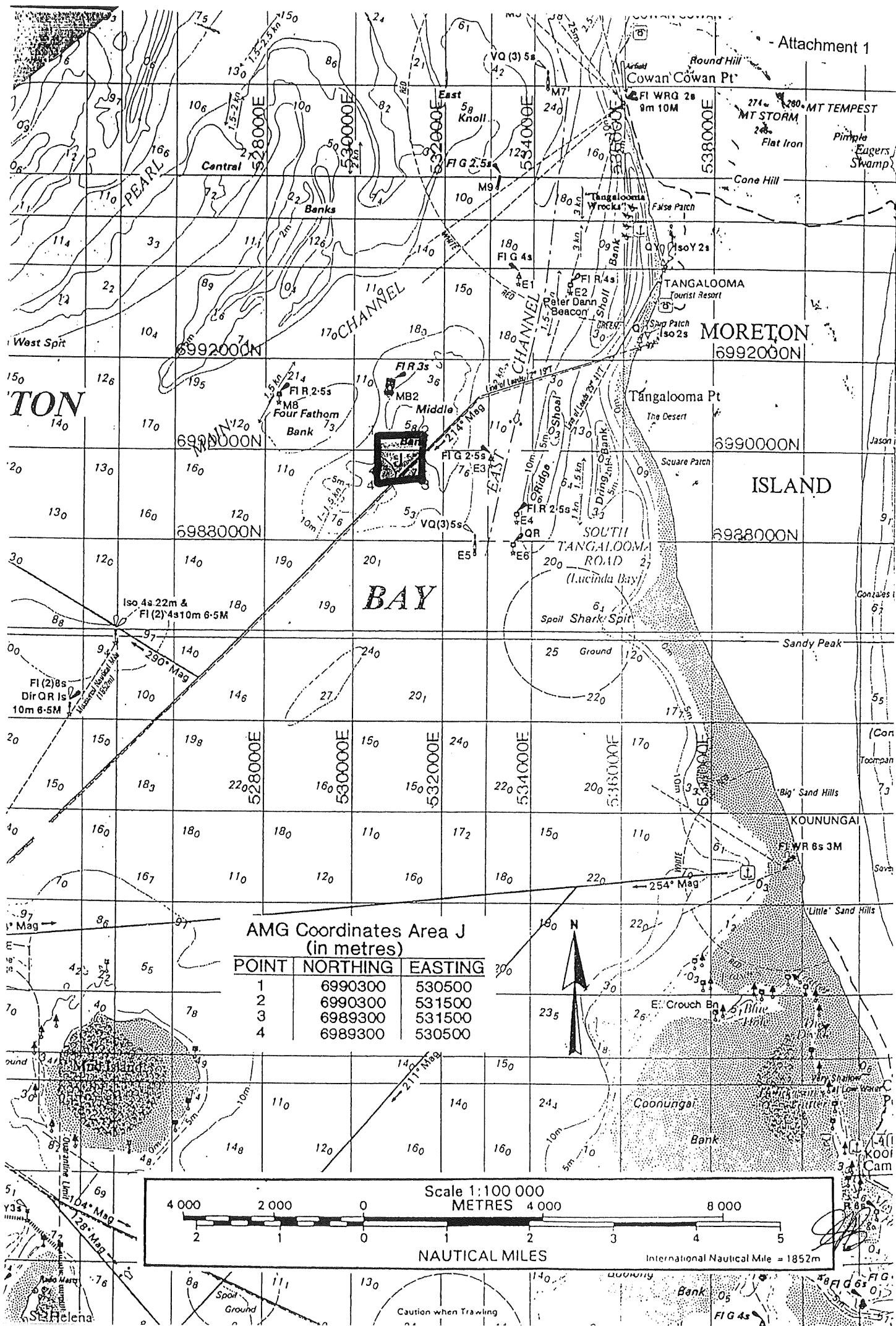
Environmentally Relevant Activity:
19(b) - Dredging material.

SCHEDULE J - PLAN OF DEVELOPMENT

- (i) Middle Banks (Area J) - Attachment 1
- (ii) Middle Banks (Area K) - Attachment 2

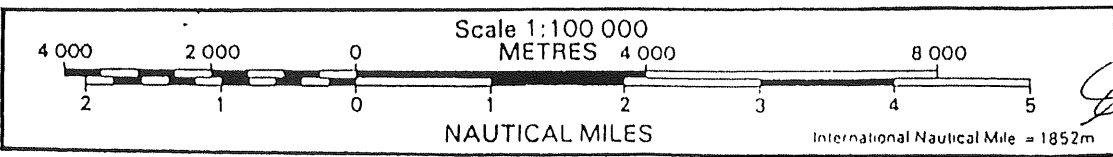
End of Conditions for Schedule J





AMG Coordinates Area J
(in metres)

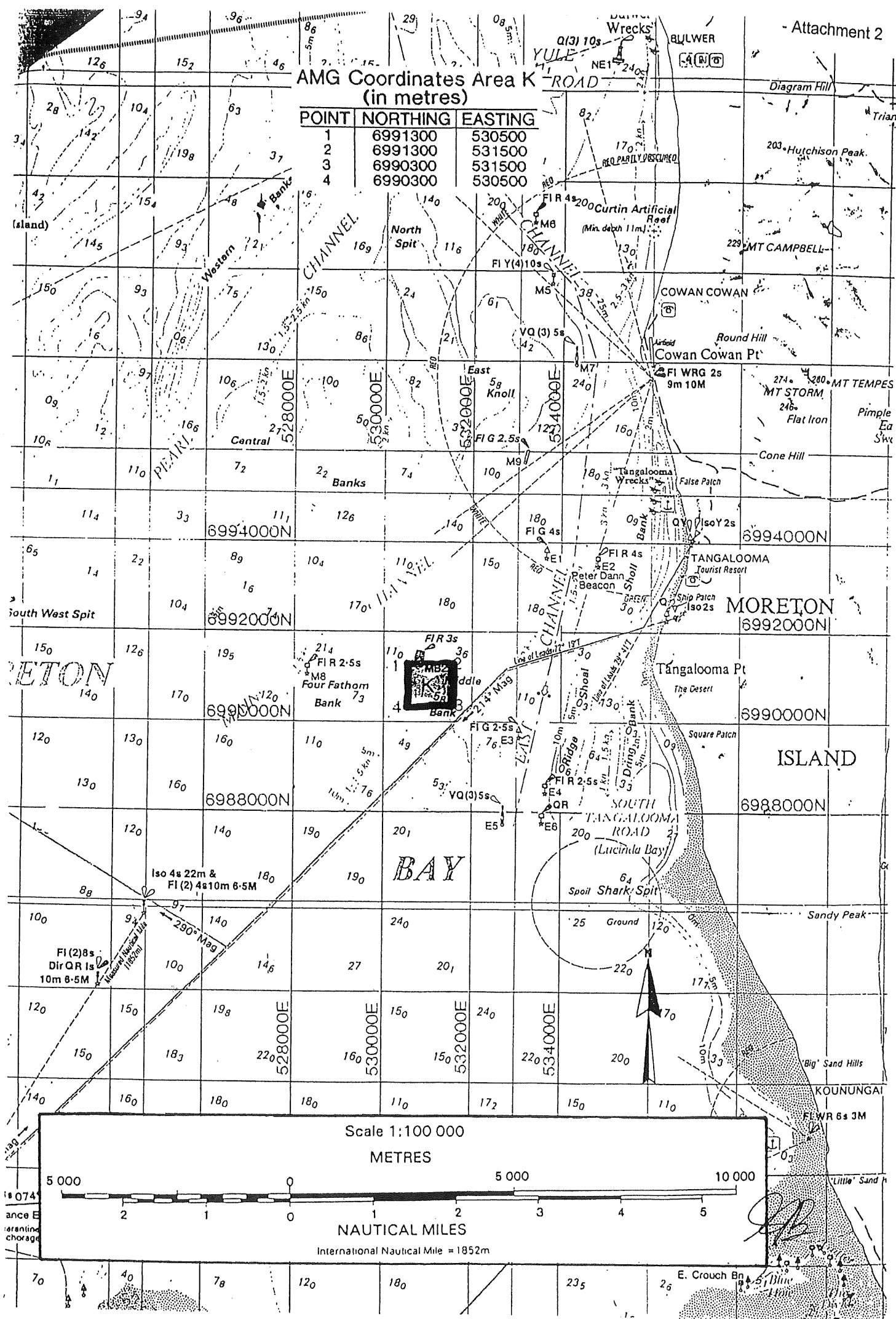
POINT	NORTHING	EASTING
1	6990300	530500
2	6990300	531500
3	6989300	531500
4	6989300	530500



Caution when Trawling

AMG Coordinates Area K (in metres)

POINT	NORTHING	EASTING
1	6991300	530500
2	6991300	531500
3	6990300	531500
4	6990300	530500



Registration certificate

Environmental Protection Act 1994

Registration certificate

No: ENRE01636810

This registration certificate is issued by the administering authority and takes effect from: 21-NOV-2011.

The anniversary day for the purposes of the Annual Return is 7 October.

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 place; subject to the conditions set out in development approval attached to the premises.

Registered Operator:-

Boral Resources (Qld) Pty Limited
C/- Boral Limited, 'AMP Centre'
Level 39, 50 Bridge Street, SYDNEY NSW 2000

Development Approval Number: SPDE00656110 (formerly SR1390)

Located at:-

Middle Banks, Moreton Bay

Registered Activity:-

ERA 16 Extractive and screening activities Threshold 1(b) - dredging, in a year, more than 10000t to 100000t of material



Delegate
Derek Robson
Department of Environment and Resource Management
Environmental Protection Act 1994

21-NOV-2011