Permit

Environmental Protection Act 1994

Environmental authority EPPR02005514

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR02005514

Environmental authority takes effect on the day of approval.

The anniversary date of this environmental authority is 25 July each year.

Environmental authority holder

Name	Registered address
Department of Transport and Main Roads T/A Maritime Safety Queensland	Floor 18, 313 Adelaide Street, BRISBANE QLD 4001

Environmentally relevant activity and location details

Environmentally relevant activities	Locations
ERA 16 - Extraction and Screening - 1(c) - Dredging, in a year, the following quantity of material - more than 100,000t but not more than 1,000,000t	Burnett River adjacent to 253 Kirbys Road, KALKIE QLD 4670 Adjacent to Lot 1 Plan RP76219 Lot 1 on Plan SP143293 Dredging – Lot 642 on Plan SP320984 Placement – Molongle Creek Dredge Placement Facility on Lot 10 on Plan SP312679
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Rosslyn Bay Boat Harbour, ROSSLYN QLD 4703 Lot 105 Plan SP161849 Adjacent to Lot 105 Plan SP161849 Adjacent to Lot 24 on Plan SP122863
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - 10000t to 100,000t	Port of Hay Point, HAYPOINT QLD 4740 Lot 143 Plan SP121683 (dredging of material from Half Tide Beach Harbour) Adjacent to Lot 126 Plan SP123776
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Mooloolaba Boat Harbour, MOOLOOLABA QLD 4557 Lot 1 Plan SP143293; and Coral Sea offshore: 513 356.000E - 7 049 180.000N 513 275.000E – 7 049 165.000N

Environmentally relevant activities	Locations
	513 204.153E – 7 049 114.802N 513 187.158E – 7 049 051.396N 513 491.828E – 7 048 782.532N 513 414.116E – 7 048 781.926N 513 173.678E – 7 048 994.107N 513 100.000E – 7 048 800.000N 512 800.000E – 7 048 800.000N 512 800.000E – 7 049 100.000N 513 356.000E – 7 049 358.604N
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Port Douglas Boat Harbour, PORT DOUGLAS QLD 4877 Lot 5 Plan SP288958 Adjacent to Lot 5 Plan SP288958 (entrance channel), Lot 115 Plan SR632 (dredge area - Marina) Lot 3 Plan SP183025 (onshore spoil disposal) Dredging pipeline: Lot 2 Plan SP262338 Adjacent to Lot 113 Plan SP105910 Lot 202 Plan SP222765 Lot 204 Plan SP264765 Adjacent to Lot 138 Plan CP851586 Lot 6 Plan SP183013 Adjacent to Lot 29 Plan USL8686 Lot 4 Plan SP158389
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	9 William Street, Raby Bay CLEVELAND QLD 4163 Adjacent to Lot 130 Plan SP120286
ERA 16 - Extraction and Screening - 1(a) - Dredging, in a year, the following quantity of material - 1000t to 10,000t	Schooner Road Boat Ramp, TRINITY PARK, QLD 4879 Adjacent to Lot 1860 Plan SP264300 Adjacent to Lot 906 Plan SP165903 Adjacent to Lot 382 on plan SR864 Lot 540 on Plan SP287493 Clump Point Lookout Road Mission Beach, Cassowary Coast Regional
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Pumicestone Passage, opposite public boat ramp at BELLARA QLD 4507 Bribie Island Adjacent to Lot 187 Plan SP172796
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	864 Buccaneer Drive URANGAN, QLD 4655 Lot 253 Plan SP166261 Lot 254 Plan SP150280

Environmentally relevant activities	Locations
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Kedron Brook BRISBANE AIRPORT QLD 4008 Lot 3 Plan SP272478
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Bowen Boat Harbour Channel, BOWEN QLD 4805 Lot 310 Plan SP198022 Adjacent to Lot 310 Plan SP198022
ERA 16 - Extraction and Screening - 1(a) - Dredging, in a year, the following quantity of material - 1000t to 10,000t	Mossman River, NEWELL BEACH QLD 4873 Adjacent to Lot 382 Plan SR864 Lot 1 Plan SP32263 Adjacent to Lot 1 Plan SP32263 Lot 374 Plan SR533 (beach nourishment area)
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Cabbage Tree Creek Boat Harbour and Allpass Parade SHORNCLIFFE QLD 4017 Lot 426 Plan SP158144 Adjacent to Lot 426 Plan SP158144
ERA 16 - Extraction and Screening - 1(c) - Dredging, in a year, the following quantity of material - more than 100,000t but not more than 1,000,000t	Boundary Street, Railway Estate TOWNSVILLE SOUTH QLD 4810, Ross River Adjacent to Lot 5 Plan AP20194 Lot 56 Plan RP703354 Adjacent to Lot 773 Plan SP223346 Adjacent to Lot 791 Plan EP2348 Lot 791 Plan EP2348 (spoil disposal area) Adjacent to Lot 792 Plan EP1518
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Glenora Street, WYNNUM QLD 4178 Adjacent to Lot 508 Plan SP258083
ERA 16 - Extraction and Screening - 1(a) - Dredging, in a year, the following quantity of material - 1000t to 10,000t	Dredge Area - entrance channel to Pelican Park CLONTARF QLD 4019 Adjacent to Lot 610 Plan CP859632
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Manly Boat Harbour, MANLY 4179 Lot 687 Plan SP172860
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of	470 Royal Esplanade MANLY QLD 4179 Adjacent to Lot 687 Plan SP172860

Environmentally relevant activities	Locations
material - more than 10,000t but not more than 100,000t	
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Port of Cooktown, Webber Esplanade, COOKTOWN QLD 4895 Adjacent to Lot 2 Plan SP287194 Adjacent to Lot 1 Plan SP287194 Adjacent to Lot 2 Plan CP889652 Adjacent to Lot 83 Plan BS161
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Bird O'Passage Parade, SCARBOROUGH QLD 4020 Adjacent to Lot 859 Plan SP158152 Location indicated in the submitted Queensland Transport and Main Roads drawings: BN-11-28-1 and BN-11-28-2
ERA 16-(1a) Dredging >1000t but <10000t yr	Clump Point, Bingil Bay QLD 4852 – Lot 550 Plan NR7351 and adjacent road reserve
ERA 16 - Extraction and Screening - 1(b) - Dredging, in a year, the following quantity of material - more than 10,000t but not more than 100,000t	Wellington Point, QLD 4160 Moreton Bay adjacent to Lot 89 on SL10815

Additional information for applicants

Environmentally relevant activities

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

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

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority - on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

	31/07/2023
Signature	Date

Rebecca Griffiths
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
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Phone: 1300 130 372
Email: palm@des.qld.gov.au

Privacy statement

Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. If you are unsure that you have the most current version of the environmental authority relating to this site please visit https://apps.des.qld.gov.au/env-authorities/ to access all environmental authorities currently approved.

Conditions of environmental authority

Contents

Part	Environmentally relevant activities	Locations
Part 1	16-(1b) Dredging >10000t but <100000t/yr	Bowen Boat Harbour Channel, BOWEN QLD 4805 Lot 310 Plan SP198022 Adjacent to Lot 310 Plan SP198022
Part 2	16-(1b) Dredging >10000t but <100000t/yr	864 Buccaneer Drive URANGAN, QLD 4655 Lot 253 Plan SP166261 Lot 254 Plan SP150280
Part 3	16-(1c) Dredging more than 100,000t but not more than 1,000,000t/yr	Boundary Street, Railway Estate TOWNSVILLE SOUTH QLD 4810, Ross River Adjacent to Lot 5 Plan AP20194 Lot 56 Plan RP703354 Adjacent to Lot 773 Plan SP223346 Adjacent to Lot 791 Plan EP2348 Lot 791 Plan EP2348 (spoil disposal area) Adjacent to Lot 792 Plan EP1518
Part 4	16-(1b) Dredging >10000t but <100000t/yr	Cabbage Tree Creek Boat Harbour and Allpass Parade SHORNCLIFFE QLD 4017 Lot 426 Plan SP158144 Adjacent to Lot 426 Plan SP158144
Part 5	16-(1b) Dredging >10000t but <100000t/yr	Bird O'Passage Parade, SCARBOROUGH QLD 4020 Adjacent to Lot 859 Plan SP158152 Location indicated in the submitted Queensland Transport and Main Roads drawings: BN-11-28-1 and BN-11-28-2
Part 6	16-(1b) Dredging >10000t but <100000t/yr	Glenora Street, WYNNUM QLD 4178 Adjacent to Lot 508 Plan SP258083
Part 7	16-(1c) Dredging >100000t but <1000000t/yr	Burnett River adjacent to 253 Kirbys Road, KALKIE QLD 4670 Adjacent to Lot 1 Plan RP76219
Part 8	16-(1b) Dredging >10000t but <100000t/yr	Rosslyn Bay Boat Harbour, ROSSLYN QLD 4703 Lot 105 Plan SP161849 Adjacent to Lot 105 Plan SP161849
Part 9	16-(1b) Dredging >10000t but <100000t/yr	470 Royal Esplanade MANLY QLD 4179 Adjacent to Lot 687 Plan SP172860

Part 10	16-(1b) Dredging >10000t but <100000t/yr	Port of Cooktown, Webber Esplanade, COOKTOWN QLD 4895 Adjacent to Lot 2 Plan SP287194 Adjacent to Lot 1 Plan SP287194 Adjacent to Lot 2 Plan CP889652 Adjacent to Lot 83 Plan BS161
Part 11	16-(1a) Dredging >1000t but <10000t/yr	Mossman River, NEWELL BEACH QLD 4873 Adjacent to Lot 382 Plan SR864 Lot 1 Plan SP322663 Adjacent to Lot 1 Plan SP322663 Lot 374 Plan SR533 (beach nourishment area)
Part 12	16-(1b) Dredging >10000t but <100000t/yr	Port Douglas Boat Harbour, PORT DOUGLAS QLD 4877 Lot 5 Plan SP288958 Lot 115 Plan SR632 (dredge area - Marina) Lot 3 Plan SP183025 (onshore spoil disposal) Dredging pipeline: Lot 2 Plan SP262338 Adjacent to Lot 113 Plan SP105910 Lot 202 Plan SP222765 Lot 204 Plan SP264765 Adjacent to Lot 138 Plan CP851586 Lot 6 Plan SP183013 Adjacent to Lot 29 Plan USL8686 Lot 4 Plan SP158389
Part 13	16-(1a) Dredging >1000t but <10000t/yr	Dredge Area - entrance channel to Pelican Park CLONTARF QLD 4019 Adjacent to Lot 610 Plan CP859632
Part 14	16-(1b) Dredging >10000t but <100000t/yr	Mooloolaba Boat Harbour, MOOLOOLABA QLD 4557 Lot 1 Plan SP143293; and Coral Sea offshore: 513 356.000E - 7 049 180.000N 513 275.000E – 7 049 165.000N 513 204.153E – 7 049 114.802N 513 187.158E – 7 049 051.396N 513 491.828E – 7 048 782.532N 513 414.116E – 7 048 781.926N 513 173.678E – 7 048 994.107N 513 100.000E – 7 048 800.000N 512 800.000E – 7 048 800.000N 512 800.000E – 7 049 100.000N 513 356.000E – 7 049 358.604N
Part 15	16-(1b) Dredging >10000t but <100000t/yr	Manly Boat Harbour, MANLY 4179 Lot 687 Plan SP172860

Part 16	16-(1b) Dredging >10000t but <100000t/yr	9 William Street, Raby Bay CLEVELAND QLD 4163 Adjacent to Lot 130 Plan SP120286
Part 17	16-(1b) Dredging >10000t but <100000t/yr	Kedron Brook BRISBANE AIRPORT QLD 4008 Lot 3 Plan SP272478
Part 18	16-(1b) Dredging >10000t but <100000t/yr	Pumicestone Passage, opposite public boat ramp at BELLARA QLD 4507 Bribie Island Adjacent to Lot 187 Plan SP172796
Part 19	16-(1b) Dredging >10000t but <100000t/yr	Port Douglas Boat Harbour Adjacent to Lot 5 Plan SP288958 (entrance channel)
Part 20	16-(1a) Dredging >1000t but <10000t/yr	Schooner Road Boat Ramp, TRINITY PARK, QLD 4879 Adjacent to Lot 1860 Plan SP264300 Adjacent to Lot 906 Plan SP165903
Part 21	16-(1b) Dredging >10000t but <100000t/yr	Port of Hay Point, HAYPOINT QLD 4740 Lot 143 Plan SP121683 (dredging of material from Half Tide Beach Harbour) Adjacent to Lot 126 Plan SP123776
Part 22	16-1(a) Dredging >1000t but <10000t/yr	Clump Point, Bingil Bay QLD 4852 Lot 550 Plan NR7351 and adjacent road reserve
Part 23	16-(1b) Dredging >10000t but <100000t/yr	Wellington Point, QLD 4160 Adjacent to Lot 89 Plan SL10815 Authorised Disturbance Area
Part 24	16-(1b) Dredging >10000t but <100000t/yr	Wellington Point, QLD 4160 Adjacent to Lot 89 Plan SL10815 Authorised Dredge Footprint Area
Part 25	16-(1b) Dredging >10000t but <100000t/yr	Yorkey's Knob Boat Ramp Adjacent to Lot 24 on Plan SP122863
Part 26	16-(1a) Dredging >1000t but <10000t/yr	Lot 540 SP287493 Clump Point Lookout Road Mission Beach, Cassowary Coast Regional Lot 550 NR7351 Porter Prom, Mission Beach Cassowary Coast Regional 4852
Part 27	16-(1a) Dredging >1000t but <10000t/yr	Newell Beach Boat Ramp Adjacent to Lot 382 on Plan SR864
Part 28	16-(1c) Dredging >100000t but <1000000t/yr	Dredging Lot 642 on Pan SP320984 and Placement – Molongle Creek Dredge Placement Facility on Lot 10 on SP312679

Part 29	16-(1c) Dredging >100000t but <1000000t/yr	Mooloolaba Harbour Lot 1 on SP143293

Part 1 – Bowen Boat Harbour Channel (Former EPPR03042015)

Environmentally Relevant Activity	Locations
ERA 16-(1b) Dredging >10000t but <100000t yr	Bowen Boat Harbour Channel, BOWEN QLD 4805 Lot 310 Plan SP198022 and Adjacent to Lot 310 Plan SP198022

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P1-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. The **activity** must be conducted within the boundaries identified in *Part 1 - Approved Plans.*
P1-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P1-G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P1-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P1-G5	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P1-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P1-G7	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P1-G8	The activity must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency; 2. establish and maintain control measures that minimise the potential for environmental harm; 3. ensure plant, equipment and measures are maintained in a proper and effective condition; 4. ensure plant, equipment and measures are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and

	6. ensure that reviews of environmental performance are undertaken at least annually.
P1-G9	Provide to the administering authority written notification of the date when dredging will commence at least five (5) business days prior to establishing a new dredging activity.
Agency interest: Air	
Condition number	**Condition**
P1-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P1-WT1	The only contaminants to be released to surface **waters** are bed sediments, disturbed during dredging, at the locations indicated in condition P1-G1.
P1-WT2	Any turbidity plume resulting from the works must be managed to ensure It does not extend in excess of 350 metres from the footprint of the works, as defined in the approved plans.
P1-WT3	Sediment control **measures** must be implemented and maintained to minimise the release of sediment.
Agency interest: Noise	
Condition number	**Condition**
P1-N1	Noise from the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
P1-N2	When required by the **administering authority**, noise monitoring must be undertaken and the results notified within 14 days to the **administering authority**. Monitoring must include: 1. $L_{Aeq, adj, T}$ 2. **Background** noise (Background) as $L_{A90, adj, T}$ 3. $Max_{LpA,T}$ 4. the level and frequency of occurrence of any impulsive or tonal noise 5. atmospheric conditions including wind speed and direction 6. effects due to extraneous factors such as traffic noise 7. location, date and time of recording.
Agency interest: Land	
Condition number	**Condition**
P1-L1	Contaminants must not be released to land.

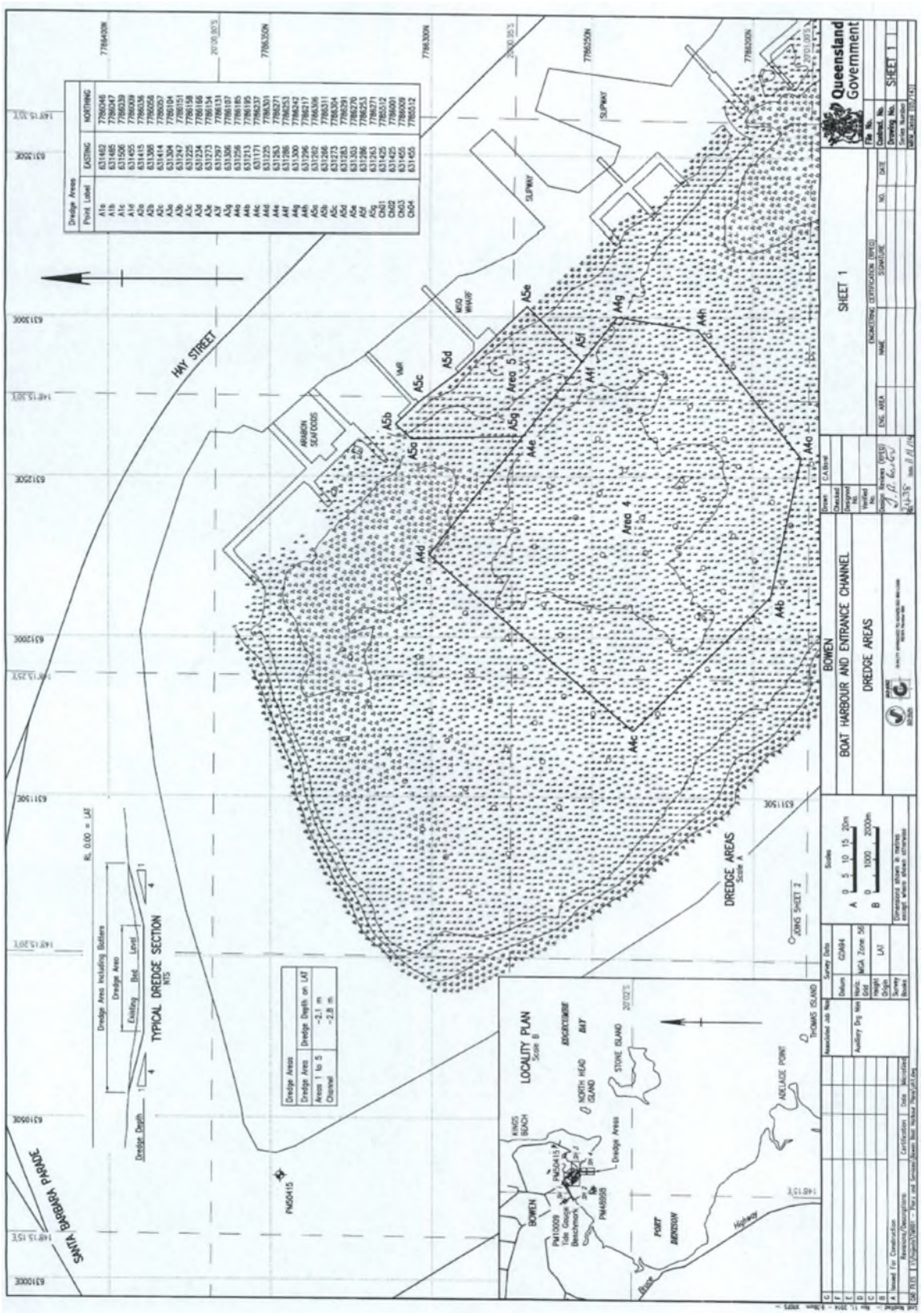
P1-L2	Any disturbed or oxidised acid sulphate soil must be treated and managed in accordance with the current Queensland Acid Sulfate Soil Technical Management Guidelines v4.0, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014 or subsequent versions.
Agency interest: Waste	
Condition number	**Condition**
P1-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.
P1-WS2	Dredge spoil must be placed within the 'proposed onshore disposal area' as identified in Schedule 1 Approved Plans or at a landfill site or other location lawfully able to receive this material.

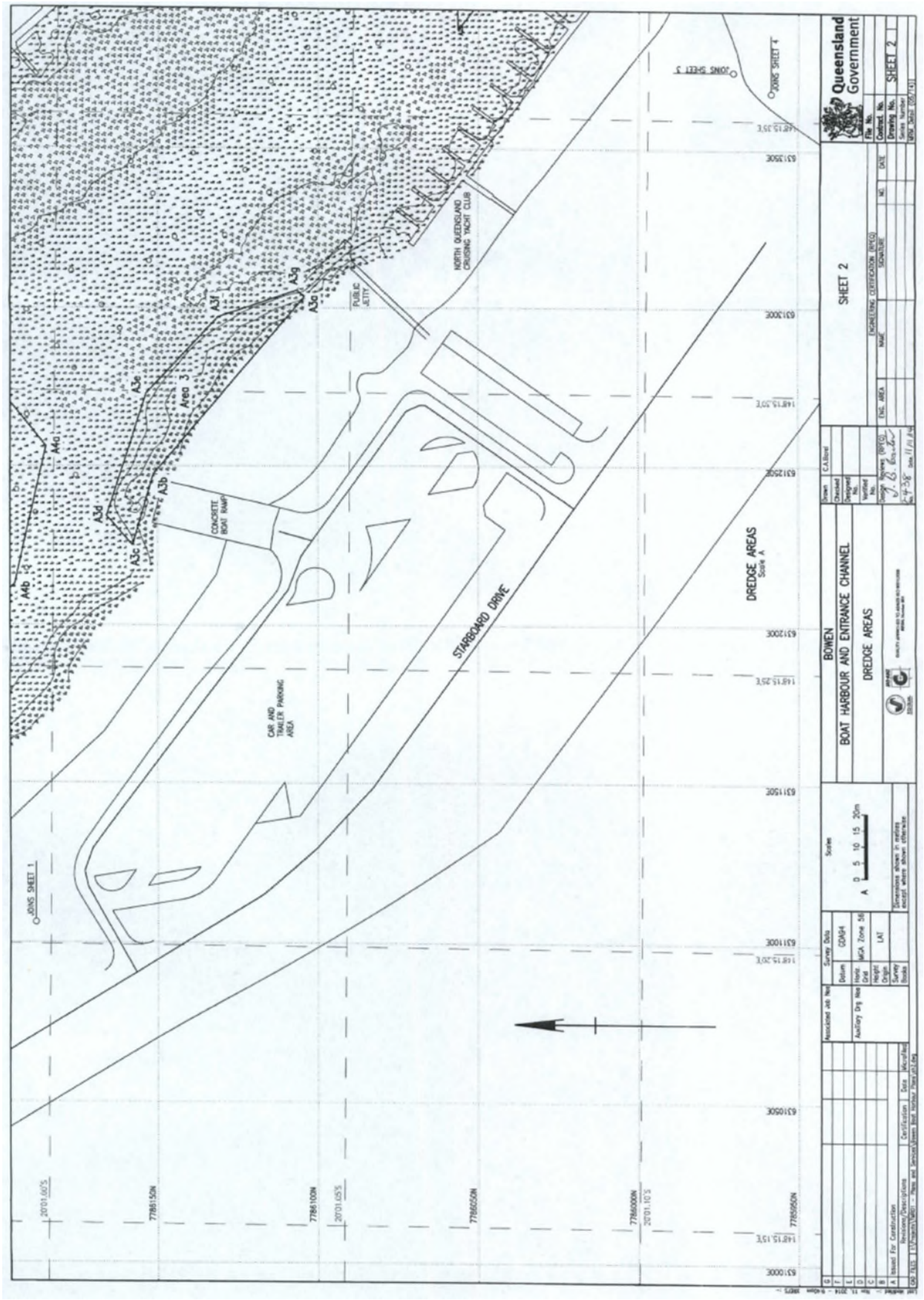
Part 1 – Approved Plans (sheets 1-5)

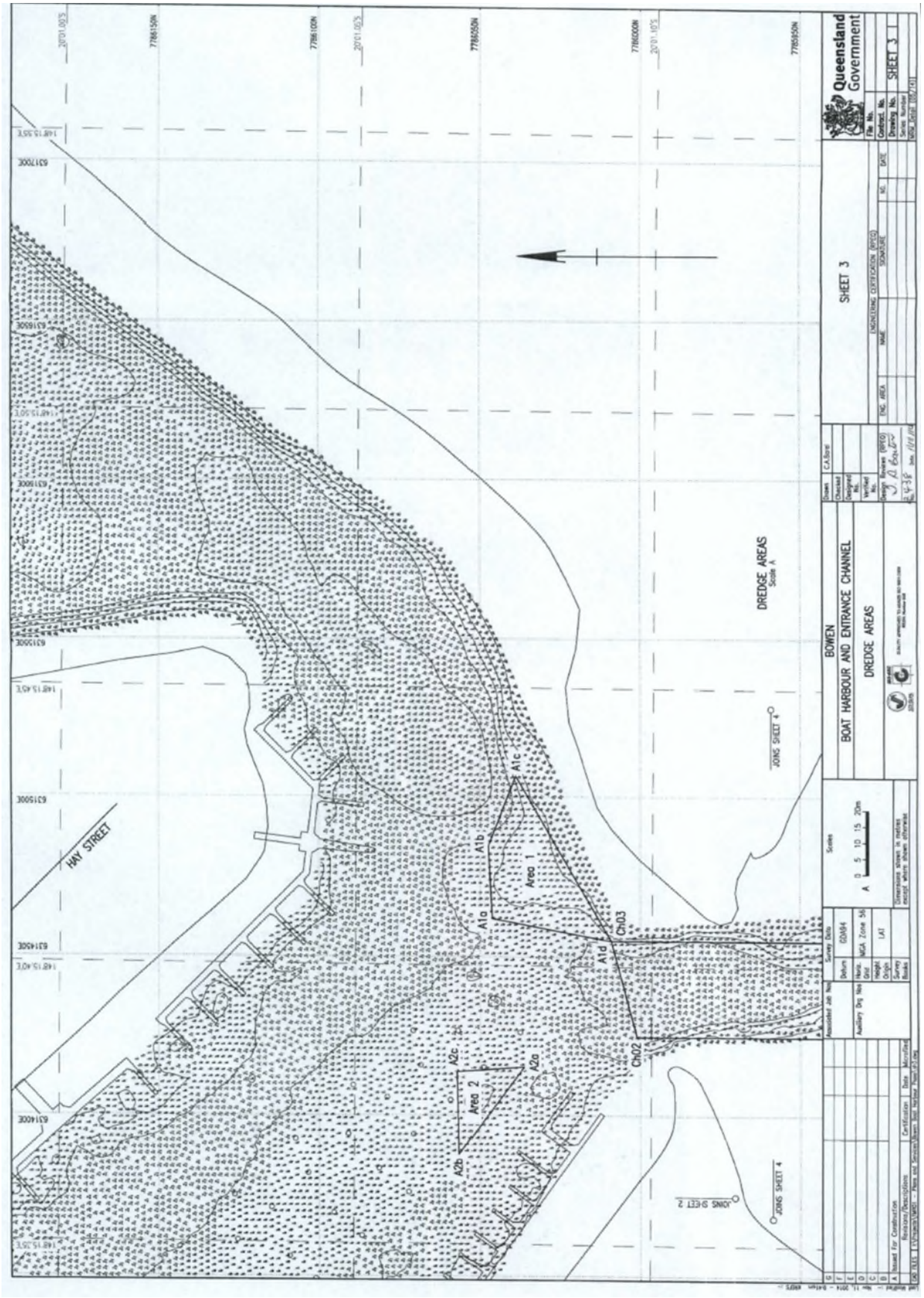
Bowen State Boat Harbour Reef and Marine Plant Assessment 2014 - Figure 1-1, “Locality Plan”, Revision A, prepared by BMT WBM Pty Ltd, 28th January 2015.

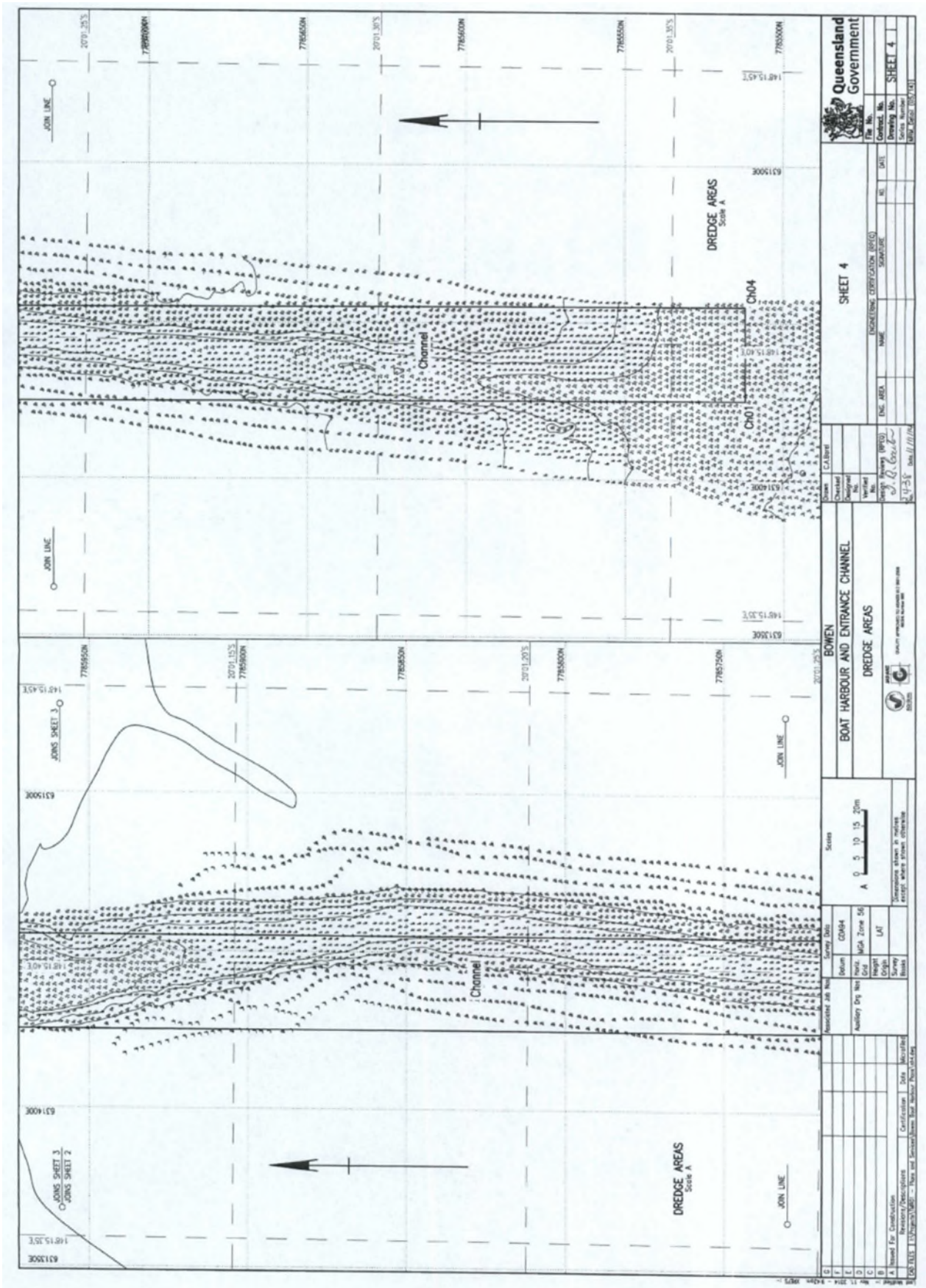


Bowen Boat Harbour and Entrance Channel Dredge Areas Sheet 1-4, Revision A, prepared by Queensland Government, 11th November 2014.


BOAT HARBOUR AND ENTRANCE CHANNEL
DREDGE AREAS
BOWEN
SHEET 1
Queensland Government
HAY STREET
SANTA BARBARA PARADE
TYPICAL DREDGE SECTION
LOCALITY PLAN
DREDGE AREAS
Area 4
Area 5
A4a
A4b
A4c
A4d
A4e
A4f
A4g
A4h
A4i
A5a
A5b
A5c
A5d
A5e
A5f
A5g
A5h
A5i
A5j
Ch01
Ch02
Ch03
Ch04
Dredge Areas
Point Label
EASTING
NORTHING
Dredge Area
Dredge Depth on LAT
Area 1 to 5
-2.1 m
Channel
-2.8 m
KINGS BEACH
NORTH HEAD ISLAND
STONE ISLAND
ADELAIDE POINT
THOMAS ISLAND
PORT DENISON
Bruce Highway
SUPWAY
WHARF
ARAMON SCATCOORS


BOWEN
BOAT HARBOUR AND ENTRANCE CHANNEL
DREDGE AREAS
SHEET 2
Queensland Government
DREDGE AREAS
Scale 4
STARBOARD DRIVE
CONCRETE BOAT RAMP
CAR AND TRAILER PARKING AREA
NORTH QUEENSLAND CRUISING YACHT CLUB
PUBLIC JETTY
Area 3
A4b
A4a
A3d
A3c
A3b
A3e
A3f
A3g
A3h
JOINS SHEET 1
JOINS SHEET 3
JOINS SHEET 4
7785150N
7785100N
7785050N
7785000N
631350E
631300E
631250E
631200E
631150E
631100E
631050E
631000E
Survey Data
Datum GDA94
Horiz Proj MGA Zone 56
Vert Datum LAT
Survey Risks
Scale
0 5 10 15 20m
Dimensions shown in metres except where shown otherwise
Issued For Construction
Revisions/Descriptions
Certification
Date
Initial
Associated Job Nos
Auxiliary Drg Nos
Drawn
Checked
Designed
Verified
Design Surveyor (RPEQ)
Chk. Engr (RPEQ)
SIGNATURE
DATE
File No.
Contract No.
Drawing No.
Series Number


DREDGE AREAS
Scale A
HAY STREET
Area 1
Area 2
A1a
A1b
A1c
A1d
A2a
A2b
A2c
Ch02
Ch03
JOINS SHEET 4
JOINS SHEET 2
BOWEN
BOAT HARBOUR AND ENTRANCE CHANNEL
DREDGE AREAS
SHEET 3
Queensland Government
0 5 10 15 20m


DREDGE AREAS
Scale A
Channel
Ch04
Ch01
JOIN LINE
JOINS SHEET 3
JOINS SHEET 2
SHEET 4
BOWEN
BOAT HARBOUR AND ENTRANCE CHANNEL
DREDGE AREAS
Queensland Government

Part 2 – Urangan (Former EPPR02289714)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	864 Buccaneer Drive URANGAN, QLD 4655 Lot 253 Plan SP166261 Lot 254 Plan SP150280

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P2-G1	**Activities** conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. This environmental authority is for maintenance **dredging** only, no capital **dredging** is implied or allowed under this permit; 2. The **activity**, unless otherwise conditioned by this environmental authority, must be in accordance with *Part 2 – Approved Plans (E520-158A: sheets 1-4);* 3. Dredge spoil is authorised for placement in the following locations: (a) in the Urangan Dredge Material Rehandling Facility (UDMRF) as depicted in *Part 2 – Approved Plans (634934 – A (Schedule 1));* (b) any suitably approved reclamation area; or (c) at a landfill site or other location lawfully able to receive this material.
P2-G2	Operating hours are restricted to 7:00 am to 6:00 pm Monday to Saturday.
P2-G3	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P2-G4	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P2-G5	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P2-G6	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P2-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P2-G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P2-G9	The **activity** must be undertaken in accordance with written procedures that:

	1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P2-G10	The holder of this environmental authority must provide the **administering authority** written notification of the date when **dredging** will commence at least five (5) business days prior to establishing a new **dredging activity**.
Agency interest: Air	
Condition number	**Condition**
P2-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P2-WT1	Other than as permitted within this environmental authority, **prescribed water contaminants** must not be directly or indirectly released from the site to any **waters** or the bed and banks of any **waters**.
P2-WT2	All reasonable and practicable **measures** must be implemented to prevent or minimise the release of contaminants to the **waters** when undertaking the approved **dredging** work.
P2-WT3	**Prescribed water contaminants** are authorised for release to **waters** at the following locations: 1. at the head of the Dredge at the location where **dredging** is being undertaken as a direct result of the **activity**; and 2. within the bounds of the Urangan Dredge Material Rehandling Facility as defined in the approved plans (attached).
P2-WT4	**Prescribed water contaminants** released at the point of **dredging** and deposition must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum or litter.
P2-WT5	All monitoring must be performed on an outgoing tide and must be conducted by an **appropriately qualified person(s)** in accordance with methods set out in the latest version of the **administering authority**'s water quality sampling manual.
P2-WT6	Background water quality monitoring must be conducted at least 30 minutes prior to the commencement of any **dredging** or deposition work for the purpose of establishing background values for the site, at the following locations: • BG – at a location outside of the Urangan Boat Harbour and no greater than 200m down current of the harbour entrance and include the parameters listed in *Part 2 Table 1 - Release Limits*.
P2-WT7	Impact monitoring of the dredge area must be undertaken while the dredge is operational (unless stipulated otherwise within *Part 2 Table 1- Release Limits* and at the following locations:

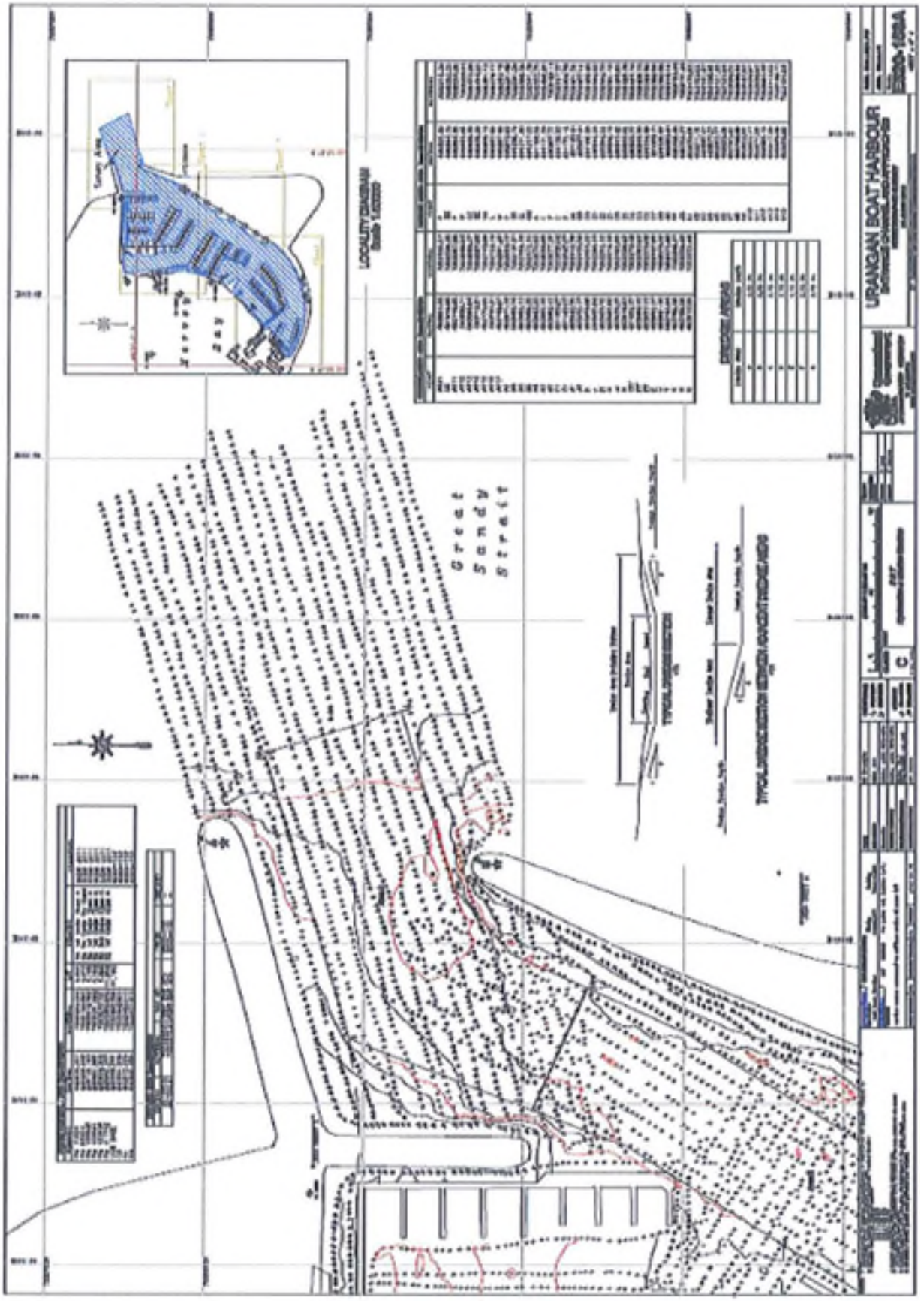
<table>
<tr><td></td><td>

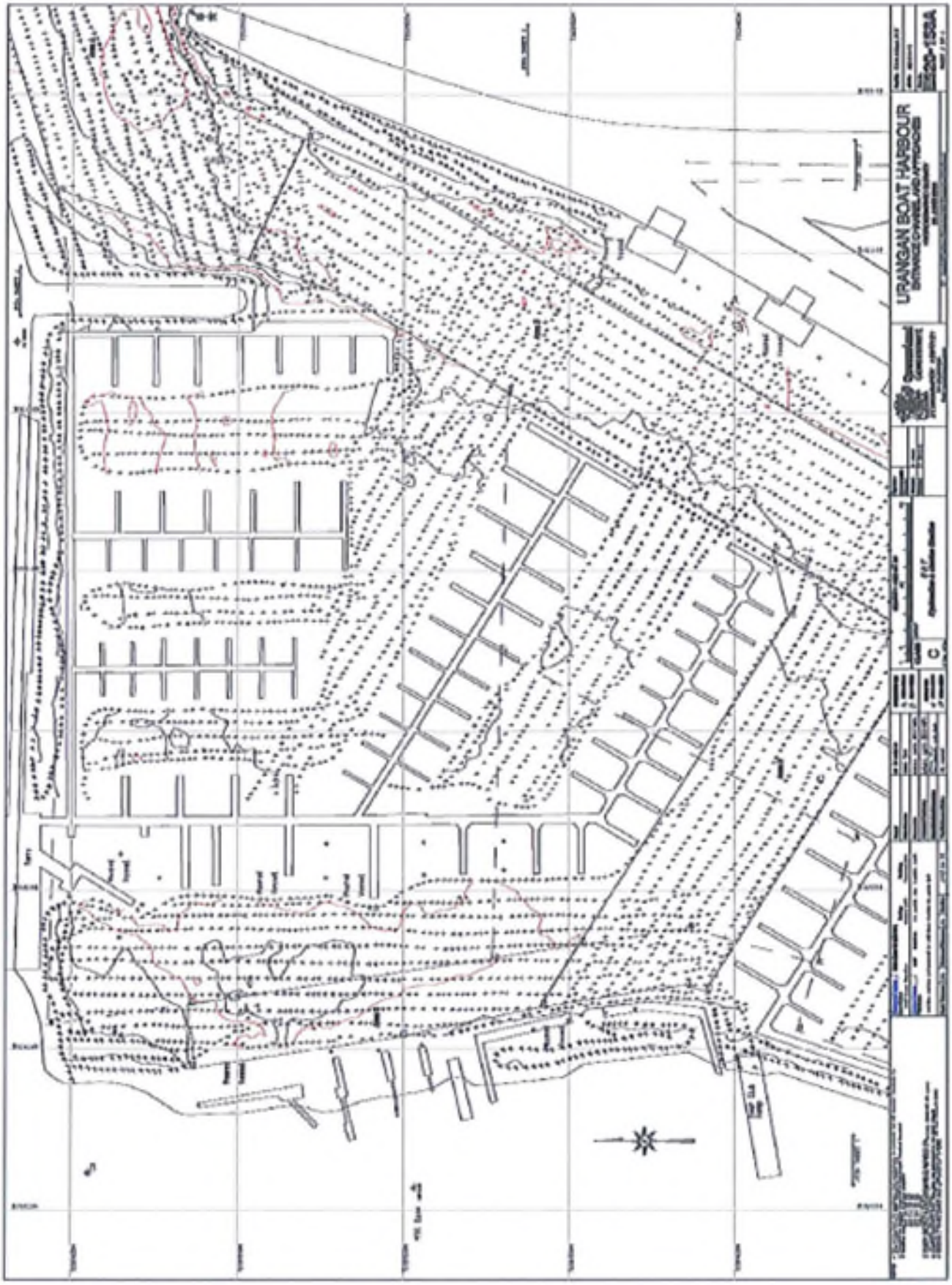
- W1 – at a location outside of the Urangan Boat Harbour and no greater than 200m down current of the harbour entrance.

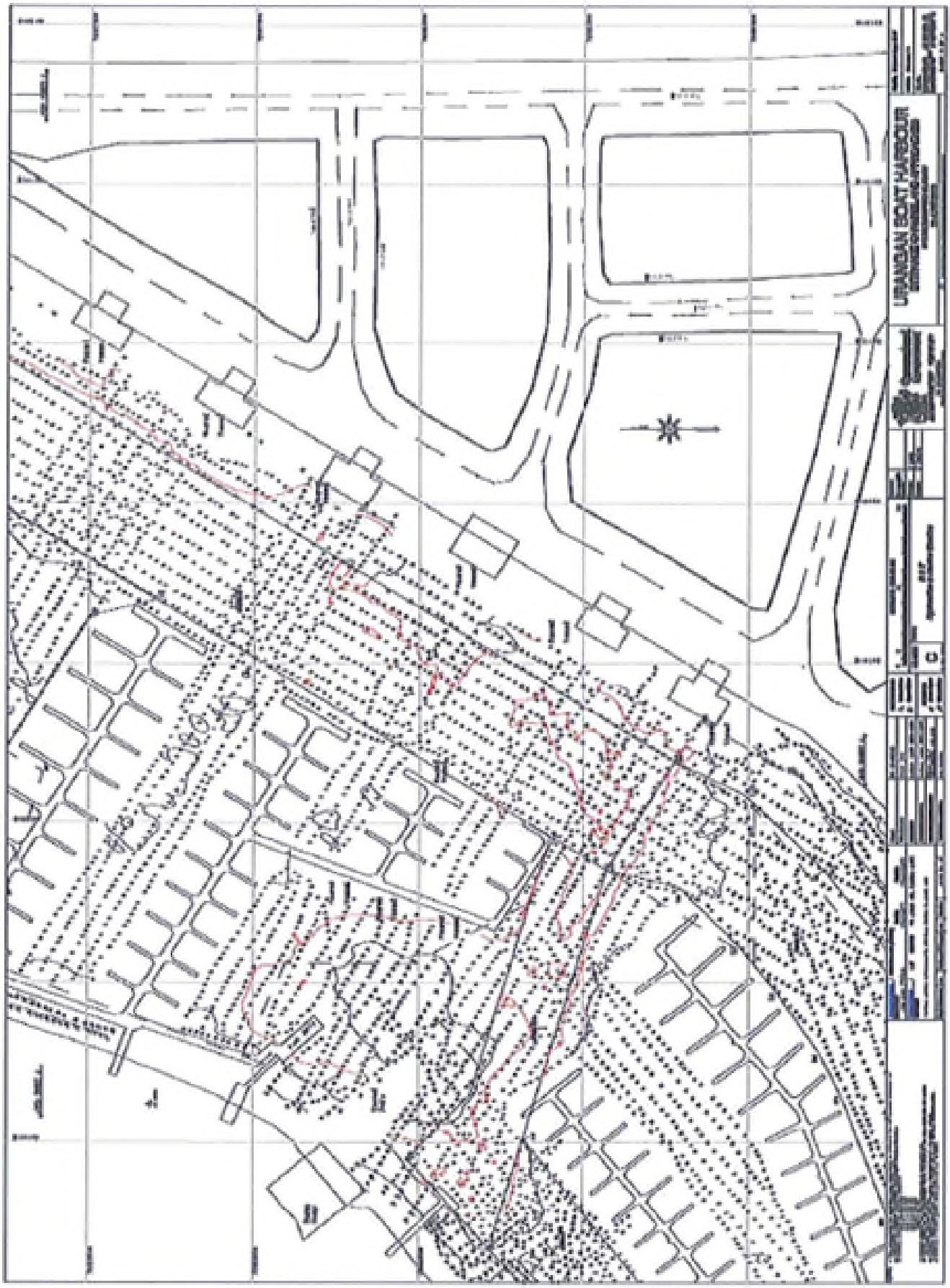
</td></tr>
<tr><td>P2-WT8</td><td>Impact monitoring of the spoil deposition must be undertaken while the deposition system is operational (unless stipulated otherwise within Part 2 Table 1- Release Limits and at the following locations:
W2 – at a location outside of the Urangan Dredge Material Rehandling Facility and no greater than 50m adjacent to ponds receiving dredge spoil.</td></tr>
<tr><td>P2-WT9</td><td>Impact monitoring of the dredge area and the spoil deposition area must be conducted for the parameters and at the frequencies listed in Part 2 Table 1 - Release Limits.
Part 2 Table 1 Release Limits
<table>
<tr><th rowspan="2">Quality Characteristic</th><th colspan="2">Release Limit</th></tr>
<tr><th>Maximum</th><th>Monitoring Frequency</th></tr>
<tr><td>Turbidity (NTU)</td><td>For background values up to 100 NTU, 10 NTU above background value</td><td rowspan="2">At least once per week while works are operational and once within 7 days after works are completed</td></tr>
<tr><td>pH</td><td>7.0 - 9.0</td></tr>
</table></td></tr>
<tr><td>P2-WT10</td><td>If quality characteristics of the receiving waters exceed any of the limits specified in Part 2 Table 1 - Release Limits while conducting dredging and dredge spoil placement works, the environmental authority holder must cease the activity immediately and take appropriate measures to bring the activity back into compliance with the limits in Part 2 Table 1- Release Limits.
Upon resuming the activity, following exceeding a release limit, the holder of this environmental authority must confirm with monitoring that the activity is no longer exceeding the release limits as per Part 2 Table 1- Release Limits.
If upon the confirmation sampling it is identified that the appropriate measures have not resulted in a return to compliance with Part 2 Table 1- Release Limits then the environmental authority holder must cease dredging and dredge spoil placement operations and complete an investigation into the potential for environmental harm and provide a written report to the administering authority, outlining:
1. details of the investigations carried out; and
2. measures taken to prevent environmental harm. </td></tr>
<tr><td>P2-WT11</td><td>All determinations of the water quality sampled must be made in accordance with the methods prescribed in the latest edition of the administrating authority’s Water Sampling Manual, and carried out on samples that are representative of the discharge.</td></tr>
<tr><td colspan="2">Agency interest: Noise</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P2-N1</td><td>Noise from the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><td>P2-N2</td><td>When required by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:
1. $L_{Aeq, adj, T}$</td></tr>
</table>

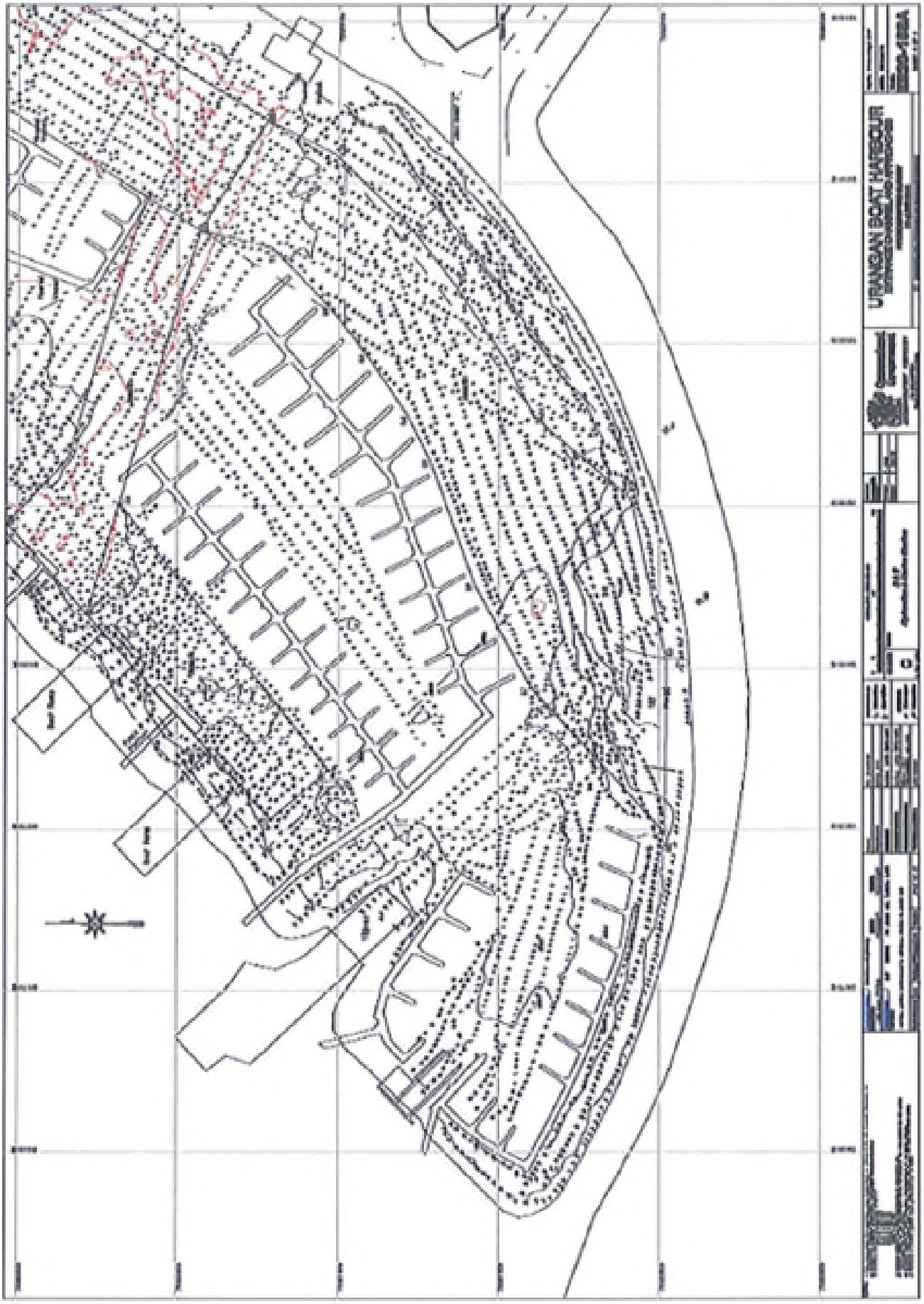
	2. **Background** noise (Background) as $L_{A90,\ adj,\ T}$ 3. $Max_{LpA,T}$ 4. the level and frequency of occurrence of any impulsive or tonal noise 5. atmospheric conditions including wind speed and direction 6. effects due to extraneous factors such as traffic noise 7. location, date and time of recording.
P2-N3	The method of measurement and reporting of noise levels must comply with the latest edition of the **administering authority's** noise measurement manual.
Agency interest: Land	
Condition number	**Condition**
P2-L1	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
Agency interest: Waste	
Condition number	**Condition**
P2-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

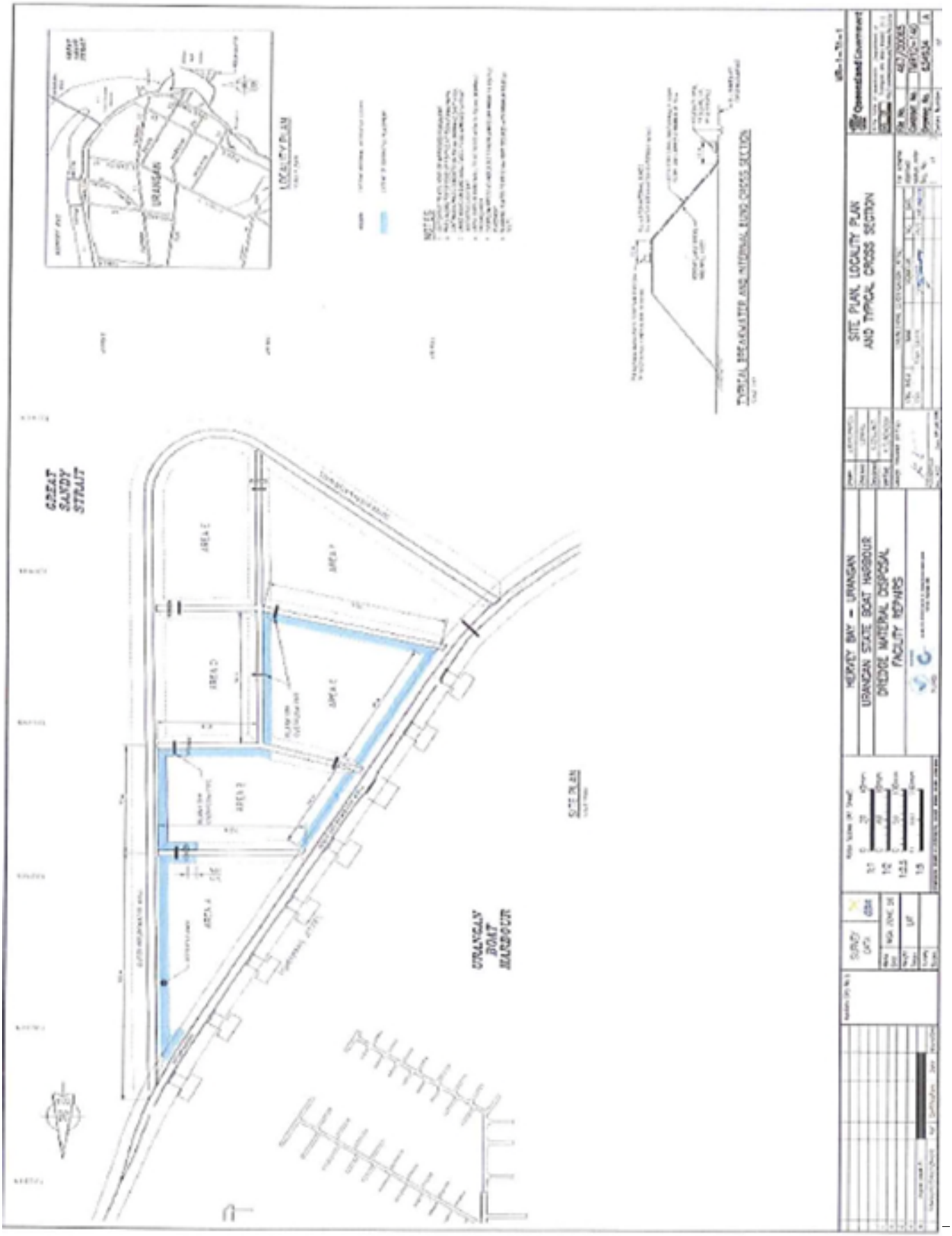
Part 2 – Approved Plans (sheet 1-5)




URANGAN BOAT HARBOUR


URBANISM BOAT HARBOUR


URANGAN BOAT HARBOUR


SITE PLAN, LOCALITY PLAN
AND TYPICAL CROSS SECTION
HERVEY BAY – URANGAN
URANGAN STATE BOAT HARBOUR
DREDGE MATERIAL DISPOSAL
FACILITY KEYARS
GREAT
SANDY
STRAIT
URANGAN
BOAT
HARBOUR
SITE PLAN
LOCALITY PLAN
NOTES
TYPICAL BREAKWATER AND INTERNAL ROAD CROSS SECTION

Part 3 – Townsville (Former EPPR02005514)

Environmentally Relevant Activity	Locations
16-(1c) Dredging more than 100,000t but not more than 1,000,000t/yr	Boundary Street, Railway Estate TOWNSVILLE SOUTH QLD 4810, Ross River Adjacent to Lot 5 Plan AP20194 Lot 56 Plan RP703354 Adjacent to Lot 773 Plan SP223346 Adjacent to Lot 791 Plan EP2348 Lot 791 Plan EP2348 (spoil disposal area) Adjacent to Lot 792 Plan EP1518

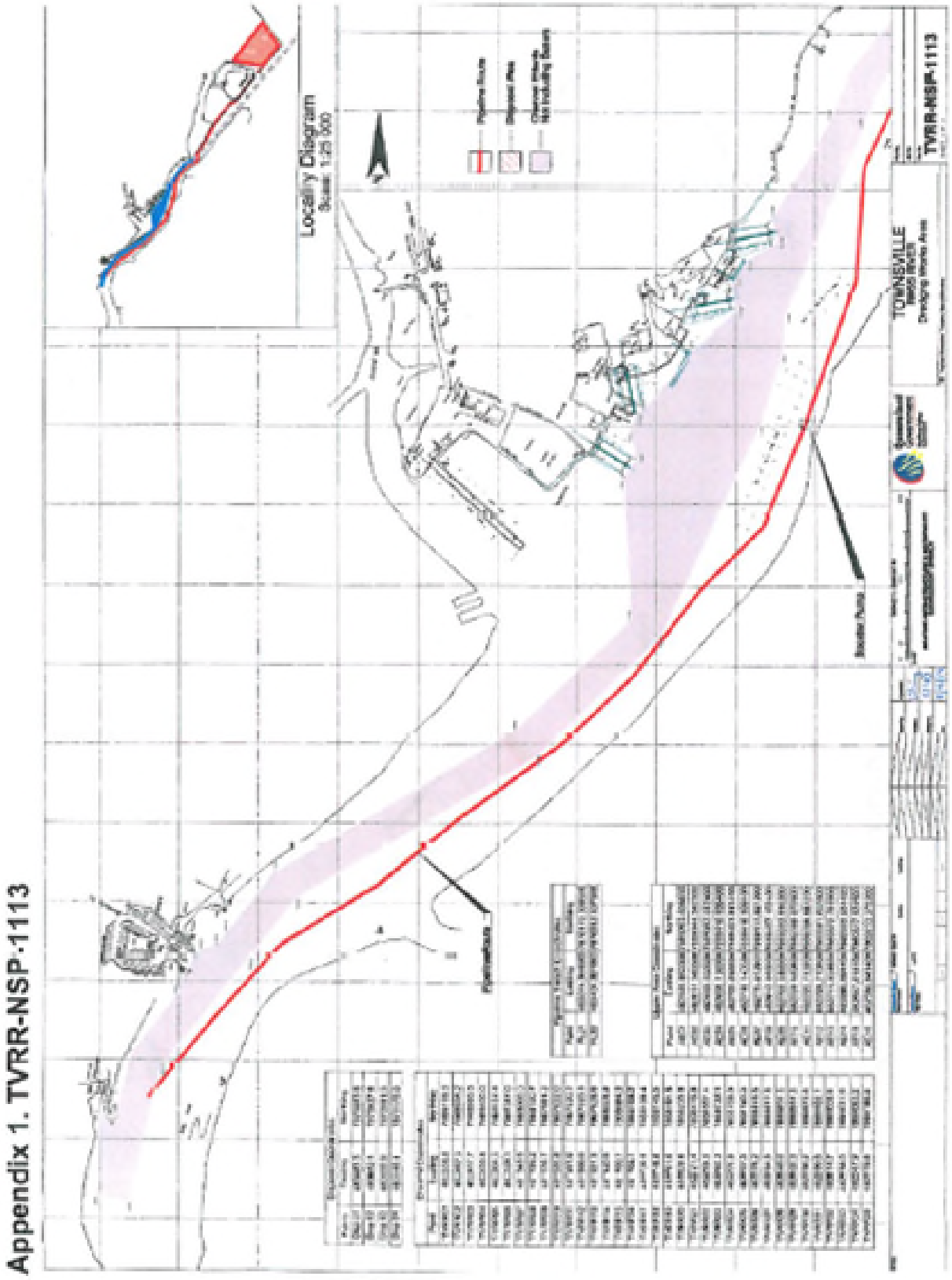
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

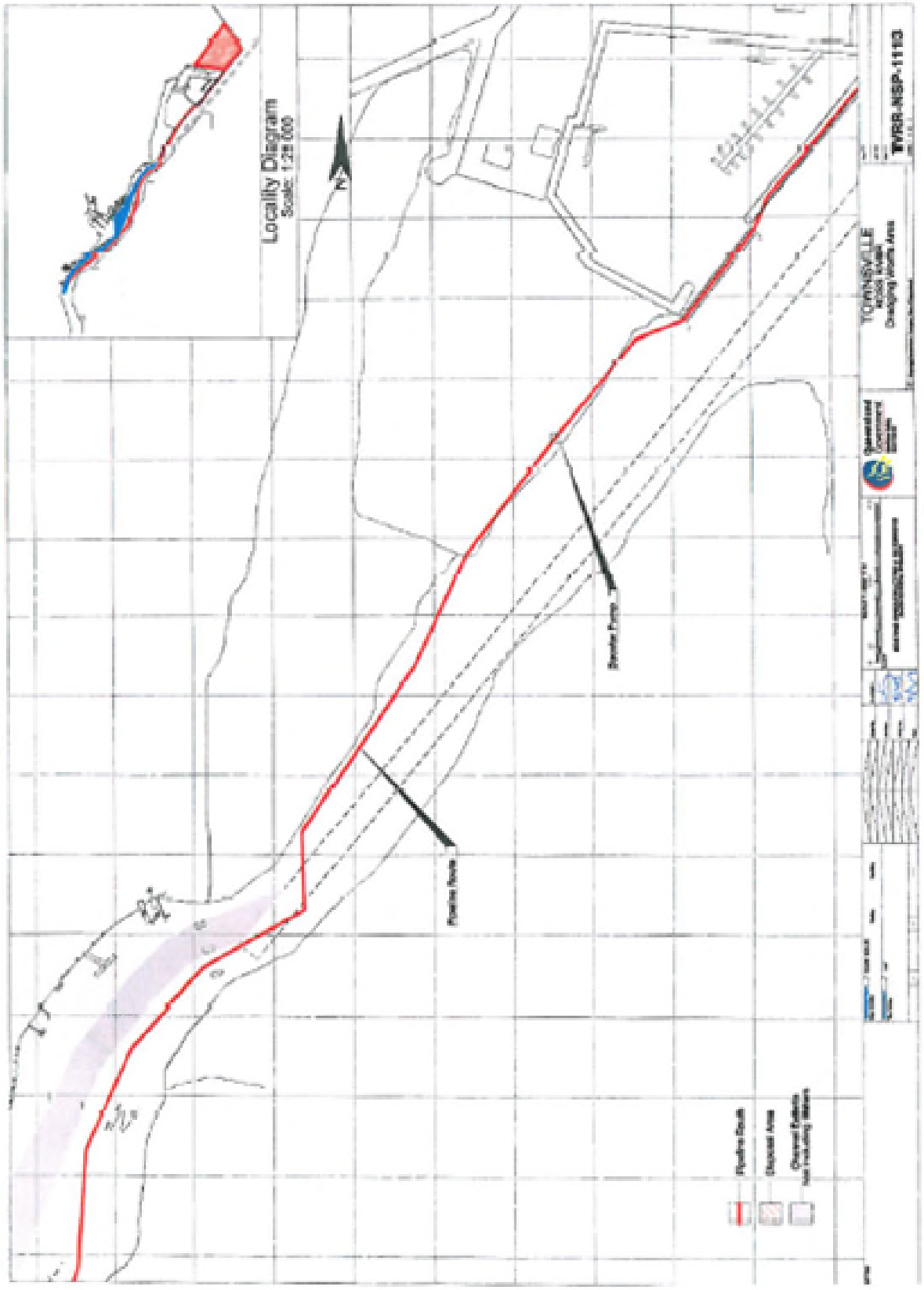
Agency interest: General	
Condition number	**Condition**
P3-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. the quantity of dredged material must not exceed 150,000t in a year; 2. no dredged material shall be removed from the bed or foreshores outside the areas marked on *Part 3 – Approved Plans **TVRR-NSP-1113** dated 08/05/2014*; 3. no dredged material shall be disposed of outside the areas marked on *Part 3 – Approved Plans **TVRR-NSP-1113** dated 08/05/2014*; 4. **dredging** must not exceed a depth of -2.3 metres lowest astronomical tide; 5. batters must be constructed at a minimum ratio of 1:13.
P3-G2	All works conducted under this environmental authority must be conducted in accordance with *Part 3 – Approved Plans **TVRR-NSP-1113** dated 08/05/2014.*
P3-G3	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P3-G4	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P3-G5	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P3-G6	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P3-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P3-G8	All analyses required under this environmental authority must be carried out by a laboratory that has **NATA** certification, or an equivalent certification, for such analyses. The only exception to

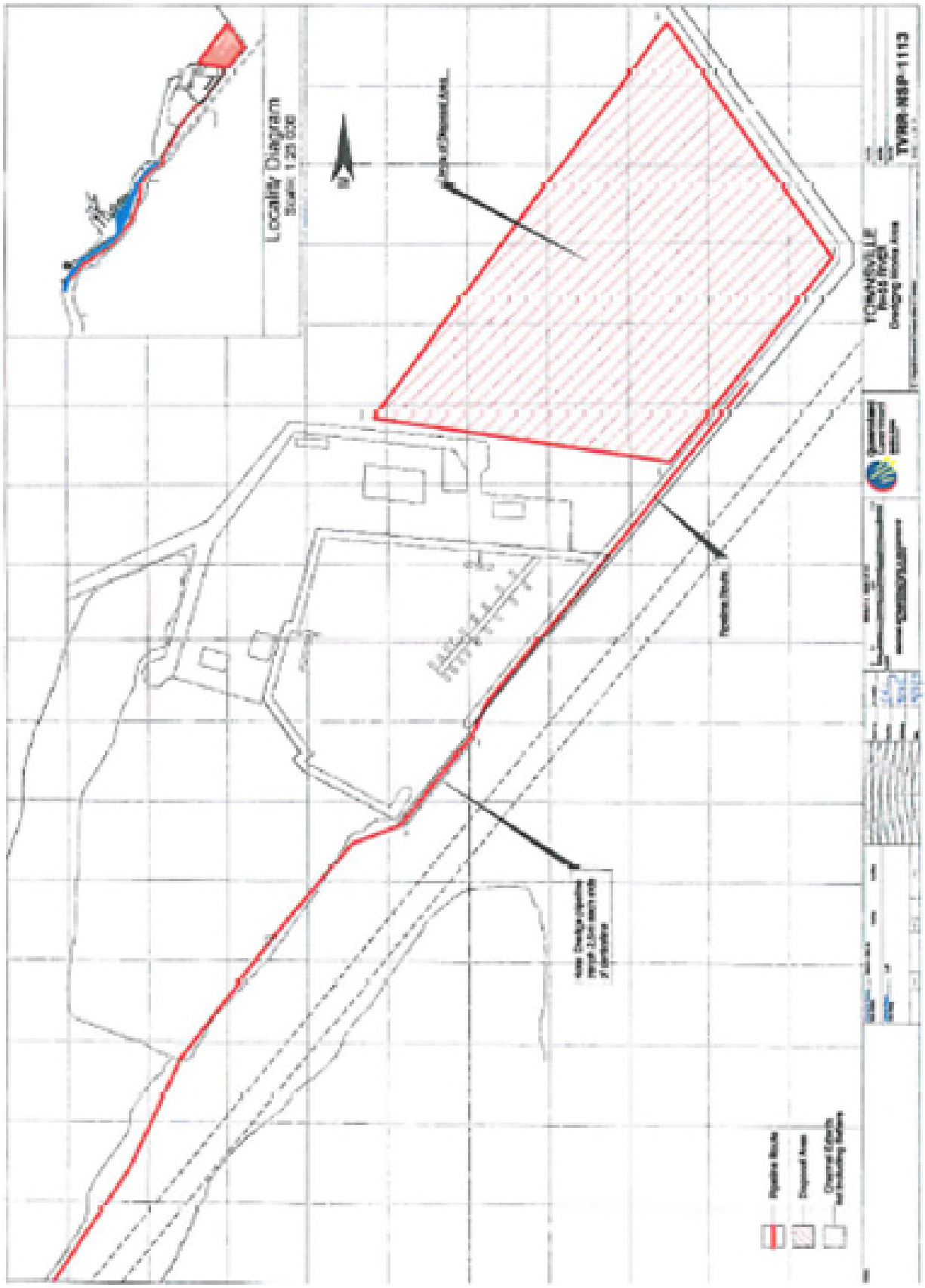
	this condition is for in situ monitoring of turbidity, pH, dissolved oxygen, temperature and conductivity.
P3-G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**. The monitoring results must be provided to the **administering authority** upon request.
P3-G10	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm and ensure plant, equipment and **measures** are maintained in a proper and effective condition; 3. ensure plant, equipment and **measures** are operated in a proper and effective manner; 4. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 5. ensure that reviews of environmental performance are undertaken at least annually.
P3-G11	Provide written notification to the **administering authority** of the date when **dredging** will commence at least five (5) business days prior to establishing a new **dredging activity**.
P3-G12	The **activity** is to operate in daylight hours and between the hours of 6am and pm.
P3-G13	A Site Based Management Plan (SBMP) must be implemented from the commencement of the **activity**.
P3-G14	A written copy of the SBMP must be provided to the **administering authority** within 10 business days of the takes effect date.
P3-G15	The SBMP must ensure potential impacts from the activity are managed to prevent environmental harm.
Agency interest: Air	
Condition number	**Condition**
P3-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P3-WT1	**Contaminants** must not be directly or indirectly released to **waters** other than wastewater released from the dredging equipment during the loading and unloading of dredge spoil.
P3-WT2	In carrying out the activity, the release of contaminants (including any release caused by dredging of material from the bed of waters) must: (a) only occur within the permitted areas specified in P3-G2; (b) not have any properties which are capable of causing environmental harm; (c) not produce any slick or other visible evidence of grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.
P3-WT3	Contaminants must not be released from the disposal site to the bed and banks of any **waters**.

P3-WT4	Contaminants must not be released from the disposal site to the bed and banks of any **surface waters**.
Agency interest: Noise	
Condition number	**Condition**
P3-N1	Noise from the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
Agency interest: Land	
Condition number	**Condition**
P3-L1	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
Agency interest: Waste	
Condition number	**Condition**
P3-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 3 – Approved Plans TVRR-NSP-1113 (sheets 1-3)




Locality Diagram
Scale: 1:25 000
N
TVRR-NSP-1110


Locality Diagram
TYRR-RBP-1113

Part 4 – Cabbage Tree Creek Boat Harbour (Former EPPR03316315)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Cabbage Tree Creek Boat Harbour and Allpass Parade SHORNCLIFFE QLD 4017 Lot 426 Plan SP158144 Adjacent to Lot 426 Plan SP158144

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

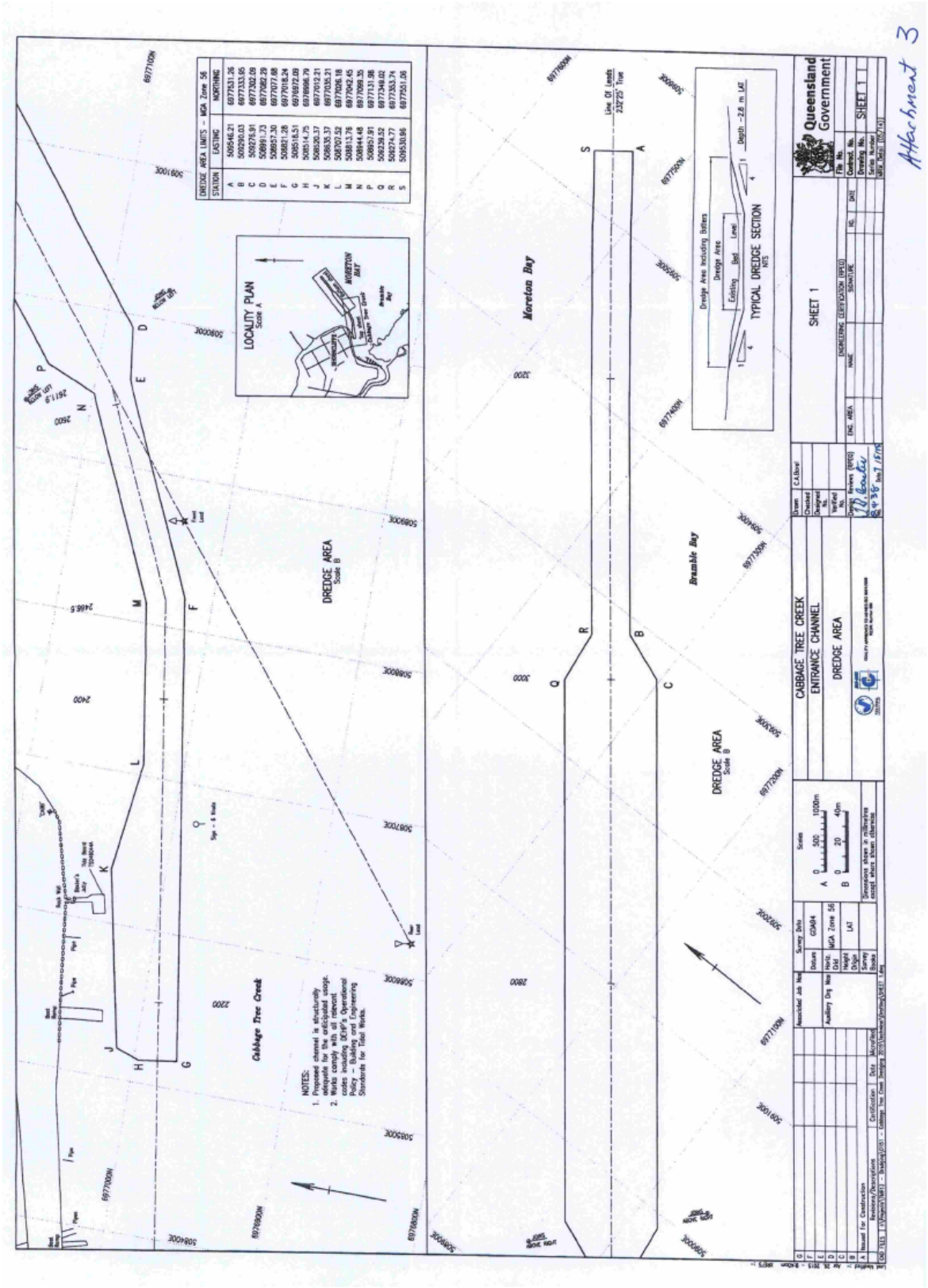
Agency interest: General	
Condition number	**Condition**
P4-G1	Activities conducted under this environmental authority must be conducted in accordance with approved drawings as specified in *Part 4 – Approved Plans*.
P4-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P4-G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P4-G5	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P4-G6	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P4-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P4-G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P4-G10	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.

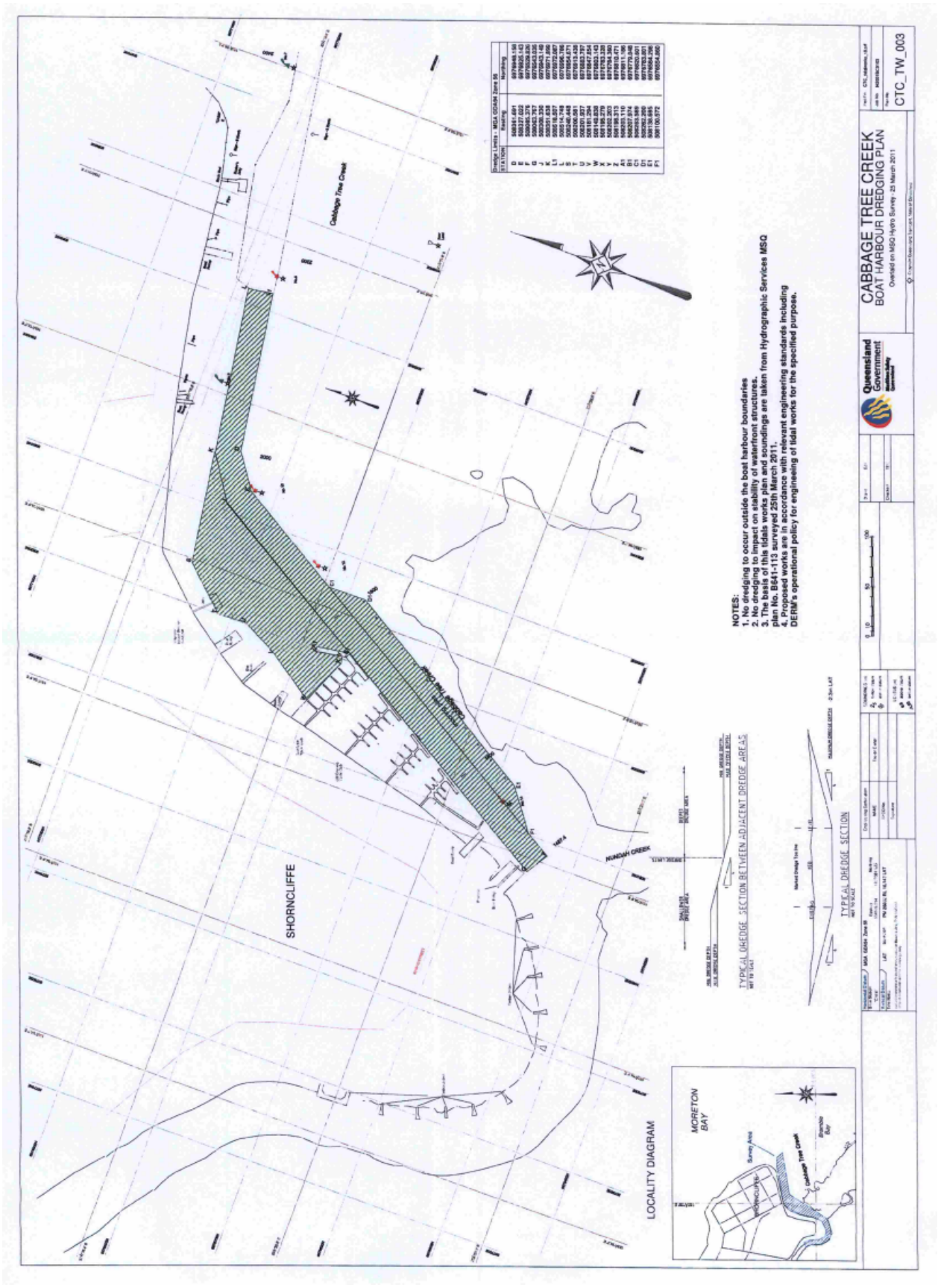
Agency interest: Air	
Condition number	**Condition**
P4-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P4-WT1	**Contaminants** must not be directly or indirectly released from the dredging vessel to any **waters** or the bed and banks of any **waters** except: 1. stream bed sediments necessarily disturbed when carrying out the authorised **dredging;** 2. dredging wastewater, excluding fuel or hydrocarbons, which overflows from the dredge vessel during loading of dredged materials at locations for which **dredging** is permitted to occur; 3. any incidental losses of dredged material during loading of dredged material to the vessel; 4. dredge spoil that is suitable for unconfined ocean disposal at an approved discharge site at Mud Island.
P4-WT2	In addition to P4-WT1, the release to **waters** must not: 1. have any other properties at a concentration that is capable of causing environmental harm; 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
P4-WT3	All reasonable and practicable **measures** must be undertaken during the works to prevent the movement of sediment from the work area to other areas of Cabbage Tree Creek.
P4-WT4	The release of contaminants to **waters** must comply with the release limits specified in *Part 4 Table 2 – Surface water limits*, when monitored in accordance with the associated monitoring requirements.
P4-WT5	Monitoring of contaminant releases to **waters** must be undertaken in accordance with *Part 4 Table 2 – Surface water limits*.
P4-WT6	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a breach of the water limits specified in *Part 4 Table 2 – Surface water limits*. The monitoring results must be provided to the **administering authority** upon request.
Agency interest: Noise	
Condition number	**Condition**
P4-N1	Noise from the **activity** must not exceed the levels identified in *Part 4 Table 1 – Noise limits* when measured in accordance with the associated monitoring requirements.
P4-N2	When required by the **administering authority**, noise monitoring must be undertaken in accordance with the associated monitoring requirements of *Part 4 Table 1—Noise Limits*, and the results notified within 14 days to the **administering authority**. Monitoring must include: 1. $L_{Aeq,\ adj,\ T;}$ 2. **Background** noise (Background) as $L_{A\ 90,\ adj,\ T;}$ 3. $Max_{LpA,T;}$

	4. the level and frequency of occurrence of any impulsive or tonal noise; 5. atmospheric conditions including wind speed and direction; 6. effects due to extraneous factors such as traffic noise; 7. location, date and time of recording.
Agency interest: Land	
Condition number	**Condition**
P4-L1	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
Agency interest: Waste	
Condition number	**Condition**
P4-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 4 – Approved Plans (sheet 1-2)

a. Drawing Number Sheet 1, titled '*Cabbage Tree Creek Entrance Channel Dredge Area'*, prepared by Queensland Government, and signed on 07.05.2015.
b. Job Number 142001BC9103, Plan Number CTC_TW_003, titled '*Cabbage Tree Creek Boat Harbour Dredging Plan'*, prepared by Queensland Government, and dated 25 March 2011.


Attachment 3
SHEET 1
Queensland Government
CABBAGE TREE CREEK
ENTRANCE CHANNEL
DREDGE AREA
DREDGE AREA
Scale B
DREDGE AREA
Scale B
LOCALITY PLAN
Scale A
TYPICAL DREDGE SECTION
NTS
Dredge Area Including Batters
Dredge Area
Existing Bed Level
Depth - 2.8 m LAT
Moreton Bay
Brunskie Bay
Cabbage Tree Creek
Low Of Leads
23°25' True
NOTES:
1. Proposed channel is structurally adequate for the anticipated usage.
2. Works comply with all relevant codes including DCHP's Operational Policy – Building and Engineering Standards for Tidal Works.
DREDGE AREA LIMITS – MGA Zone 56
STATION EASTING NORTHING
A 509546.21 6977531.26
B 509290.03 6977333.95
C 509278.91 6977302.09
D 508991.73 6977082.29
E 508957.30 6977077.68
F 508921.28 6977018.24
G 508918.51 6976972.09
H 508914.75 6976898.79
J 508826.37 6977012.21
K 508835.37 6977035.21
L 508707.52 6977026.18
M 508614.78 6977042.45
N 508614.48 6977079.75
P 508621.91 6977131.38
Q 508239.52 6977340.02
R 508274.77 6977353.74
S 508530.86 6977551.06


CABBAGE TREE CREEK
BOAT HARBOUR DREDGING PLAN
CTC_TW_003
Queensland Government
NOTES:
1. No dredging to occur outside the boat harbour boundaries
2. No dredging to impact on stability of waterfront structures.
3. The basis of this tidals works plan and soundings are taken from Hydrographic Services MSQ plan No. B641-113 surveyed 25th March 2011.
4. Proposed works are in accordance with relevant engineering standards including DERM's operational policy for engineering of tidal works for the specified purpose.
SHORNCLIFFE
HUNDAH CREEK
TYPICAL DREDGE SECTION BETWEEN ADJACENT DREDGE AREAS
TYPICAL DREDGE SECTION
LOCALITY DIAGRAM
MORETON BAY

Part 4 – Table 1 Noise Limits

Noise level measuring in dB(A)	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a **nuisance sensitive place**					
$L_{Aeq, adj,T}$	Background + 5	Background + 3	Background + 0	Background + 5	Background + 3	Background + 0
$MaxL_{pA,T}$	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
Noise measured at a **commercial place**						
$L_{Aeq, adj, T}$	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
$MaxL_{pA,T}$	Background + 15	Background + 13	Background + 10	Background + 15	Background + 13	Background + 10

Associated monitoring requirements

1. All monitoring devices must be correctly calibrated and maintained.
2. Any monitoring must be in accordance with the most recent version of the **administering authority's** Noise Measurement Manual.
3. Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in operation.
4. **Background** is defined in this permit for the purpose of Noise release limits.

Part 4 – Table 2 Surface Water Limits

Monitoring location/s	Water quality characteristics	Limit		Monitoring frequency
		Minimum	Maximum	
Background sampling point[1]	Turbidity[4] (NTU)	N/A	N/A	Concurrently with down-current turbidity sampling frequency
Down-current sampling point[2]	Turbdity[4] (NTU)	Daily average turbidity must not exceed the background value by more than 10 NTU when ground is < 100 NTU OR Daily average turbidity must not exceed the background value by more than 10% when background is > 100 NTU		Daily during an event[3]
	Visual sediment plume monitoring	N/A – for the purpose of monitoring the occurrence of an event[3]		Daily
	pH	7.0	8.5	Daily during an event[3]

[1] *A background sampling point must be located less than 100 metres up-current of the dredge.*

[2] *A down-current sampling point must be located less than 350 metres down-current from the dredge,*

[3] *An 'event is defined as being the occurrence of a visible sediment plume observed beyond 350 metres of the dredge. The extent end intensity of the plume must be investigated for the purposes of reporting in accordance with condition G3. Turbidity and pH monitoring must be conducted daily whilst an 'event is occurring.*

[4] *Turbidly monitoring must be conducted by completing profile readings measured throughout the water column of 2 metre depth intervals where overall depth is greater than 10 metres or 1 metre depth intervals where the overall depth is less than 10 metres, with the deepest reading taken at least 1 metre above the substrate. All turbidity profile depths should be represented when calculating average values.*

Associated monitoring requirements

1. Water quality determinations must be made at times when tidal flows or other tows are occurring (i.e. measurements collected within the period of one hour either site of the slack water cannot be used).
2. Monitoring must be underlain) during dredging as per the frequency stated.
3. Monitoring must be conducted in accordance with the methods prescribed in the current edition of the Department of Environment and Heritage Protection Monitoring and Sampling Manual.

Part 5 – Scarborough (Former EPPR02238714)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Bird O'Passage Parade, SCARBOROUGH QLD 4020 Adjacent to Lot 859 Plan SP158152 Location indicated in the submitted Queensland Transport and Main Roads drawings: BN-11-28-1 and BN-11-28-2

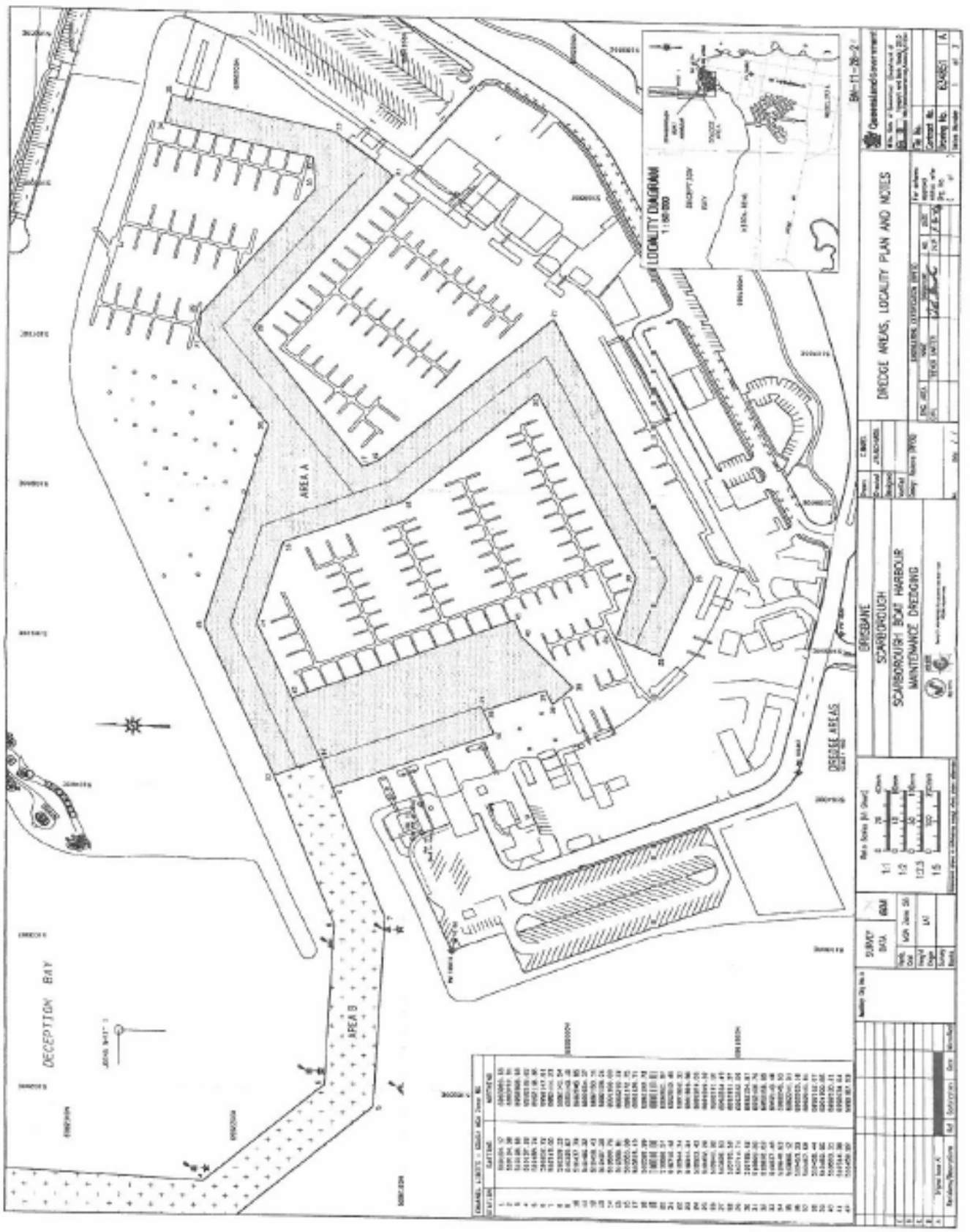
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

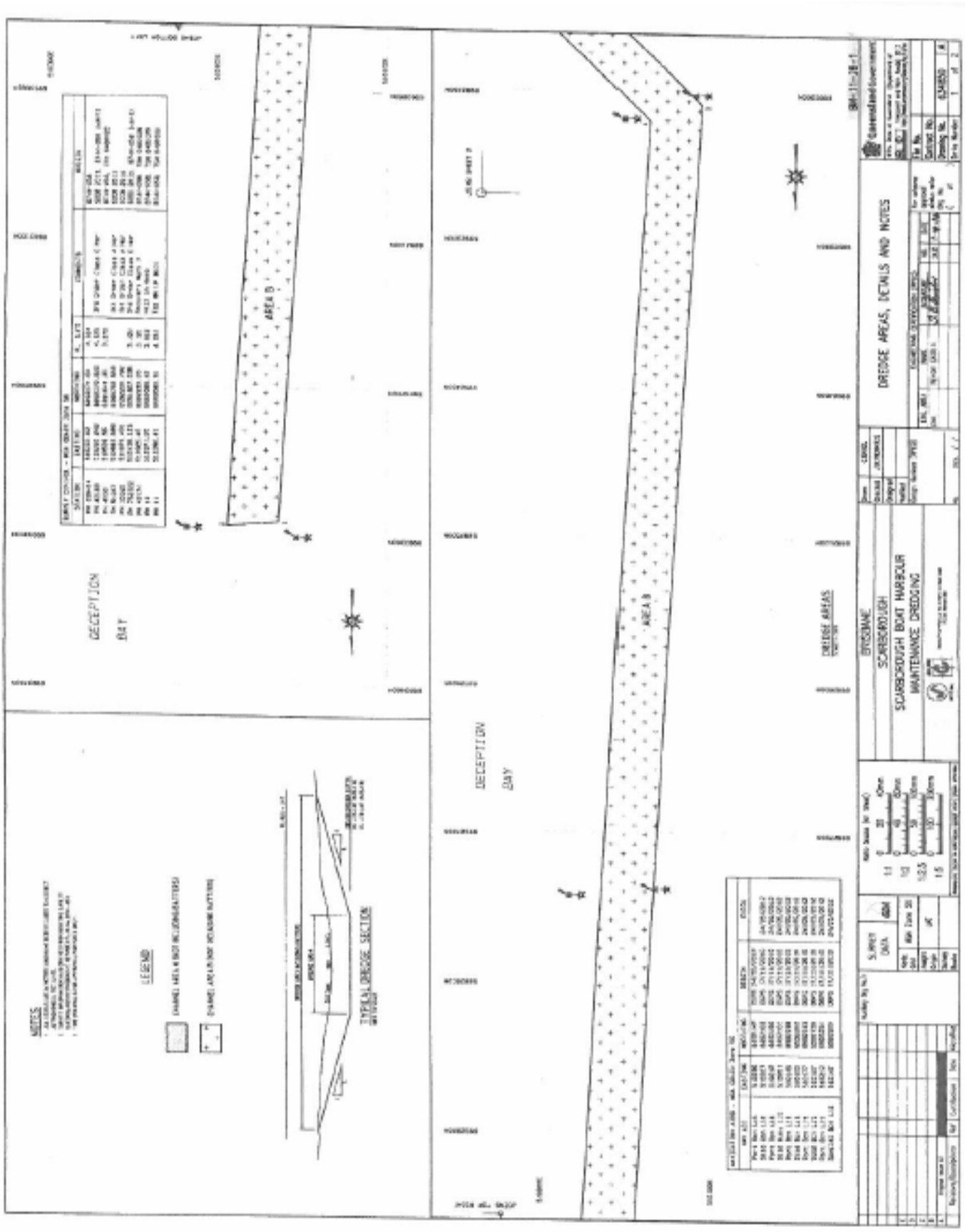
Agency interest: General	
Condition number	**Condition**
P5-G1	The **administering authority** must be advised in writing at least five (5) business days prior to establishing a new **dredging activity**.
P5-G2	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. the **dredging** of the Scarborough Boat Harbour and approaches must be undertaken solely within the confines of the dredge areas indicated in *Part 5 – Approved Plans of Queensland Transport and Main Roads drawings BN-11-28-1 and BN-11-28-2*. 2. The maximum depth of **dredging** works is not to exceed -2.8m LAT (Lowest Astronomical Tide).
P5-G3	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P5-G4	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P5-G5	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P5-G6	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P5-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P5-G8	All analyses required under this environmental authority must be carried out by a laboratory that has **NATA** certification, or an equivalent certification, for such analyses.
P5-G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P5-G10	The **activity** must be undertaken in accordance with written procedures that:

	1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
Agency interest: Air	
Condition number	**Condition**
P5-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P5-WT1	Other than as permitted within this environmental authority, contaminants must not be released from any **dredging** vessels, support craft or dredge-related machinery to any **waters** or the bed and banks of any **waters**.
P5-WT2	Monitoring of contaminant releases to **waters** must be undertaken in accordance with *Part 5 Table 1 – Water Monitoring* and records of the results must be kept.
WT3	The only contaminants to be released to surface **waters** (including the bed and banks of any **waters**) are sediments disturbed whilst conducting the **dredging activity** in accordance *with Part 5 Table 1 – Surface Water Release Limits* and additional requirements.
P5-WT4	In addition to *Part 5 – Table 1 – Surface Water Release Limits*, the release to waters must not: 1. have any other properties at a concentration that is capable of causing environmental harm; 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visibly objectionable matter.
P5-WT5	All reasonable and practicable **measures** must be implemented to prevent or minimise the release of contaminants to the **waters** when undertaking the approved **dredging** work.
P5-WT6	Any **dredging** activities must be conducted using equipment that is registered and is equal to or superior to the following equipment in environmental performance: 1. Trailing Suction Hopper dredge that is equipped, at a minimum, with: • below keel discharge of tail **waters** via an anti-turbidity control valve; and • dredge heads capable of, and where appropriate, depth control and fitted with marine wildlife protection or fauna exclusion devices (e.g. turtle deflector, deflector plates, tickler chains or drag heads) prior to and during operation.
P5-WT7	Where Trailer Suction Hopper **dredging** is carried out, an effective turtle exclusion device must be fitted to the dredge head. Evidence that this device has been installed and used on the dredge for the entire period of the **dredging activity** must be provided to the **administering authority** on request.

Agency interest: Noise	
Condition number	**Condition**
P5-N1	Noise from the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
P5-N2	The environmentally relevant activity must be carried out by such practicable means necessary to prevent the emission or likelihood of emission of noise that constitutes environmental nuisance.
P5-N3	When requested by the **administering authority**, noise monitoring must be undertaken to investigate any complaint of noise nuisance and the results are to be provided within 14 days to the **administering authority.**
P5-N4	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority *Noise Measurement Manual*.
Agency interest: Land	
Condition number	**Condition**
P5-L1	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
P5-L2	There must be no release of petroleum/oil based products from any machinery used in the works.
Agency interest: Waste	
Condition number	**Condition**
P5-WS1	The only areas permitted to receive dredge spoil under this environmental authority are those described as a '*Material disposal area – MDA01 – Mud Island'* indicated within Part 6, Schedule 2, section 24 of the *Marine Parks (Moreton Bay) Zoning Plan 2008*. Any material that is not able to be deposited at the '*Material disposal area – MDA01 – Mud Island'* must be deposited at either: (a) an approved reclamation area; or (b) at a landfill site or other location lawfully able to receive this material.

Part 5 – Approved Plans Queensland Transport and Main Roads drawings BN-11-28-1 and BN-11-28-2 (sheets 1-2)




DREDGE AREAS, DETAILS AND NOTES
BRISBANE
SCARBOROUGH
SCARBOROUGH BOAT HARBOUR
MAINTENANCE DREDGING
DECEPTION
BAY
AREA B
DREDGE AREAS
NOTES
LEGEND
TYPICAL DREDGE SECTION

Part 5 – Table 1 Water Monitoring

Parameter	Measurement (units)	Minimum Frequency	Monitoring Location
Water	Prescribed in Schedule 3, Table 1-Surface Water Release Limits	Sampling is to be undertaken on the day before **dredging** commences. Thereafter, sampling is to be undertaken daily* during **dredging**	Down current monitoring point[1].

Additional Requirements

* Minimum frequency can be changed to weekly when 5 consecutive days of **dredging** produce no exceedances of turbidity as defined in Schedule 3, Table 1- Surface Water Release Limits. If an exceedance occurs, daily monitoring must resume.

1. For dredge areas within the harbour (area A and the first 150m of area B as shown on drawing BN-11.28-2), the down-current monitoring point must be no more than 350m from the harbour entrance. For dredge areas outside of the harbour (balance of area B on drawings BN-11-28-1 and 2), the down-current monitoring point must not be more than 350m down-current of the **dredging activity.** Global Positioning co-ordinates in eastings and northings must be provided for the up-current control site(s), the **dredging** location(s) and downstream monitoring point(s) for each monitoring event related to this condition.
2. Monitoring must be conducted in accordance with methods prescribed in the current edition of the Department of Environment and Heritage Protection *Water Quality Sampling Manual*.
3. All monitoring must be carried out on samples that are representative of the effects of the **dredging activity.**
4. All monitoring devices must be effectively calibrated and maintained.

Part 5 – Table 1 Surface Water Release Limits

Dredging Location	Quality Characteristic (units)	Minimum	Maximum	Relevant Information
Locations where sediment is disturbed during the regular conduct of the **dredging activity** as indicated in drawing BN-11-28-1 and BN-11-28-2 (*Schedule 1 Attachment 1)*	Turbidity (NTU)	N/A N/A	BV[1] +10 NTU BV[1] +10%	When the **Background value**[1] is less than 100 NTU, the level must not exceed 10 NTU above the background level[1]. When the **background level**[1] is more than 100 NTU, the level must not be greater than 10% than the **background value**[1].
	pH (pH units)	7.0	8.0	Measure **background value**[1]

Additional requirements

1. The **BV or "background value"** for a quality characteristic is the quality characteristic value as measured at an up-current control (non-impacted) monitoring point situated in the receiving environment and:
    a. Must be measured throughout the water column at 2m depth intervals where overall depth is >10m or 1m depth intervals where the overall depth is <10m. with the deepest reading taken at least 1m above the substrate - the average reading is the **BV:**
    b. Must be from 50-100m up-current from any location where sediment is disturbed during regular conduct of the **dredging activity:**
    c. Must be determined only at times when tidal flows are occurring. and
    d. Must not be determined within the period of one hour either side of slack tide.

Part 6 – Wynnum (Former EPPR02175914)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Glenora Street, WYNNUM QLD 4178 Adjacent to Lot 508 Plan SP258083

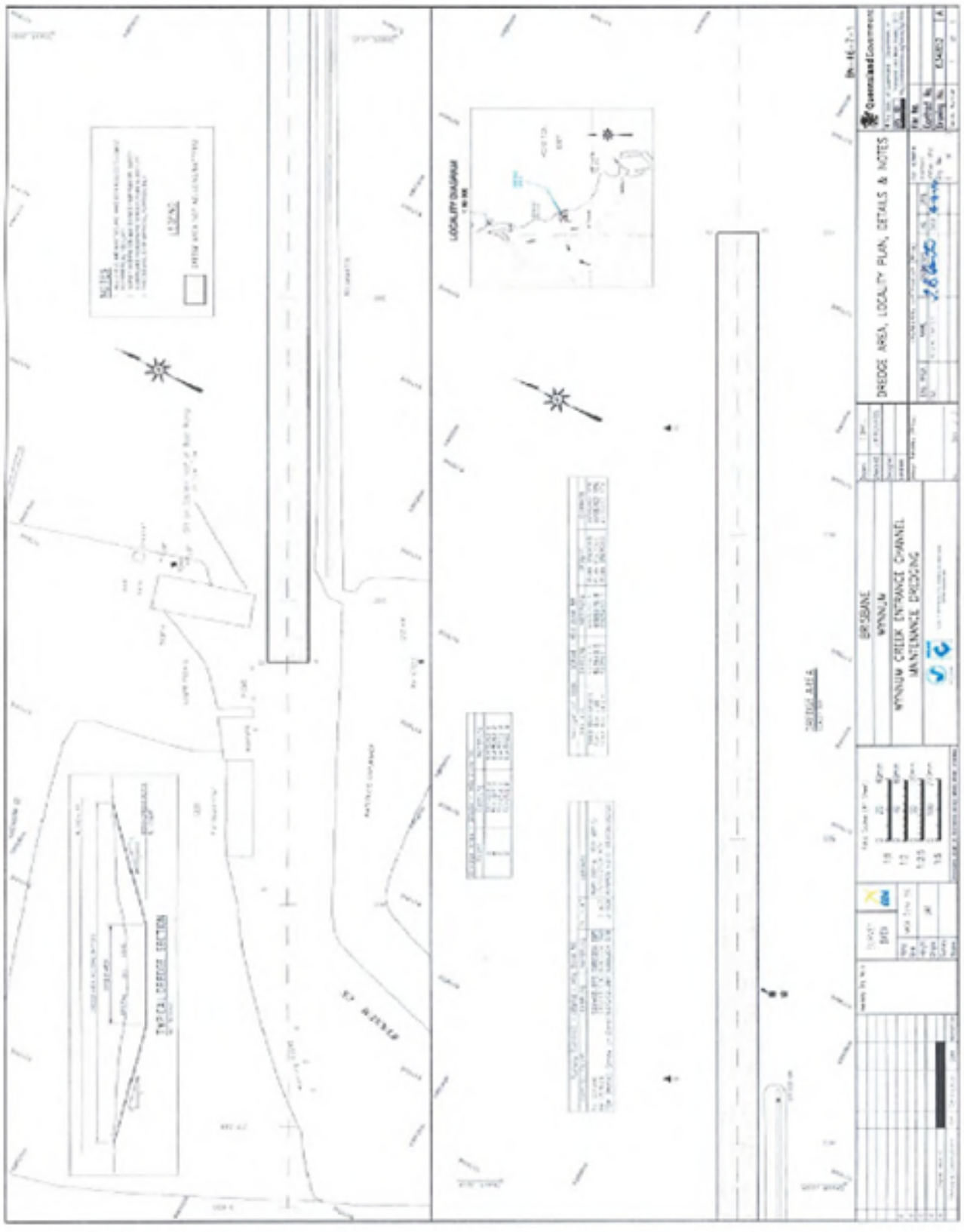
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P6-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. the **dredging** of the Wynnum Creek Entrance Channel must be undertaken solely within the confines of '*Dredge Area'* indicated in the submitted Queensland Transport and Main Roads drawings *Part 6 – Approved Plans BN-46-7-1, Drawing 634852A*; 2. maximum depth of dredging works is not to exceed -1.5m LAT (Lowest Astronomical Tide).
P6-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P6-G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P6-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P6-G5	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P6-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P6-G7	All analyses required under this environmental authority must be carried out by a laboratory that has **NATA** certification, or an equivalent certification, for such analyses.
P6-G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P6-G9	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner;

	5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and *6.* ensure that reviews of environmental performance are undertaken at least annually.
P6-G10	Provide to the **administering authority** written notification of the date when **dredging** will commence at least five (5) business days prior to establishing a new **dredging activity**.
P6-G11	Provide to the **administering authority** written notification within ten (10) days following completion of the maintenance dredging campaigns.
Agency interest: Air	
Condition number	**Condition**
P6-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P6-WT1	The only contaminants to be released to surface **waters** are sediments disturbed whilst conducting the **dredging activity** in accordance with *Part 6 Schedule 2 Table 2 – Surface Water Release Limits* and additional requirements.
P6-WT2	Monitoring of contaminant releases to **waters** must be undertaken in accordance with condition P6-WT1 and *Part 6 Schedule 2 Table 3 – Water Monitoring* and records of the results must be kept.
P6-WT3	In addition to P6-WT1, the release to **waters** must not: 1. have any other properties at a concentration that is capable of causing environmental harm; 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visibly objectionable matter.
Agency interest: Noise	
Condition number	**Condition**
P6-N1	Noise from the **activity** must not exceed the levels identified in *Part 6 Table 1 – Noise limits* when measured in accordance with the associated monitoring requirements.
P6-N2	When required by the **administering authority**, noise monitoring must be undertaken in accordance with the associated monitoring requirements of *Part* 6 *Table 1—Noise Limits*, and the results notified within 14 days to the **administering authority**. Monitoring must include: 1. $L_{Aeq, adj, T}$ 2. **Background** noise (Background) as $L_{A90, adj, T}$ 3. Max $L_{pA,T}$ 4. the level and frequency of occurrence of any impulsive or tonal noise 5. atmospheric conditions including wind speed and direction 6. effects due to extraneous factors such as traffic noise 7. location, date and time of recording.
P6-N3	**Blasting** or the generation of **substantial low frequency noise** is not permitted.

Agency interest: Land	
Condition number	**Condition**
P6-L1	Other than as permitted by this authority, contaminants must not be released to land.
P6-L2	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
Agency interest: Waste	
Condition number	**Condition**
P6-WS1	The only areas permitted to receive dredge spoil under this environmental authority are those described as a '*Material disposal area – MDA01 – Mud Island'* indicated within Part 6, Schedule 2, section 24 of the *Marine Parks (Moreton Bay) Zoning Plan 2008.* Any material that is not able to be deposited at the '*Material disposal area – MDA01 – Mud Island'* must be deposited at either: a) an approved reclamation area; or b) at a landfill site or other location lawfully able to receive this material.
P6-WS2	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 6 – Approved Plans BN-46-7-1 Drawing 634852 Issue A – Wynnum Creek Entrance Channel Maintenance Dredging, Dredging Area, Locality Plan, Details and Notes.



1. Part 6 – Table 1 Noise Limits

Noise level measuring in dB(A)	***Monday to Saturday***			***Sundays and public holidays***		
	7am - 6pm	*6pm - 10pm*	*10pm - 7am*	*9am - 6pm*	*6pm - 10pm*	*10pm - 9am*
	Noise measured at a **nuisance sensitive place**					
$L_{Aeq\ adj,T}$	Background + 5	Background + 3	Background + 0	Background + 5	Background + 3	Background + 0
MaxLpA,T	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
Noise measured at a **commercial place**						
$L_{Aeq,\ adj,\ T}$	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
MaxLpA,T	Background + 15	Background + 13	Background + 10	Background + 15	Background + 13	Background + 10

Part 6 – Table 2 Surface Water Release Limits

Dredging location	Quality Characteristic (Units)	Minimum	Median	Maximum	Relevant Information
Locations where sediment is disturbed during the regular conduct of the dredging activity[1]. As indicated in Plan BN-46-7-1 Drawing 634852. A Wynnum Creek Entrance Channel Maintenance Dredging, Dredge Area, Locality Plan, Details & Notes	Turbidity (NTU)	N/A N/A		BV[3] +10 NTU BV[3] +10%	When the background value[2] is less than 100 NTU the level must not exceed 10 NTU above the background value[2]. When the background value[2] is more than 100 NTU, the level must not be greater than 10% than the background value[2].

Additional requirements

1. The down-current monitoring point must be 350m down-current of the currently active dredging activities (provide Global Positioning System in castings and nothings for the up-current control site, dredging location(s), and the downstream monitoring point for each monitoring event related to this condition);
2. The BV or 'background value' for a quality characteristic es the quality characteristic value as measured at an up-current control (unimpacted) monitoring point situated in the receiving environment and:
   a. must be measured throughout the water column at 2m depth intervals where overall depth is >10m, or 1m depth intervals where the overall depth is ≤10m, with the deepest reading taken at least 1m above the substrate - the average of the readings is the BV;
   b. must be from 50-100m up-current from any location where sediment is disturbed during the regular conduct of the dredging activity;
   c. must be determined only at times when tidal flows are occurring, and
   d. d must not be determined within the period of one hour either side of slack tide

Part 6 – Table 3 Water Monitoring

Parameter	Measurement (units)	Minimum Frequency	Monitoring Location
Water	Prescribed in Schedule 2, Table 2 – Surface Water Release Limits	Sampling is to be undertaken on the day before dredging commences. Thereafter, sampling is to be undertaken daily * during dredging	Down current monitoring point[1]

Additional Requirements

* Minimum frequency can be changed to weekly when 5 consecutive days of dredging produce no exceedances of turbidity as defined in Schedule 2. Table 2 - Surface Water Release Limits. If an exceedance occurs, daily monitoring must resume.

1. The down-current monitoring point(s) may be less than, but must not be more than 350m down-current of the dredging activity (provide Global Positioning System in eastings and northings for the up-current control site(s), dredging location(s), and downstream monitoring point(s) for each monitoring event related to this condition).
2. All monitoring must be conducted in accordance with methods prescribed in the latest edition of the *Monitoring and Sampling Manual (DERM 2009).*
3. All monitoring must be carried out on samples that are representative of the effects of the dredging activity.
4. All monitoring devices must be effectively calibrated and maintained.

Part 7 – Burnett River, Kalkie (Former EPPR01748913)

Environmentally Relevant Activity	Locations
16-(1c) Dredging >100000t but <1000000t/yr	Burnett River adjacent to 253 Kirbys Road, KALKIE QLD 4670 Adjacent to Lot 1 Plan RP76219

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

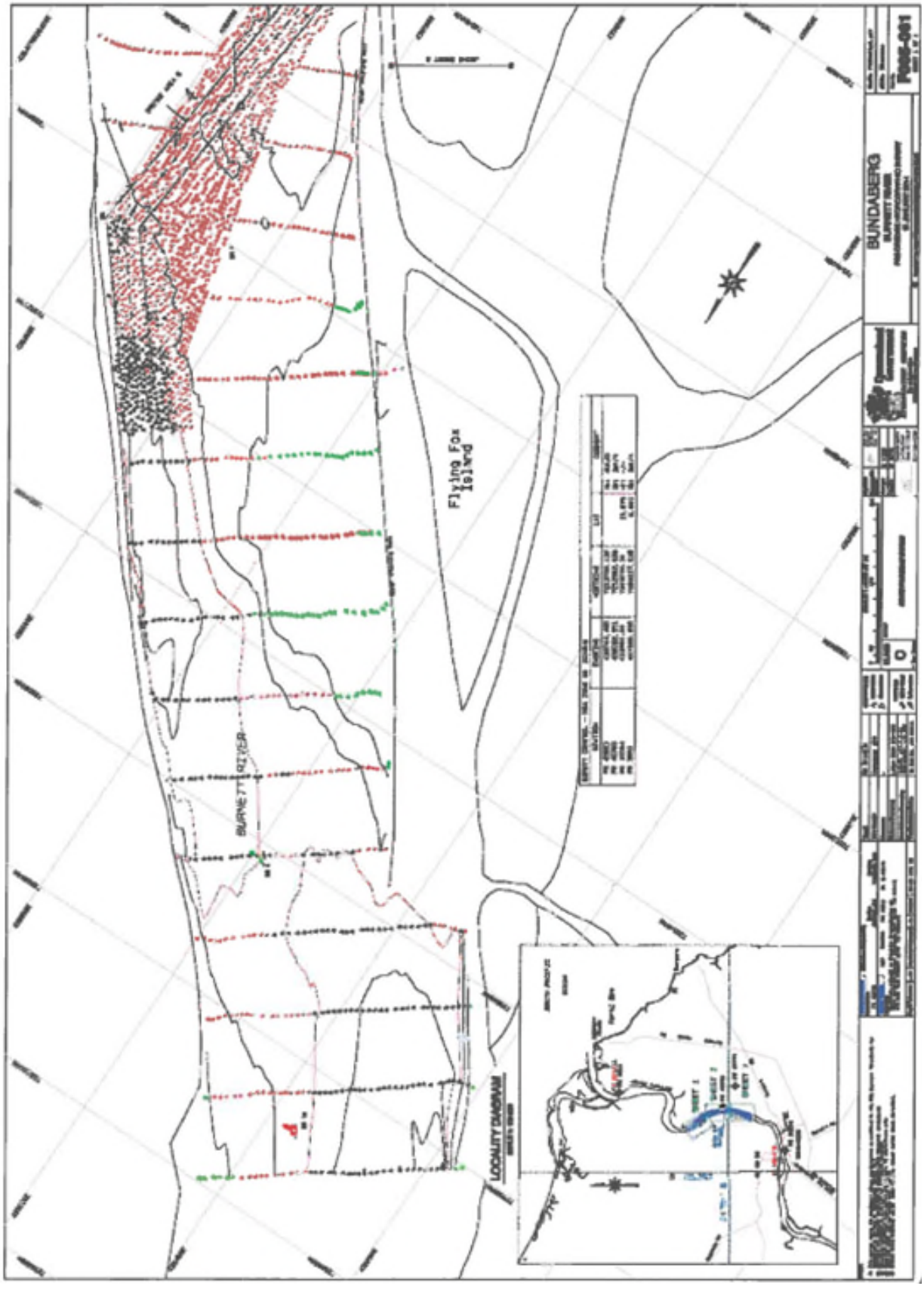
Agency interest: General	
Condition number	**Condition**
P7-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. this environmental authority is for the capital **dredging** of up to 90,000 cubic metres of material in the Burnett River only, no maintenance **dredging** is implied or allowed under this permit; and 2. the activity, unless otherwise conditioned by this environmental authority, must be in accordance with the following *Part 7 – Approved Plans*: (a) *F005-061 sheets 1 to 3;* and (b) *WBBR-NSP-0114.*
P7-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P7-G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P7-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P7-G5	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P7-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P7-G7	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P7-G8	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition;

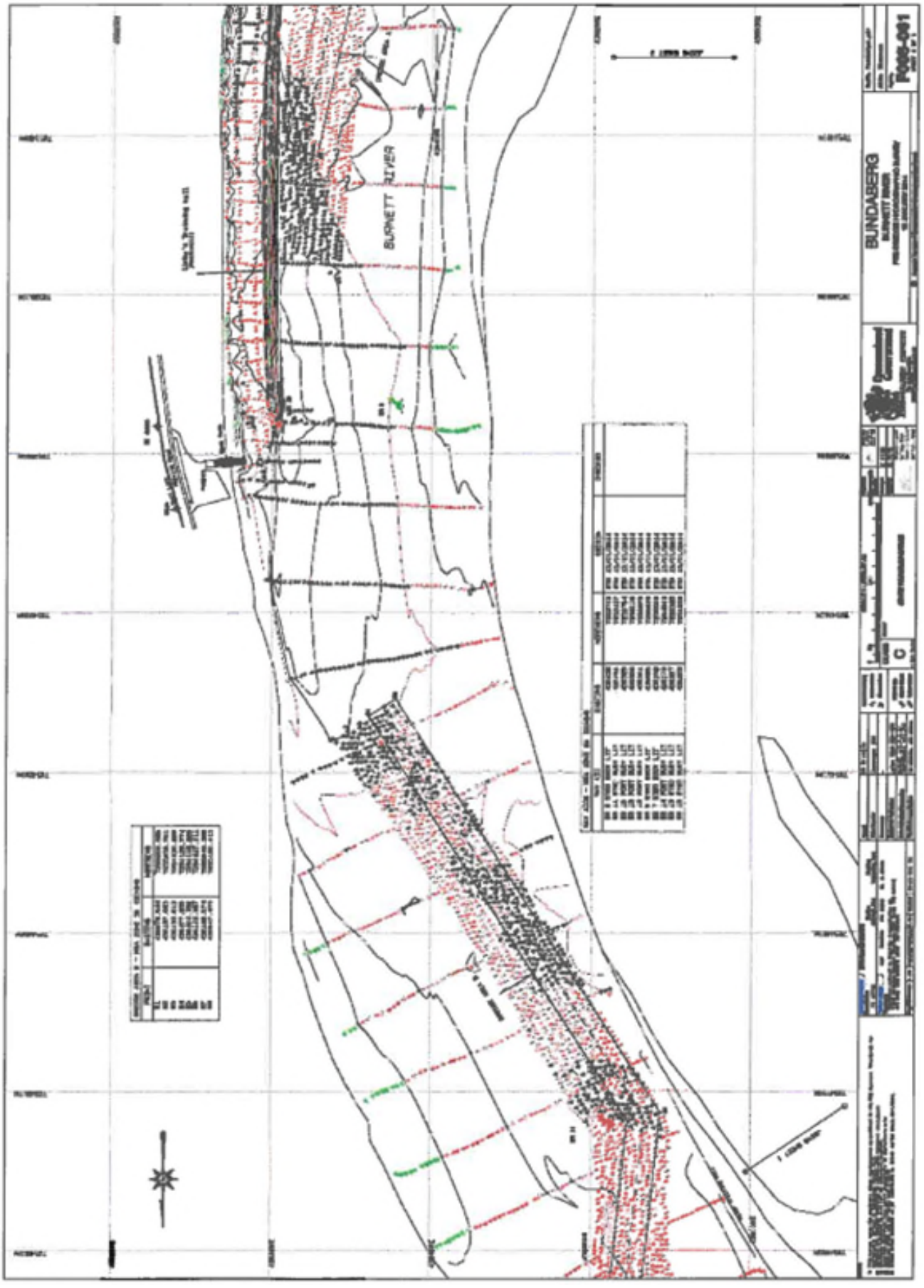
	4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P7-G9	The holder of this environmental authority must provide to the **administering authority** written notification of the date when **dredging** will commence at least five (5) business days prior to establishing a new **dredging activity**.
Agency interest: Air	
Condition number	**Condition**
P7-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P7-WT1	Other than as permitted within this environmental authority, contaminants must not be directly or indirectly released from the site to any **waters** or the bed and banks of any **waters.**
P7-WT2	All reasonable and practicable **measures** must be implemented to prevent or minimise the release of contaminants to the Burnett River when undertaking the approved **dredging** work.
P7-WT3	Contaminants are authorised for release to **waters** at the following locations: (a) at the head of the Cutter Suction Dredge at the location where dredging is being undertaken as a direct result of dredging activity; and (b) within the bounds of the area landward of Kirby's Wall as defined in the approved plans (Part 7 – Approved Plans) via a continuous delivery connection (e.g. floating or submerged pipeline).
P7-WT4	Contaminants released at the point of **dredging** and deposition must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum or litter.
P7-WT5	Monitoring must be done by an **appropriately qualified person(s)** in accordance with methods set out in the latest version of the administering authority's water quality sampling manual.
P7-WT6	Ambient water quality monitoring must be conducted at least twice within 7 days prior to the commencement of any **dredging** or deposition work for the purpose of establishing background values for the site. The monitoring must be at a location in the direct vicinity of the proposed works and include the parameters listed in *Part 7 Table 1 - Water Quality Characteristics*.
P7-WT7	Impact monitoring of the **dredging** area must be undertaken while the dredge is operational and at a location no greater than 100m up current and no greater than 200m down current of the dredging work.
P7-WT8	Impact monitoring of the spoil deposition must be undertaken while the deposition system is operational and at a location no greater than 100m up current and no greater than 200m down current of the outlet of the dredge spoil delivery system.
P7-WT9	Impact monitoring of the **dredging** area and the spoil deposition area must be conducted for the parameters and at the frequencies listed in *Part 7 Table 1 – Water Quality Characteristics.*
P7-WT10	If quality characteristics of the receiving **waters** exceed any of the limits specified in *Part 7 - Table 1 – Water Quality Characteristics* while conducting **dredging** and dredge spoil placement works,

	the environmental authority holder must cease the **activity** immediately and take appropriate **measures** to bring the **activity** back into compliance with the limits in *Part 7 - Table 1 – Water Quality Characteristics.* Upon resuming the activity, following exceeding a release limit, the holder of this environmental authority must confirm with monitoring that the activity is no longer exceeding the release limits as per *Part 7 - Table 1 – Water Quality Characteristics.* If upon the confirmation sampling it is identified that the appropriate measures have not resulted in a return to compliance with *Part 7 -Table 1* then the environmental authority holder must cease **dredging** and dredge spoil placement operations and complete an investigation into the potential for environmental harm and provide a written report to the **administering authority**, outlining: (a) details of the investigations carried out; and (b) measures taken to prevent environmental harm.
P7-WT11	The holder of this environmental authority must also cease dredge spoil placement to any area within the Burnett River if any unacceptable impacts upon water quality (i.e. that cause environmental harm in relation to any of the environmental values of the Burnett River other than allowed within the limits specified in *Part 7 - Table 1 – Water Quality Characteristics* are experienced during **dredging** or dredge spoil placement.
P7-WT12	All determinations of the water quality sampled must be made in accordance with the methods prescribed in the latest edition of the **administrating authority's** *Water Sampling Manual*, and carried out on samples that are representative of the discharge.
Agency interest: Noise	
Condition number	**Condition**
P7-N1	Noise from the **activity** must not cause environmental nuisance at any **sensitive place** or **commercial place.**
P7-N2	When required by the **administering authority**, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the **administering authority**. Monitoring must include: 1. $L_{Aeq, adj, T;}$ 2. **Background** noise (Background) as $L_{A\ 90, adj, T;}$ 3. $MaxL_{pA,T;}$ 4. the level and frequency of occurrence of any impulsive or tonal noise; 5. atmospheric conditions including wind speed and direction; 6. effects due to extraneous factors such as traffic noise; 7. location, date and time of recording.
P7-N3	The method of measurement and reporting of noise levels must comply with the latest edition of the **administering authority** noise measurement manual**.**
Agency interest: Land	
Condition number	**Condition**
P7-L1	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*

Agency interest: Waste	
Condition number	**Condition**
P7-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 7 – Approved Plans F005-061 (sheets 1-3).




BURNETT RIVER
BUNDABERG


BUNDABERG
BURNETT RIVER
Paddy Island

Part 7 – Approved Plan WBBR-NSP-0114



Part 7 – Table 1 Water Quality Characteristics

Quality Characteristics	**Release Limit**	
	Maximum	**Monitoring Frequency**
Turbidity (NTU)	For Background Values up to 100 NTU, 10 NTU above background Value For background values greater than 100 NTU, 10% greater than background (ambient) value	At least once per week while works are operational an once within 7 days after works are completed
pH	7.0 - 9.0	
Visibility (secchi disk)	-	

Part 8 – Rosslyn Bay Boat Harbour (Former EPPR03292815)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Rosslyn Bay Boat Harbour, ROSSLYN QLD 4703 Lot 105 Plan SP161849 Adjacent to Lot 105 Plan SP161849

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P8-G1	Activities conducted under this environmental authority must be conducted in accordance with approved drawings as specified in *Part 8 – Approved Plans*.
P8-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P8-G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P8-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P8-G5	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P8-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P8-G7	All analyses required under this environmental authority must be carried out by a laboratory that has **NATA** certification, or an equivalent certification, for such analyses.
P8-G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P8-G9	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.

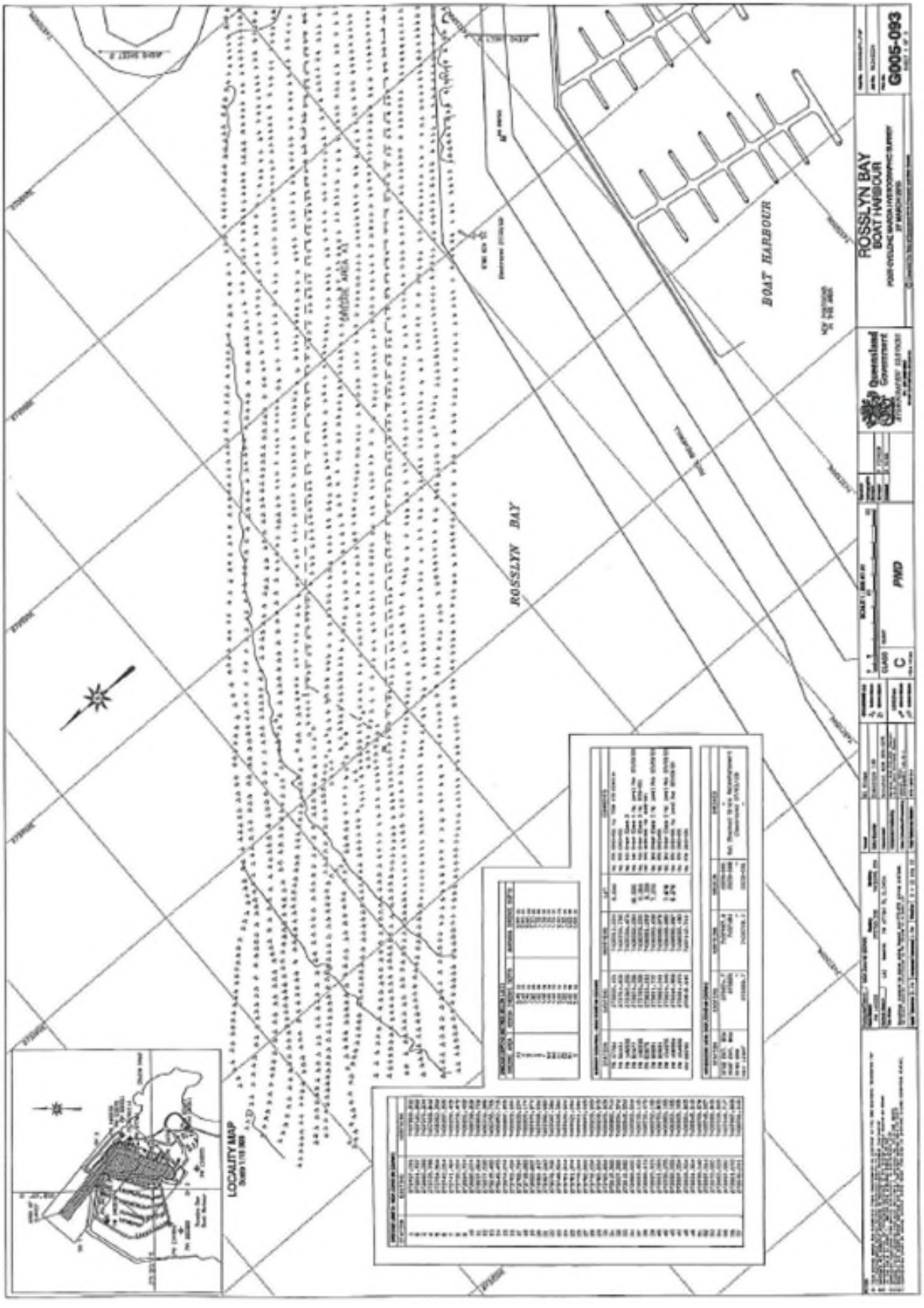
P8-G10	Provide to the **administering authority** written notification of the date when **dredging** will commence at least five (5) business days prior to establishing a new **dredging activity**.
Agency interest: Air	
Condition number	**Condition**
P8-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P8-WT1	The only contaminants to be released to surface **waters** are sediment extracted from the dredged areas of the Rosslyn Bay Boat Harbour and disposed of to the offshore disposal area in accordance with the relevant drawings specified in condition P8-G1.
P8-WT2	Dredging must not result in a visible sediment plume beyond 500m of the **dredging** site.
P8-WT3	The offshore disposal of sediment must not result in a visible plume beyond 500m of the placement area.
P8-WT4	In addition to P8-WT1, the release to **waters** must not: 1. have any other properties at a concentration that is capable of causing environmental harm; 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visibly objectionable matter.
Agency interest: Noise	
Condition number	**Condition**
P8-N1	Noise from the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
P8-N2	The method of measurement and reporting of noise levels must comply with the latest edition of the **administering authority** noise measurement manual**.**
Agency interest: Land	
Condition number	**Condition**
P8-L1	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*

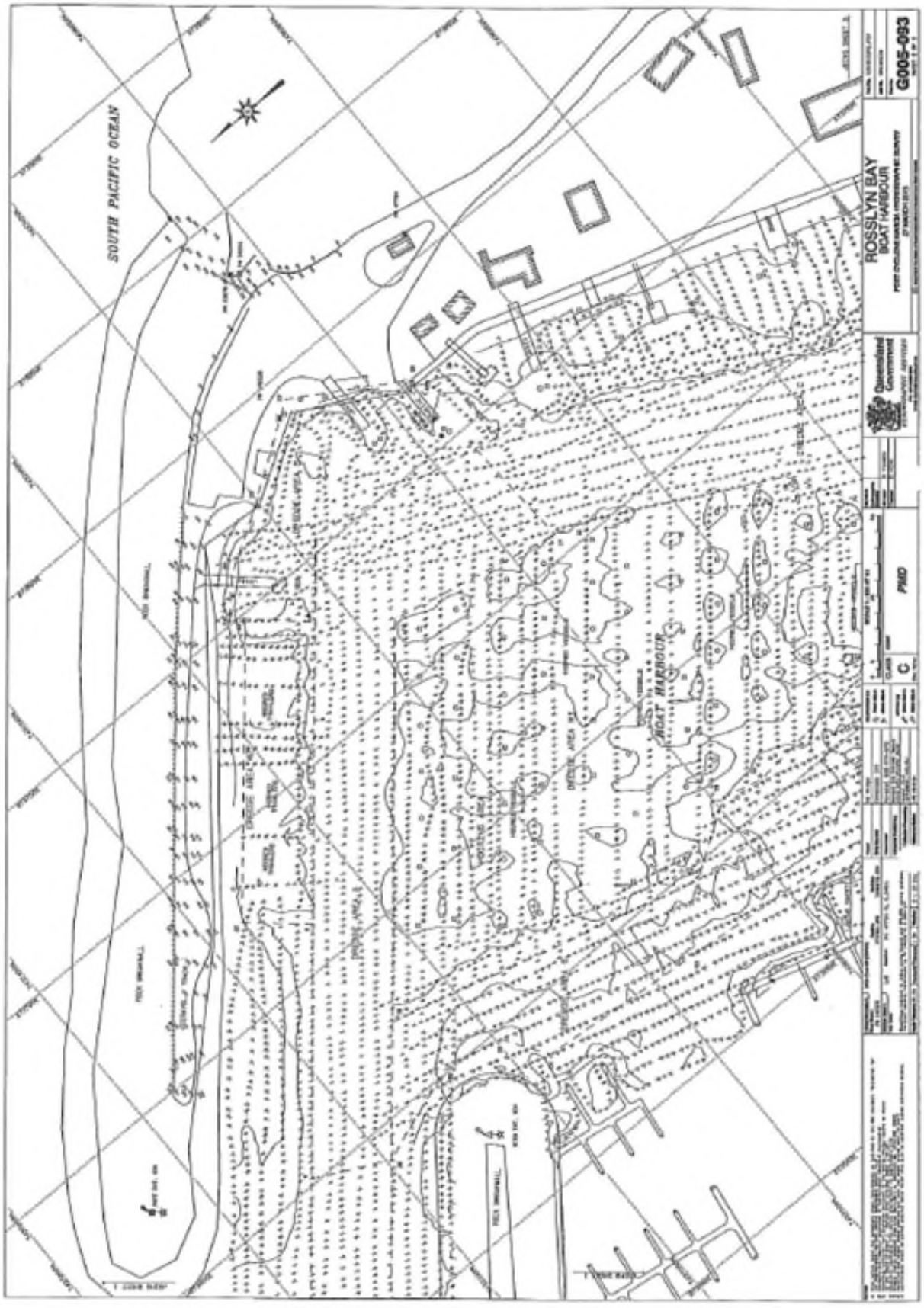
Agency interest: Waste	
Condition number	**Condition**
P8-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

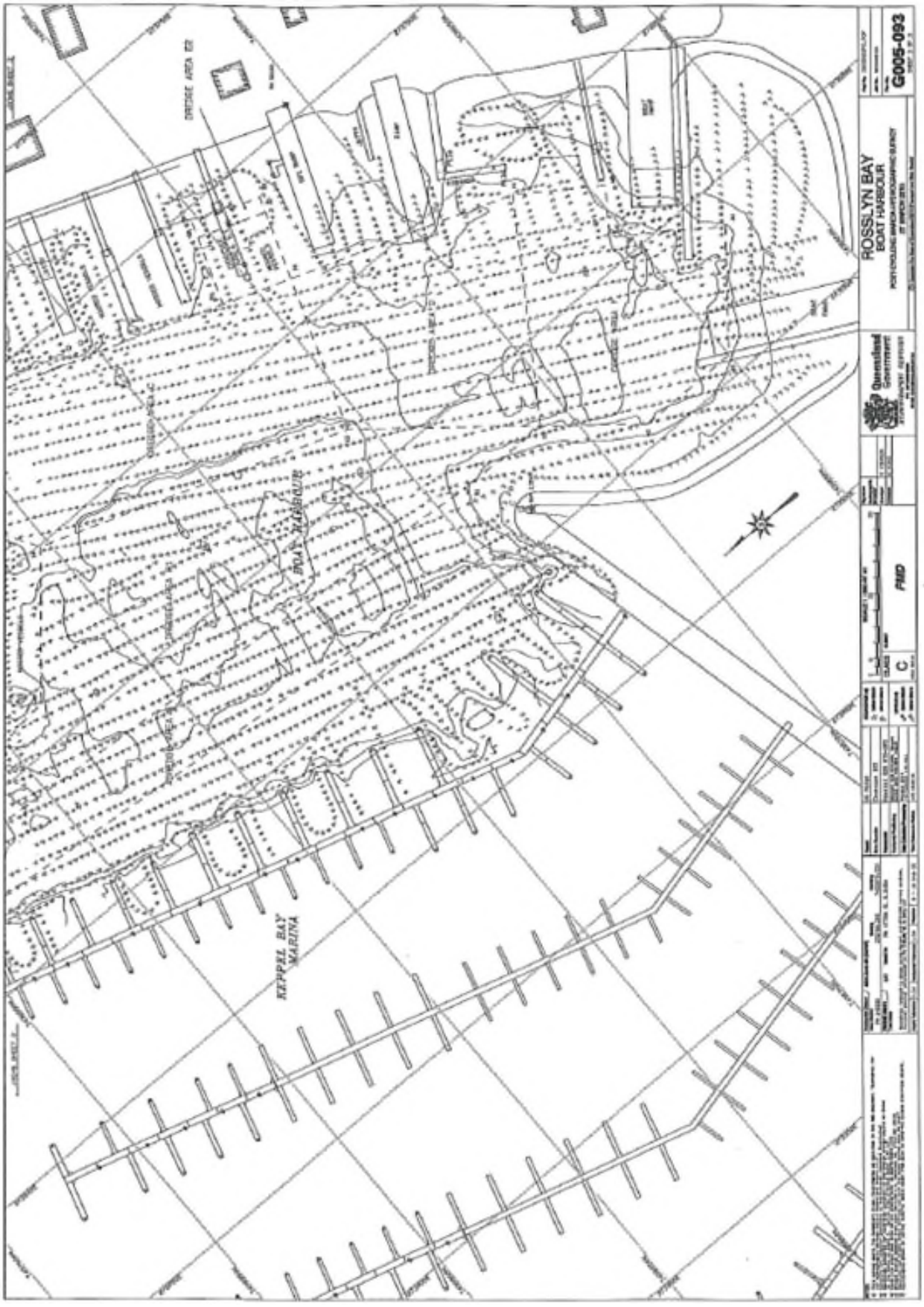
Part 8 – Approved Plans (Sheets 1-5)

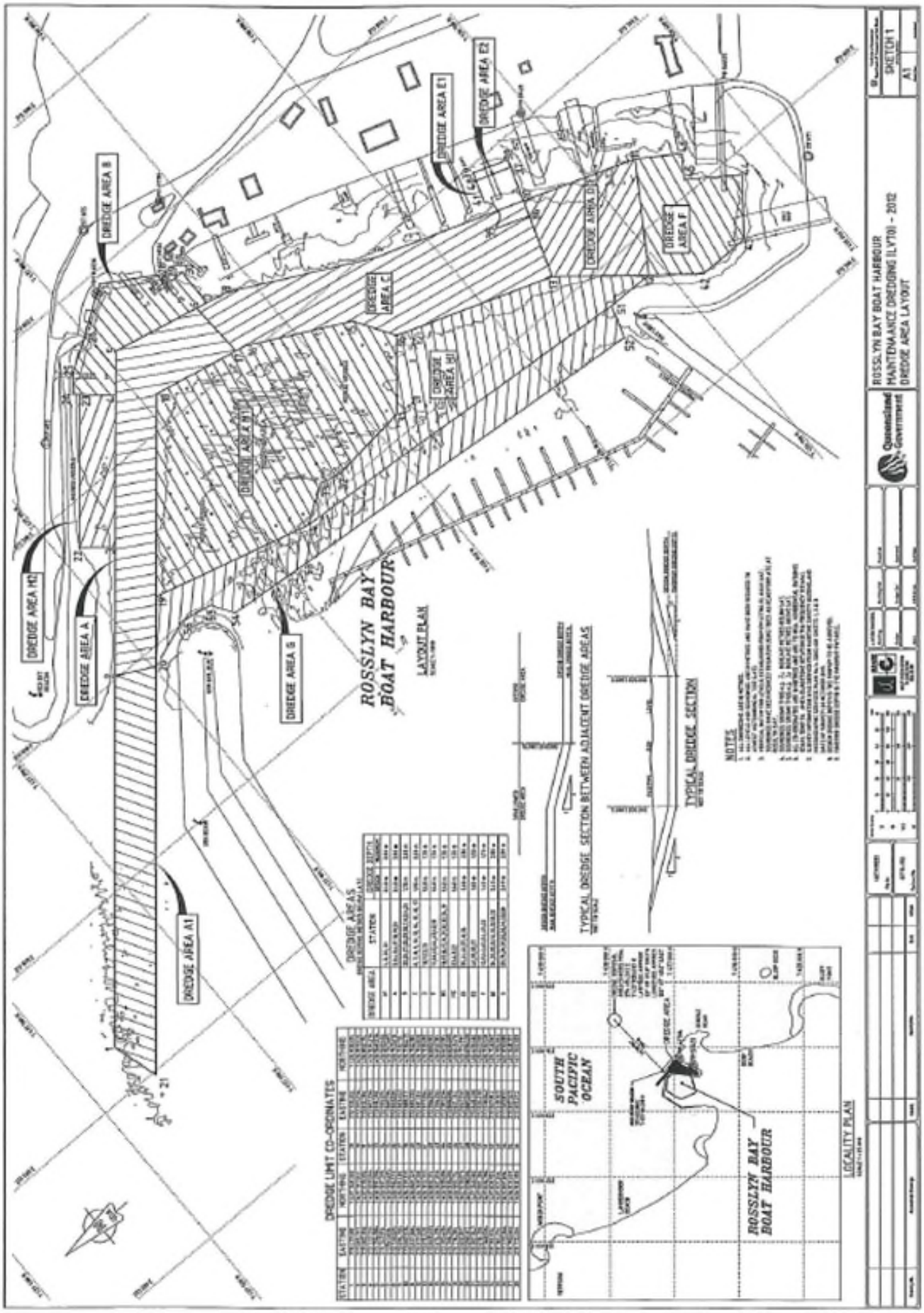
Activities conducted under this environmental authority must be conducted in accordance with the following approved drawings.

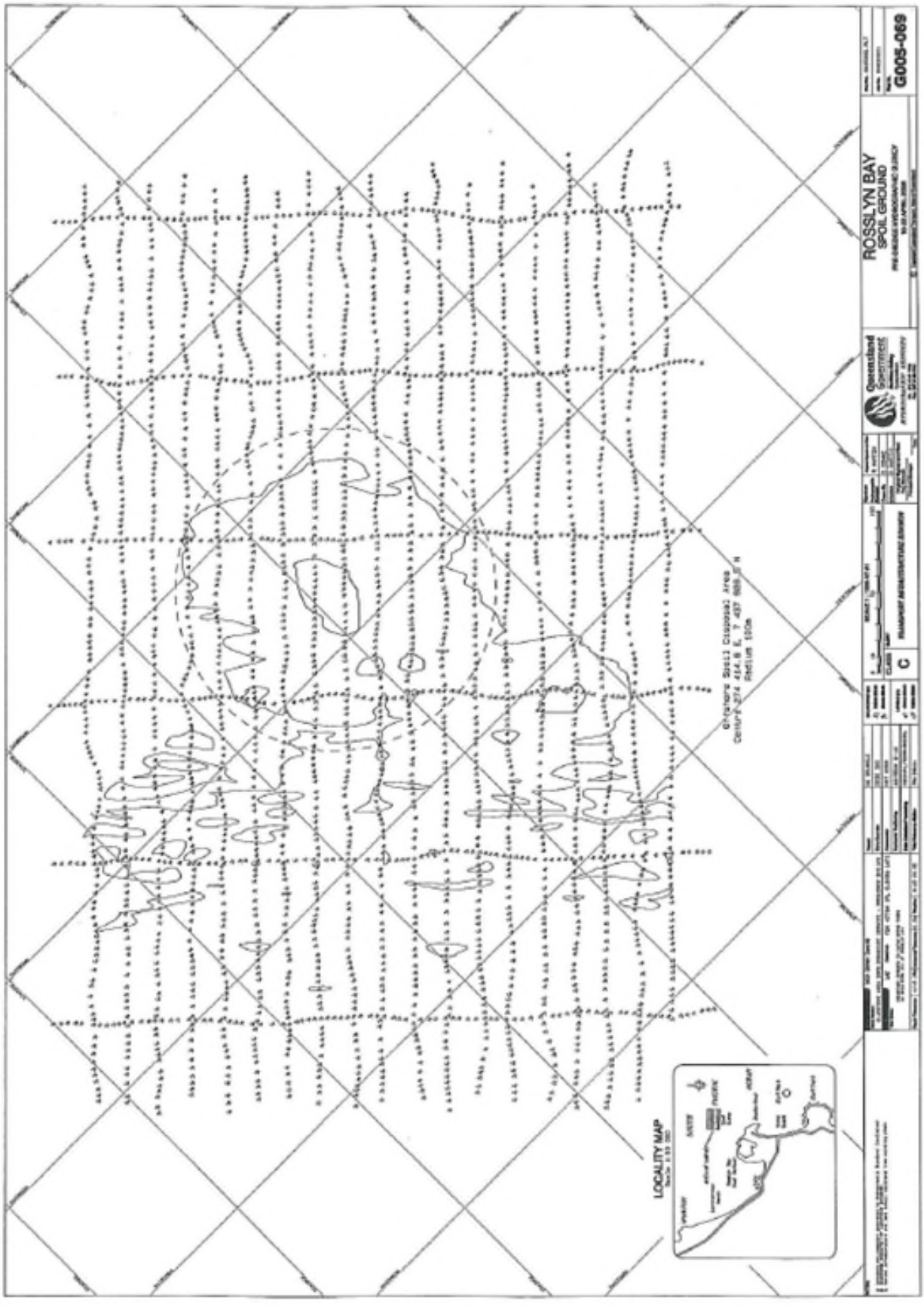
a. Job Number RK040034, Plan Number G005-093, titled 'Post—Cyclone Hydrographic Survey', prepared by PMD for Department of Transport and Main Roads, dated 27 March 2015, Sheet 1 of 3.
b. Job Number RK040034, Plan Number G005-093, titled 'Post—Cyclone Hydrographic Survey', prepared by PMD for Department of Transport and Main Roads, dated 27 March 2015, Sheet 2 of 3.
c. Job Number RK040034, Plan Number G005-093, titled 'Post—Cyclone Hydrographic Survey', prepared by PMD for Department of Transport and Main Roads, dated 27 March 2015, Sheet 3 of 3.
d. File Number 467/00222, Contract Number QT12-132, Drawing Number Sketch 1, titled 'Maintenance Dredging (LV70) — 2012 Dredge Area Layout'.
e. Job Number RK020021, Plan Number G005-069, titled Spoil Ground Pre-Dredge Hydrographic Survey', prepared by Transport Infrastructure Branch Queensland Government, dated 19-22 April 2006.


ROSSLYN BAY
BOAT HARBOUR
ROSSLYN BAY
BOAT HARBOUR
G005-093
PMD
C
LOCALITY MAP


SOUTH PACIFIC OCEAN
ROSSLYN BAY
BOAT HARBOUR
G005-093
PMD
C


ROSSLYN BAY
BOAT HARBOUR
G005-093
Queensland Government
FMD
C
BOAT HARBOUR
KEPPEL BAY
MARINA


ROSSLYN BAY BOAT HARBOUR
LAYOUT PLAN
DREDGE AREA H2
DREDGE AREA A
DREDGE AREA B
DREDGE AREA A1
DREDGE AREA C
DREDGE AREA H1
DREDGE AREA D
DREDGE AREA E1
DREDGE AREA E2
DREDGE AREA F
DREDGE AREAS
DREDGE LIMIT CO-ORDINATES
TYPICAL DREDGE SECTION BETWEEN ADJACENT DREDGE AREAS
TYPICAL DREDGE SECTION
NOTES
SOUTH PACIFIC OCEAN
ROSSLYN BAY BOAT HARBOUR
LOCALITY PLAN
ROSSLYN BAY BOAT HARBOUR
MAINTENANCE DREDGING (LY10) - 2012
DREDGE AREA LAYOUT
SKETCH 1


ROSSLYN BAY
SPOIL GROUND
G005-069
LOCALITY MAP

Part 9 – Manly (Former EPPR01431213)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	470 Royal Esplanade MANLY QLD 4179 Adjacent to Lot 687 Plan SP172860

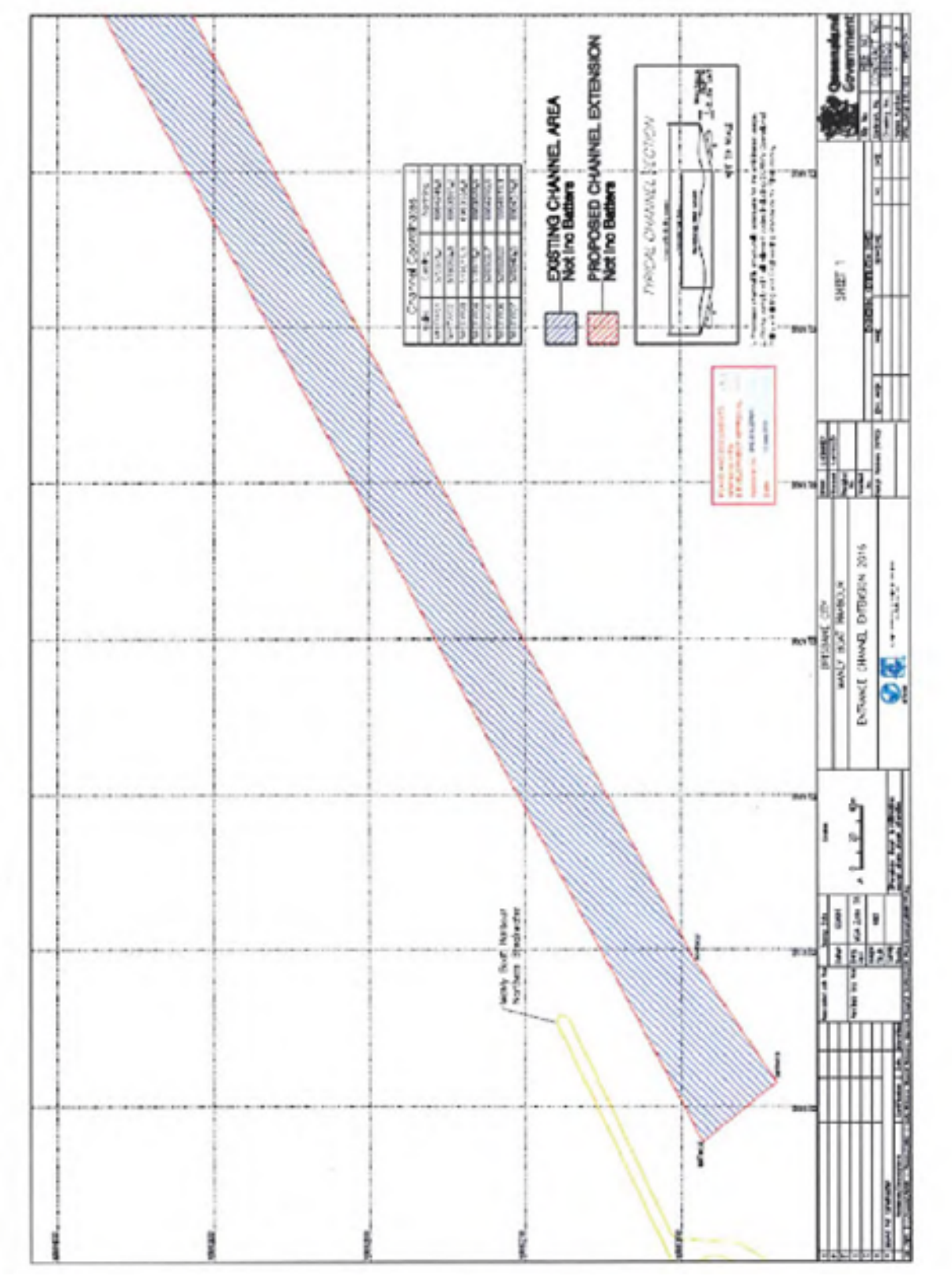
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

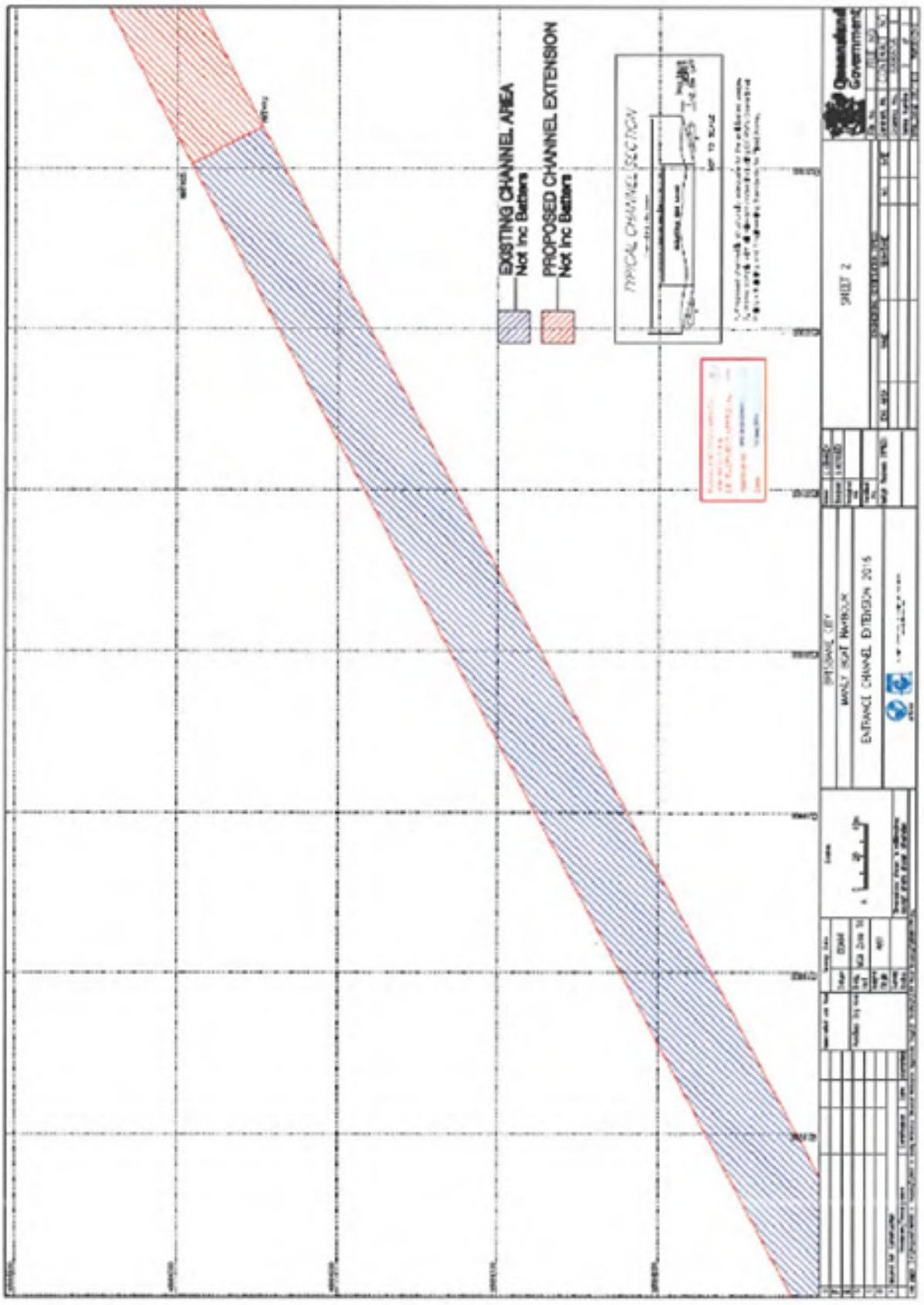
Agency interest: General	
Condition number	**Condition**
P9-G1	The **administering authority** must be advised in writing at least five (5) business days prior to the date of commencement of capital or maintenance **dredging** campaigns.
P9-G2	The **administering authority** must be advised in writing within ten (10) business following completion of the capital or maintenance **dredging** campaigns.
P9-G3	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. the deepening and widening of Manly Boat Harbour Entrance Channel must be undertaken solely within the confines of the clearly defined 'allowable area' (described as the 'redefined channel limits') indicated in the submitted Queensland Transport and Main Roads *Part 9 – Approved Plans 688655, 688656 and 688657 entitled "Brisbane City, Manly Boat Harbour, Entrance Channel Extension 2016"*. 2. Maximum depth of dredging works is not to exceed -2.8m LAT (Lowest Astronomical Tide)
P9-G4	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P9-G5	Any breach of a condition of this environmental authority or any adverse impact on an **environmental value** must be reported to the **administering authority** in writing within 24 hours of becoming aware of the breach or of the impact and any subsequent actions undertaken.
P9-G6	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years.
P9-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored.
P9-G8	For any nuisance complaints received **you** must: 1. Records of the complaint and any investigations or actions taken in relation to the complaint, must be kept. 2. The complaint must be investigated by an **appropriately qualified person** to determine if **environmental nuisance** has been caused. 3. Where **environmental nuisance** is or has been caused by the **activity**, actions necessary to rectify the nuisance issue must be undertaken.

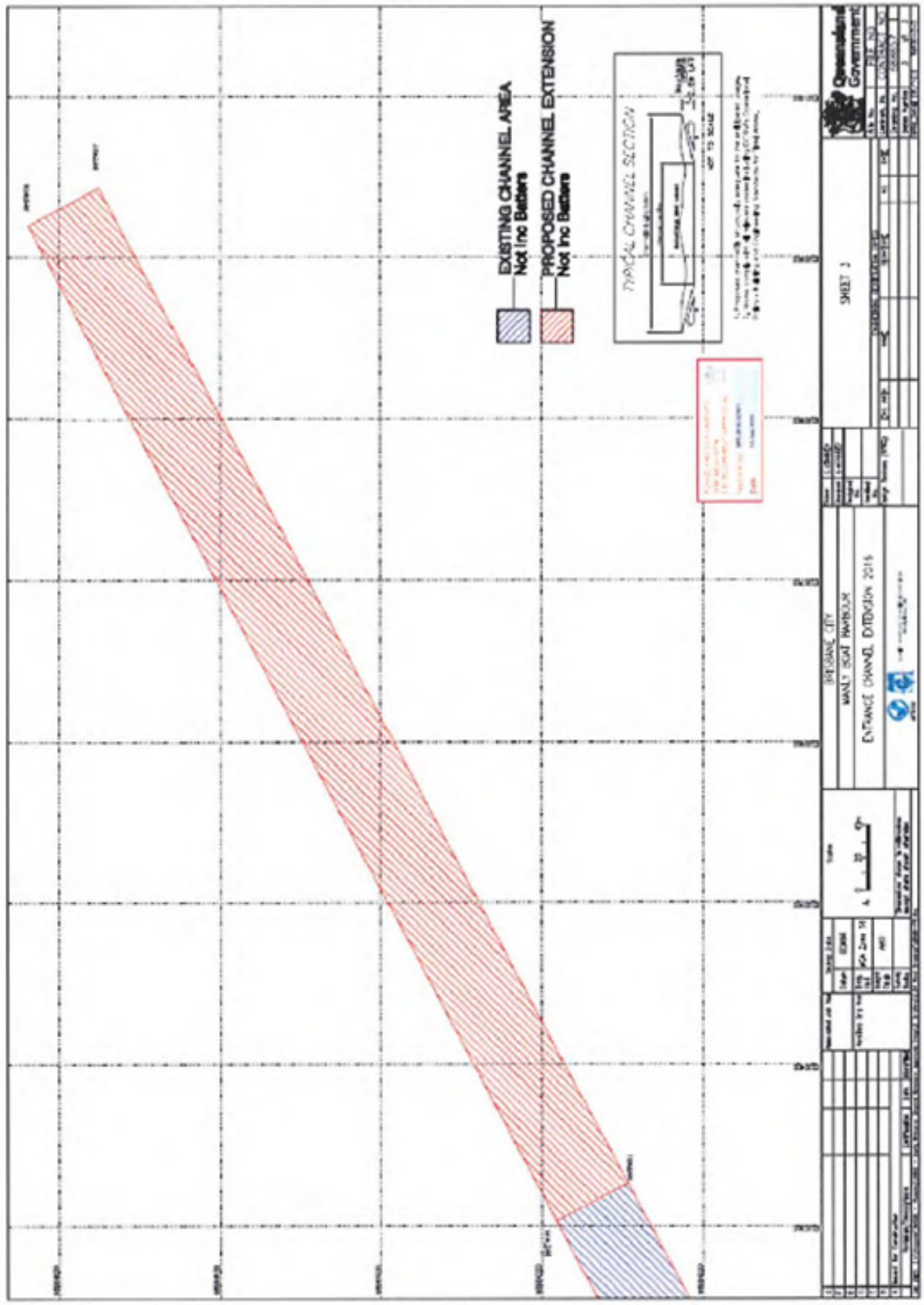
Agency interest: Air	
Condition number	**Condition**
P9-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P9-WT1	Other than as permitted within this environmental authority, contaminants must not be released from any **dredging** vessels, support craft or dredge-related machinery to any **waters** or the bed and banks of any **waters**.
P9-WT2	The only contaminants to be released to surface **waters** are sediments disturbed whilst conducting the **dredging activity** in accordance with *Part 9 - Table 1 – Surface Water Release Limits* and the additional requirements.
P9-WT3	In carrying out the ERA, the release of contaminants (including any release caused by extraction of material from the bed of waters) must: 1. only occur within the permitted areas referred to and specified in condition P9-G3; 2. not be released in the form of a 'plume' which exceeds the turbidity criteria in *Part 9 -Table 1 – Surface Water Release Limits*; 3. not have any properties which are capable of causing environmental harm; 4. not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.
P9-WT4	All reasonable and practicable **measures** must be undertaken to minimise the size of the sediment plume and concentration of suspended solids during the conduct of the **dredging activity**.
P9-WT5	Any **dredging** activities must be conducted using equipment that is registered and is equal to or superior to the following equipment in environmental performance: 1. Trailing Suction Hopper Dredge that is equipped, at a minimum, with: (a) below keel discharge of tail waters via an anti-turbidity control valve, and (b) dredge heads capable of, and where appropriate, depth control and fitted with marine wildlife protection or fauna exclusion devices (e.g. turtle deflector, deflector plates, tickler chains or drag heads) prior to and during operation.
P9-WT6	Where Trailing Suction Hopper **dredging** is carried out, an effective turtle exclusion device must be fitted to the dredge head. Evidence that this device has been installed and used on the dredge for the entire period of the dredging activity must be provided to the **administering authority** on request.
Agency interest: Noise	
Condition number	**Condition**
P9-N1	Noise from the **activity** must not occur from blasting or include substantial low frequency noise components and must not exceed the levels identified in *Part 9 -Table 2 – Noise limits* and the associated requirements at any nuisance **sensitive place** or **commercial place**.

Agency interest: Land	
Condition number	**Condition**
P9-L1	Contaminants must not be released to land.
Agency interest: Waste	
Condition number	**Condition**
P9-WS1	The only areas permitted to receive dredge spoil under this environmental authority are those described as a '*Material disposal area – MDA01 – Mud Island'* indicated within Part 6, Schedule 2, section 24 of the *Marine Parks (Moreton Bay) Zoning Plan 2008*. Any material that is not able to be deposited at the '*Material disposal area – MDA01 – Mud Island'* must be deposited at either: (a) an approved reclamation area; or (b) at a landfill site or other location lawfully able to receive this material.

Part 9 – Approved Plans 688655, 688656 and 688657 entitled “Brisbane City, Manly Boat Harbour, Entrance Channel Extension 2016” (sheets 1-3).




EXISTING CHANNEL AREA
Not Inc Batters
PROPOSED CHANNEL EXTENSION
Not Inc Batters
TYPICAL CHANNEL SECTION
SHEET 2
ENTRANCE CHANNEL EXTENSION 2015


EXISTING CHANNEL AREA
Not Inc Batters
PROPOSED CHANNEL EXTENSION
Not Inc Batters
TYPICAL CHANNEL SECTION
Queensland Government
SHEET 1
BRISBANE CITY
MANLY BOAT HARBOUR
ENTRANCE CHANNEL EXTENSION 2015

Part 9 – Table 1 Water Monitoring

Parameter	Measurement (units)	Minimum Frequency	Monitoring Location
Water	Prescribed in Schedule 3, Table 1 – Surface Water Release Limits	Sampling is to be undertaken on the day before dredging commences. Thereafter, sampling is to be undertaken daily * during dredging	Down current monitoring point[1]

Additional Requirements

* Minimum frequency can be changed to weekly when 5 consecutive days of dredging produce no exceedances of turbidity as defined in Schedule 3. Table 1 - Surface Water Release Limits. If an exceedance occurs, daily monitoring must resume.

1. The down-current monitoring point(s) may be less than, but must not be more than 350m down-current of the dredging activity (provide Global Positioning System in eastings and northings for the up-current control site(s), dredging location(s), and downstream monitoring point(s) for each monitoring event related to this condition).
2. All monitoring must be conducted in accordance with methods prescribed in the latest edition of the *Monitoring and Sampling Manual (DERM 2009).*
3. All monitoring must be carried out on samples that are representative of the effects of the dredging activity.
4. All monitoring devices must be effectively calibrated and maintained.

Part 9 – Table 1 Surface Water Release Limits

Dredging Location	**Quality Characteristic (units)**	**Minimum**	**Median**	**Maximum**	**Relevant Information**
Locations where sediment is disturbed during the regular conduct of the **dredging activity** as indicated in drawing MBMH - TW-0812 Manly Boat Harbour Entrance Channel Widening	Turbidity (NTU)	N/A N/A		BV[3] +10 NTU BV[3] +10%	When the Background value[1] is less than 100 NTU, the level must not exceed 10 NTU above the background level[1]. When the background level[1] is more than 100 NTU, the level must not be greater than 10% than the **background value**[1].
	pH (pH units)	7.0	-	8.5	Measure background value[1]

Additional requirements

1. The BV or "background value" for a quality characteristic is the quality characteristic value as measured at an up-current control (non-impacted) monitoring point situated in the receiving environment and:
    a. Must be measured throughout the water column at 2m depth Intervals where overall depth is >10m or 1m depth intervals where the overall depth is ≤10m. with the deepest reading taken at least 1m above the substrate - the average reading is the BV;
    b. Must be from 50-100m up-current from any location where sediment is disturbed during regular conduct of the dredging activity;
    c. Must be determined only at times when tidal flows are occurring; and
    d. Must not be determined within the period of one hour either side of slack tide.

Part 9 – Table 2 Noise Limits

Noise level measuring in dB(A)	***Monday to Saturday***			***Sundays and public holidays***		
	7am - 6pm	*6pm - 10pm*	*10pm - 7am*	*9am - 6pm*	*6pm - 10pm*	*10pm - 9am*
	*Noise measured at a nuisance **sensitive place***					
$LAeq_{adj,T}$	Background + 5	Background + 3	Background + 0	Background + 5	Background + 3	Background + 0
MaxLpA,T	Bkg + 10	Bkg + 8	Bkg + 5	Bkg + 10	Bkg + 8	Bkg + 5
*Noise measured at a **commercial place***						
$LAeq_{adj,T}$	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
MaxLpA,T	Background + 15	Background + 13	Background + 10	Background + 15	Background + 13	Background + 10

Part 10 – Port of Cooktown (Former EPPR01467413)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Port of Cooktown, Webber Esplanade, COOKTOWN QLD 4895 Adjacent to Lot 2 Plan SP287194 Adjacent to Lot 1 Plan SP287194 Adjacent to Lot 2 Plan CP889652 Adjacent to Lot 83 Plan BS161

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General

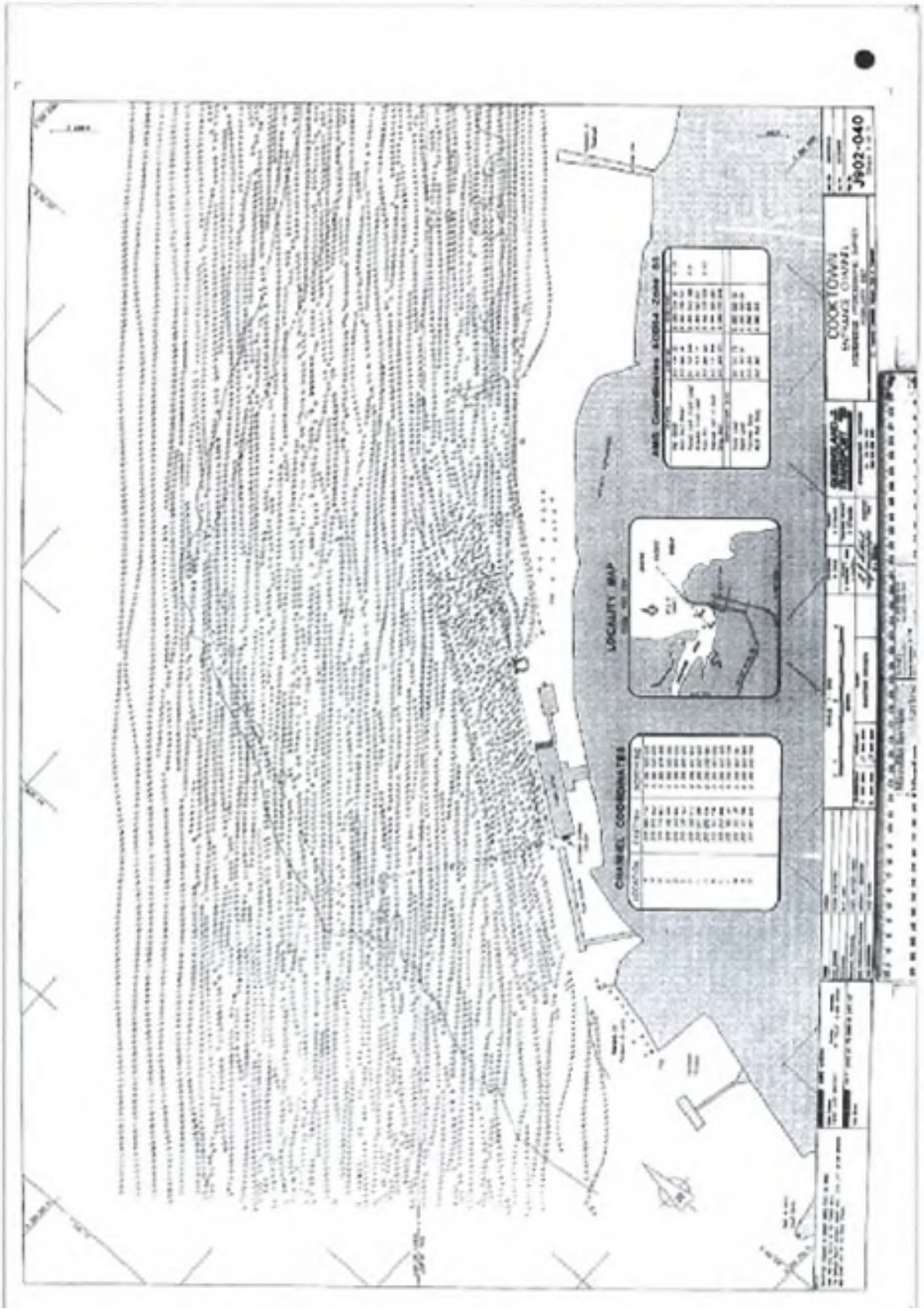
Condition number	Condition
P10-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. The deepening of the Cooktown Harbour Swing Basin and Entrance Channel must be undertaken solely within the confines of the defined area indicated in the submitted Queensland Transport and Main Roads *Part 10 – Approved Plans J902-040 (Sheet 1, 2 and 3) Cooktown Entrance Channel*. 2. The maximum depth of dredging works in the entrance channel is not to exceed -3.4m LAT (Lowest Astronomical Tide) and -4.3m (LAT) in the berth pocket.
P10-G2	The only areas permitted to receive dredge material under this environmental authority are an approved land based placement area and those within the confines of the defined area indicated in the following Table 1 – *Disposal Site Coordinates*: **Table 1: Disposal Site Coordinates** Location Name / Easting / Northing T / 313098 / 8291626 S / 313398 / 8291626 R / 313398 / 8292026 Q / 313098 / 8292026 *Notes:* *1. Survey information was derived from the Queensland Department of Transport drawing number C10-1-13-1 (original approved drawing, s.86 Approval FN300179 – amended 1998)* *2. Coordinates are Map Grid of Australia (MGA) 94, Zone 55.*
P10-G3	The **administering authority** must be advised in writing at least five (5) business days prior to the date of commencement of capital or maintenance **dredging** campaigns.
P10-G4	The **administering authority** must be advised in writing within ten (10) business days prior to the date of completion of the capital or maintenance **dredging** campaigns.
P10-G5	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P10-G6	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.

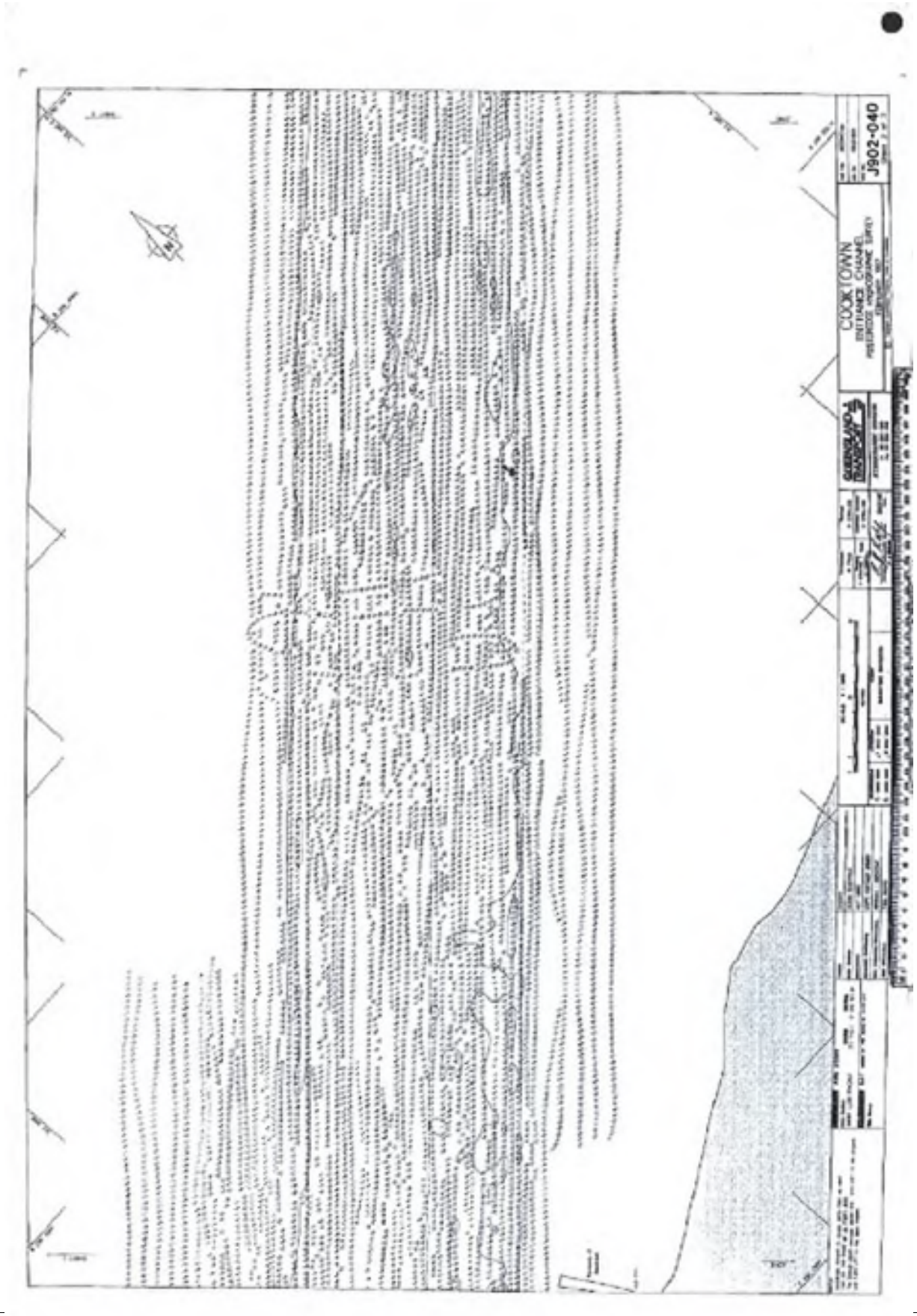
P10-G7	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years.
P10-G8	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored.
Agency interest: Air	
Condition number	**Condition**
P10-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P10-WT1	Other than as permitted within this authority, contaminants must not be released from any **dredging** vessels, support craft or dredge-related machinery to any **waters** or the bed and banks of any **waters**.
P10-WT2	The only contaminants to be released to surface **waters** are sediments, disturbed whilst conducting the dredging activity in accordance with *Part 10 –Table 1 – Surface water release limits* and the associated requirements.
P10-WT3	In carrying out the ERA dredging activity, the release of contaminants (including any release caused by extraction of material from the bed of waters) must: (a) only occur within the permitted areas referred to and specified in condition P10-G1, not be released in the form of a 'plume' which exceeds the turbidity criteria in *Part 10 - Table 1 – Surface Water Release Limits* and the additional requirements; (b) not have any properties which are capable of causing environmental harm; (c) not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.
P10-WT4	**Dredging** must not start until provision has been made to lawfully place or dispose of the dredge material. Evidence of applicable approvals must be made available to the **administering authority** when requested.
P10-WT5	All reasonable and practicable **measures** must be undertaken to minimise the size of the sediment plume and concentration of suspended solids during the conduct of the **dredging activity**.
P10-WT6	Any **dredging** activities must be conducted using equipment that is registered and is equal to or superior to the following equipment in environmental performance: (a) Trailing Suction Hopper dredge that is equipped, at a minimum, with: i. below keel discharge of tail **waters** via an anti-turbidity control valve or similar; ii. electronic positioning and depth control system for defining the location and depth of dredging activities; iii. dredge heads capable of, and where appropriate, depth control and fitted with marine wildlife protection or fauna exclusion devices (e.g. turtle deflector, deflector plates, tickler chains or drag heads) prior to and during operation

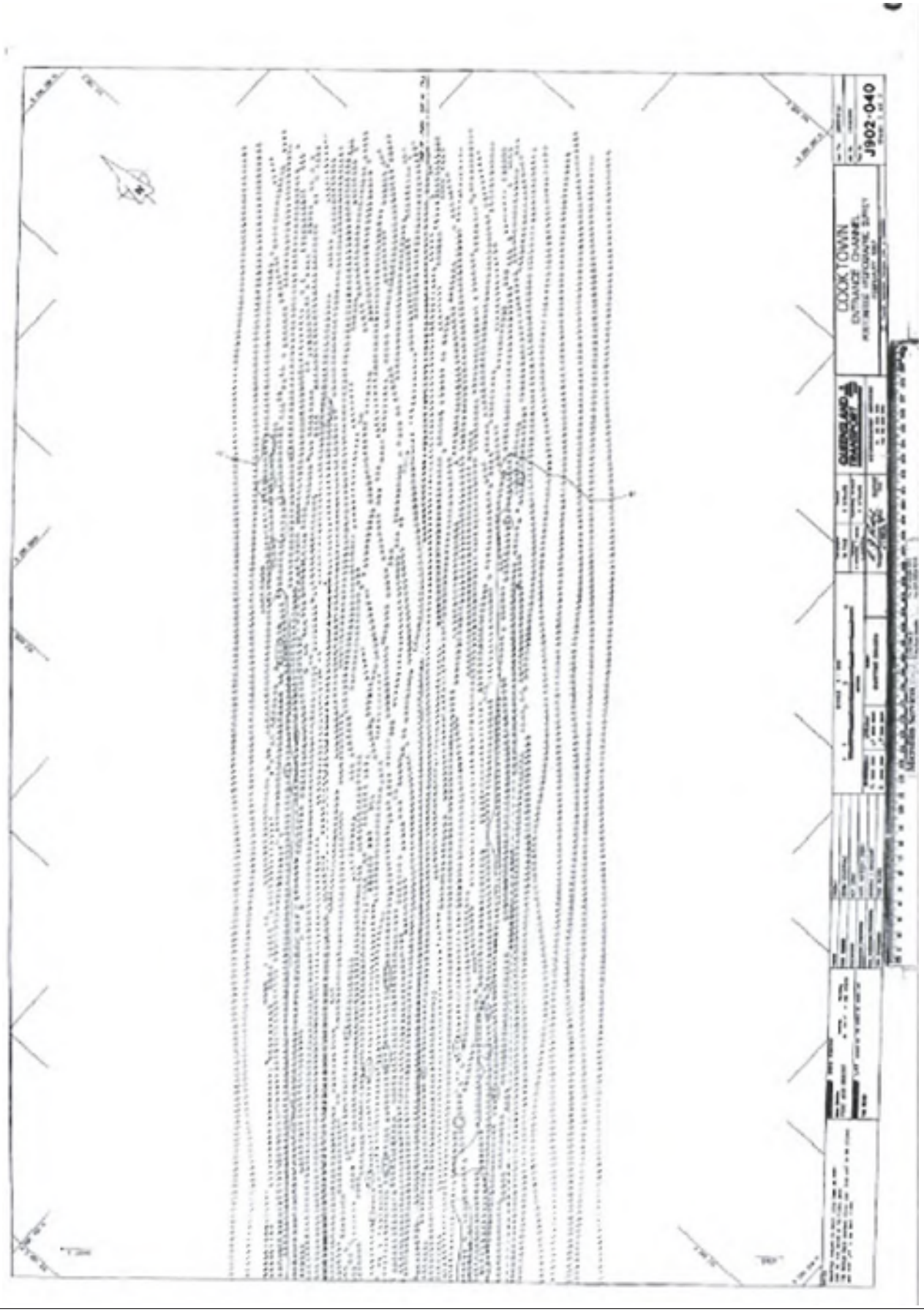
	(b) Cutter Suction Dredge that is equipped, as a minimum, with: i. electronic positioning and depth control system for defining the location and depth of dredging activities; ii. continuous delivery connection (e.g. floating or submerged pipeline) to an approved placement site; iii. a system or process to ensure the delivery system integrity is maintained at all times; iv. systems for determining solids to water ratio or density of dredged material during operations. (c) A grab dredge that is equipped, as a minimum, with: i. electronic positioning and depth control system for defining the location the location and depth of **dredging** activities.
P10-WT7	Where trailer suction **dredging** is carried out, an effective turtle exclusion device must be fitted to the dredge head. Evidence that this device has been installed and used on the dredge for the entire period of the dredging activity must be provided to the **administering authority**.
P10-WT8	Mobile and stationary **dredging** operations and spoil disposal activities must cease, or relocate to another site, if dugongs, turtles, or cetaceans, are either likely to be struck or captured, or are observed within 300 metres of the activities being undertaken.
P10-WT9	Operating procedures that minimise the risk of turtle capture by the dredge head, and the risk from all activities of injury to marine species of conservation significance, must be developed prior to the commencement of dredging activities.
P10-WT10	The **administering authority** is to be immediately notified of any turtle captures by the dredge or of injury to any marine species of conservation significance.
Agency interest: Noise	
Condition number	**Condition**
P10-N1	Noise from the **activity** must not include **substantial low frequency noise** components and must not exceed the levels identified in *Part 10 - Table 2 – Noise limits* and the associated requirements at any nuisance **sensitive place** or **commercial place**.
Agency interest: Land	
Condition number	**Condition**
P10-L1	Contaminants must not be released to land.
P10-L2	The activity must be undertaken in accordance with the Acid Sulfate Soils Management Plan (ASSMP) produced by the Department of Transport and Main Roads dated October 2013 or a more recent version submitted to the administering authority prior to implementation. The ASSMP must be implemented over the full period of works, and for a period after completion of disposal of dredge material to the land reclamation area as defined in the ASSMP.

P10-L3	The State Planning Policy 2/02 Guideline: *Planning and Managing Development Involving Acid Sulphate Soils* and the latest edition of any relevant guidelines must be complied with when treating and managing acid sulphate soils.
P10-L4	Placement of dredge material on land must be in a containment area that is certified as fit for purpose by a registered professional engineer of Queensland (RPEQ) and maintained to the condition certified during placement of dredge material.
Agency interest: Waste	
Condition number	**Condition**
P10-WS1	Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this environmental authority.

Part 10 – Approved Plans drawing J902-040 Cooktown Entrance Channel (sheets 1-3).




J902-040
COOKTOWN
ENTRANCE CHANNEL


J902-040
COOKTOWN
ENTRANCE CHANNEL
QUEENSLAND TRANSPORT

Part 10 – Table 1 – Surface Water Release Limits (sheets 1-2).

Monitoring location	Quality Characteristics (units)	Performance Criteria	Relevant Information	Frequency
WQ1 Background Value *Mouth of Endeavour River*	Turbidity (NTU)	N/A[1]	Sampling must have two 6 day sampling periods, one at the commencement of dredging and one during the middle of the dredging campaign period.	Sampling is to be undertaken on the day before dredging commences, thereafter, sampling is to be undertaken daily for the first 6 days of dredging operations and for a further 6 days during the middle of the dredging campaign period.
WQ2 *Dredge Channel* *<300m down current of dredge*	Turbidity (NTU)	Below 17.1NTU or 10NTU above WQ1	Monitor sites WQ3 and WQ4	Every 3 hours during the 6 day sampling periods indicated for WQ1.
WQ3 & WQ6 *Seagrass*	Turbidity (NTU)	If turbidity greater than 60 NTU or 10% above WQ1 (for two consecutive 3 hour readings) OR If Turbidity greater than 17.1 NTU or 10 NTU above WQ1 for greater than 2 tidal cycles (period of 24hrs).	Suspend dredging until turbidity is below trigger value	Every 3 hours during dredging operations when trigger value at WQ2 and/or WQ5 is exceeded. In the event dredging works are suspended under this criteria during either sampling period, sampling of all sites will continue daily for the duration of the dredging campaign.
WQ4 *Seagrass coral/rocky reef*	Turbidity (NTU)	WQ1 for greater than 2 tidal cycles (period of 24 hrs)		

WQ5(a) *Dredge Management Placement Area; <300m down current of dredge*	Turbidity (NTU)	Below 17.1 NTU or 10NTU above WQ1	Monitor sites WQ3 and WQ4	Every 3 hours during monitoring periods for the dredging operations, 1 hour after a load is deposited or at least 1 hour before/after slack water for continuous placement
WQ5(b) *<300m of the release point*	Turbidity (NTU)	Below 17.1NTU or 10NTU above WQ1.	Monitor sites WQ3 and WQ4.	Every 3 hours during the dredging operations.
WQ7 *Reclamation Area; <50m of outlet location*	Turbidity (NTU)	If turbidity greater than 60NTU or 10% above WQ1 (for two 3 hourly readings).	Cease all discharges from the land reclamation area until turbidity is below the trigger value.	Sampling is to be undertaken daily for the duration of dredging operations while placement to the reclamation sites.
All monitoring locations (WQ1 to WQ7)	pH (pH units)	7.0 - 8.5	Cease all discharges from the land reclamation area until pH is within the performance criteria.	During all monitoring events. If exceedance occurs 3 hourly monitoring.

Associated Requirements:

1. The 'background value' for a quality characteristic is the quality characteristic value as measured at an up current control (non-impacted) monitoring point situated in the receiving environment.
2. Global positioning coordinates must be recorded for each monitoring location.
3. Monitoring must be conducted in accordance with methods prescribed in the latest edition of the Monitoring and Sampling manual (EHP 2009).
4. Monitoring must be carried out on samples that are representative of the effects of the dredging activity.
5. All monitoring devices must be effectively calibrated and maintained.
6. The pH is the quality characteristic measured at the water surface.

Part 10 – Table 2 Noise Limits

Noise level measuring in dB(A)	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a nuisance **sensitive place**					
$L_{Aeq, adj,T}$	Background + 5	Background + 3	Background + 0	Background + 5	Background . + 3	Background + 0
MaxLpA,T	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
Noise measured at a **commercial place**						
$L_{Aeq, adj, T}$	Background + 10	Background + 8	Background + 5	Background + 10	Background + 8	Background + 5
MaxLpA,T	Background + 15	Background + 13	Background + 10	Background + 15	Background + 13	Background + 10

Part 11 – Mossman River (Former EPPR00525013)

Environmentally Relevant Activity	Locations
16-(1a) Dredging >1000t but <10000t/yr	Mossman River, NEWELL BEACH QLD 4873 Adjacent to Lot 382 Plan SR864 Lot 1 Plan SP322663 Adjacent to Lot 1 Plan SP322663 Lot 374 Plan SR533 (beach nourishment area)

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P11-G1	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P11-G2	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P11-G3	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P11-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P11-G5	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
P11-G6	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P11-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P11-G8	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: (a) map in *Part 11 – Approved Plans Attachment 1.*

<table>
<tr><th colspan="2">Agency interest: Air</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P11-A1</td><td>Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any sensitive place or commercial place.</td></tr>
<tr><th colspan="2">Agency interest: Water</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P11-WT1</td><td>Monitoring
Monitoring must be undertaken and record kept of contaminant releases to waters from the dredging works for the quality characteristics and not less frequently than specified in Part 11 -Table 2 – Contaminant release limits to water. All determinations of the quality of contaminants released must be:
(a) made in accordance with methods prescribed in the latest edition of the administering authority's Water Quality Sampling Manual; and
(b) carried out on samples that are representative of the discharge.

Part 11 - Table 2 – Contaminant release limits to water
<table>
<tr><th rowspan="2">Quality characteristics</th><th rowspan="2">Monitoring point</th><th rowspan="2">Units</th><th colspan="2">Release limit</th><th rowspan="2">Monitoring frequency</th></tr>
<tr><th>minimum</th><th>maximum</th></tr>
<tr><td rowspan="4">Turbidity</td><td>W1[1]</td><td>NTU</td><td>-</td><td>42</td><td>Once per day whilst undertaking beach nourishment works</td></tr>
<tr><td>W2[2]</td><td>NTU</td><td>-</td><td>42</td><td>Once per day whilst undertaking dredging works</td></tr>
<tr><td>W3[3]</td><td></td><td colspan="2">no visible turbidity</td><td>Once per day whilst undertaking dredging works</td></tr>
<tr><td>W4[4]</td><td></td><td colspan="2">no visible turbidity</td><td>Once per day whilst undertaking dredging works</td></tr>
<tr><td>pH</td><td>W1[1]</td><td>pH units</td><td>6.5</td><td>8.4</td><td>Once per day whilst undertaking beach nourishment works</td></tr>
</table>
[1] W1 – 50m down current of beach nourishment works
[2] W2 – 50m down current of dredging works
[3] W3 – 100m down current of beach nourishment works
[4] W4 – 100m down current of dredging works</td></tr>
<tr><td>P11-WT2</td><td>If trigger values listed in Part 11 -Table 3 are met at W1 and W2 resulting from dredging and beach nourishment works, up current[5] and down current[6] turbidity is to be compared to determine if there is a 30% increase in turbidity down current of the operation. If there is an increase of over 30% the dredging and beach nourishment works are to be amended to reduce turbidity. If turbidity has not dropped to recovery values listed in Part 11 - Table 3 by the duration period, dredging and/or beach nourishment is to stop until turbidity has returned to beneath the recovery value or background.</td></tr>
</table>

Part 11 - Table 3 – Trigger value, recovery values and duration periods for turbidity release to water

Monitoring Points	Trigger Value (NTU)	Duration (hours)	Recovery value (NTU)
W1, W2	42	8	13

[5]up current – a location determined by permit holder up current of beach nourishment and dredging works
[6]down current – 50m down current of beach nourishment and dredging works

Agency interest: Noise

Condition number	Condition
P11-N1	**Noise Nuisance.** Noise from the ERA must not cause an environmental nuisance at any nuisance **sensitive place** or **commercial place**.
P11-N2	Noise from the **activity** must not exceed the levels identified in *Part 11 -Table 1—Noise limits* when measured in accordance with the associated monitoring requirements.

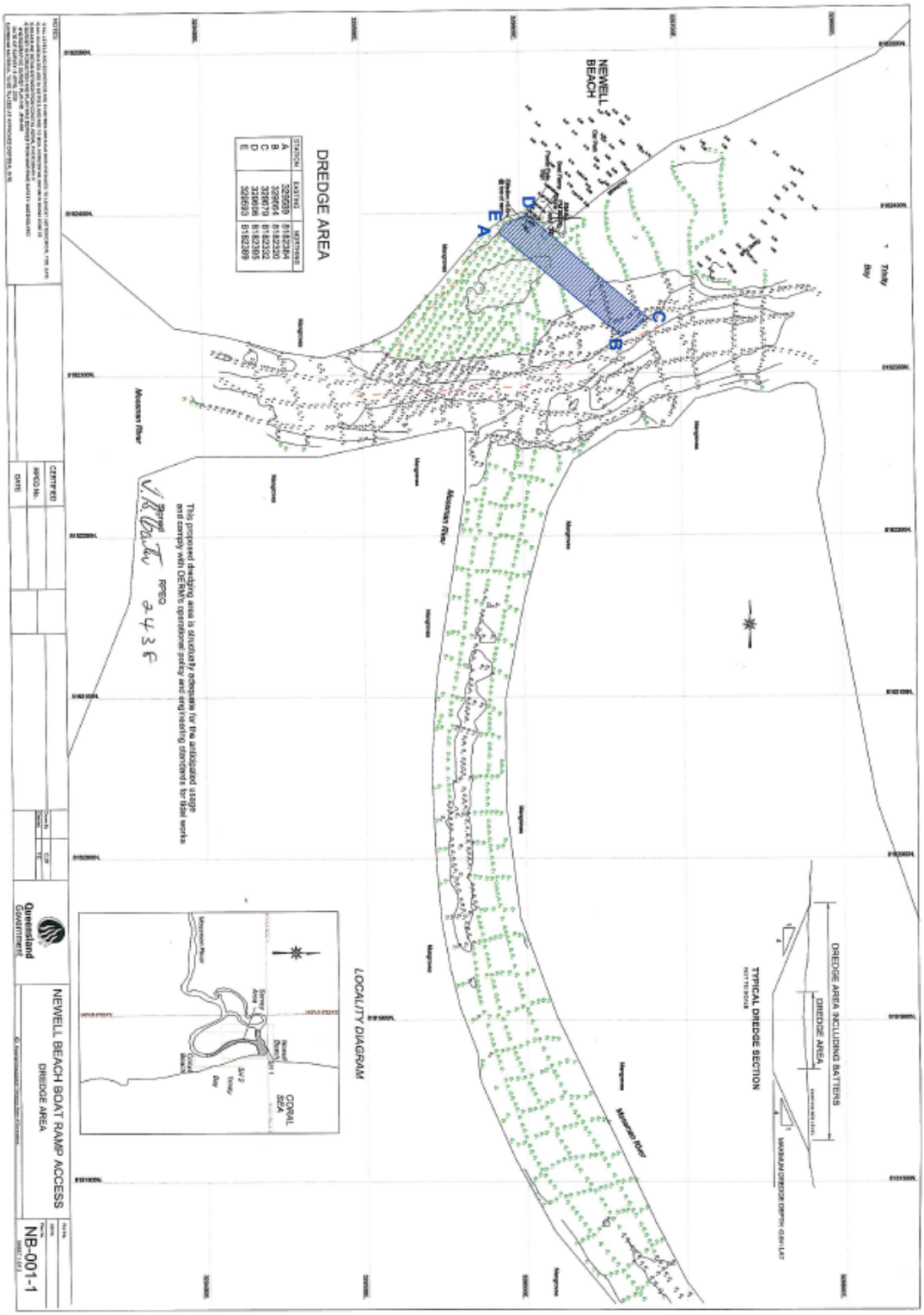
Part 11 - Table 1 - Noise limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
$L_{A10, adj, 10 mins}$	50	45	35	50	45	35
$L_{A1, adj, 10 mins}$	55	50	40	55	50	40
Noise measured at a 'Commercial place'						
$L_{A10, adj,10 mins}$	55	50	40	55	50	40
$L_{A1, adj, 10 mins}$	60	55	45	60	55	45

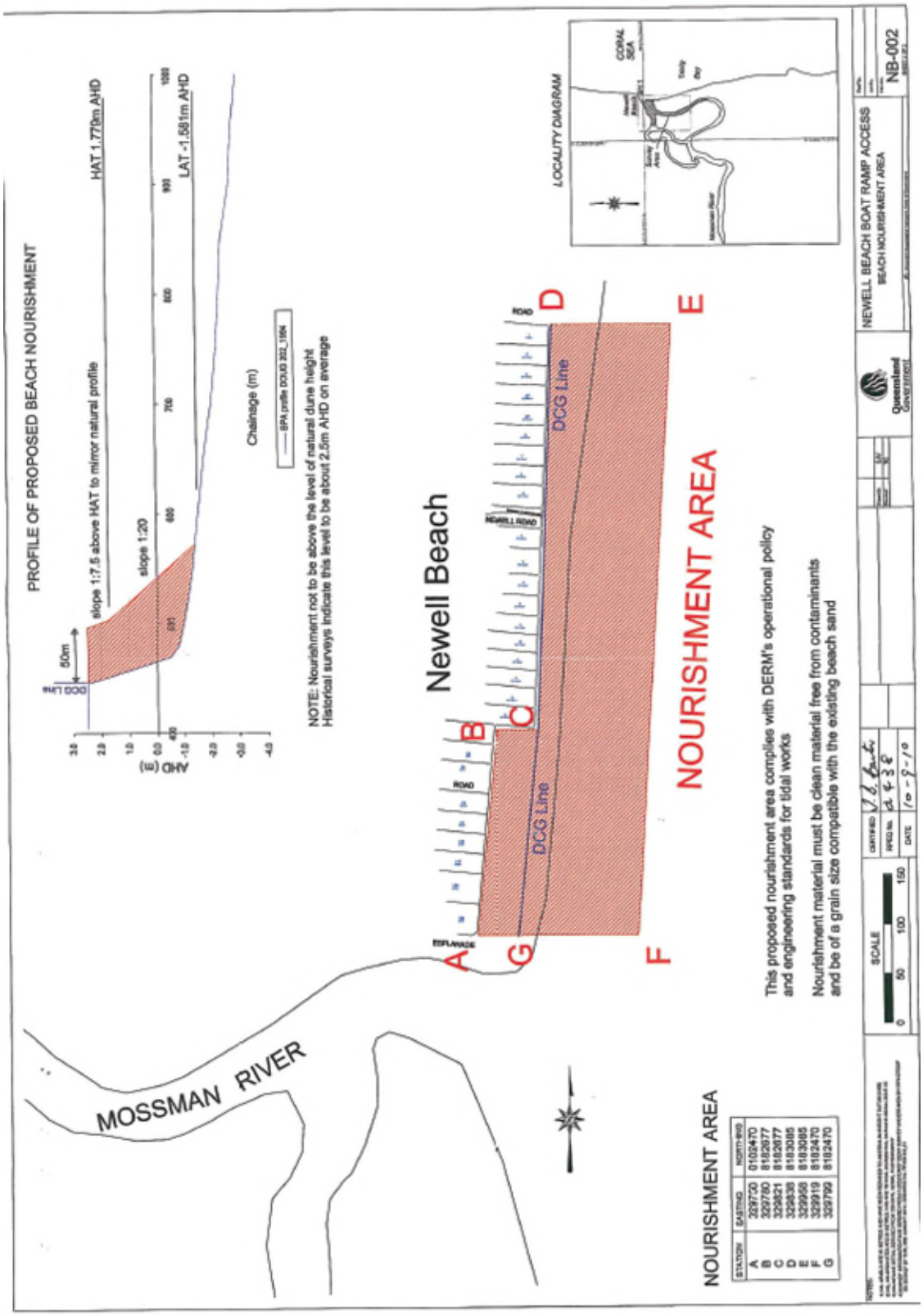
P11-N3	**Noise monitoring** When requested by the Administering Authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include: - $L_{A\ 10, adj, 10 mins}$; - $L_{A\ 1, adj, 10 mins}$; - the level and frequency of occurrence of impulsive or tonal noise; - atmospheric conditions including wind speed and direction; - effects due to extraneous factors such as traffic noise; and - location, date and time of recording.
P11-N4	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's *Noise Measurement Manual*.

Agency interest: Land	
Condition number	**Condition**
P11-L1	The beach nourishment site must be managed in a manner such that: (a) potential for erosion of the site is minimised; (b) the quality of stormwater, other water and seepage released from the site is such that releases of contaminants such as suspended solids, turbidity, total dissolved salts, pH are not likely to cause environmental harm; (c) the water quality of any residual water body meets relevant criteria for subsequent uses and does not have potential to cause environmental harm; (d) the final landform is stable and not subject to slumping; and (e) any actual and potential acid sulfate soils in or on the site are either not disturbed, or are submerged or treated, so as to not be likely to cause environmental harm.
P11-L2	**Land disturbance** The area of disturbance for the beach nourishment activities must be within the boundaries outlined in *Part 11 – Approved Plans Attachment 2*.
P11-L3	Only contaminants permitted to the released to land are dredged material to the areas shown in *Part 11 – Approved Plans Attachment 2* in compliance with the limit levels stated in Table 2 – contaminant release limits to water.
P11-L4	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Community	
Condition number	**Condition**
P11-WS1	**Complaint Response** The operator of the ERA 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) conclusion formed; and (e) any actions taken.

Part 11 – Approved Plans Attachment 1



Part 11 – Approved Plans Attachment 2



Part 12 – Port Douglas Boat Harbour (Former EPPR01511413)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Port Douglas Boat Harbour, PORT DOUGLAS QLD 4877 Lot 5 Plan SP288958 Lot 115 Plan SR632 (dredge area - Marina) Lot 3 Plan SP183025 (onshore spoil disposal) Dredging pipeline: Lot 2 Plan SP262338 Adjacent to Lot 113 Plan SP105910 Lot 202 Plan SP222765 Lot 204 Plan SP264765 Adjacent to Lot 138 Plan CP851586 Lot 6 Plan SP183013 Adjacent to Lot 29 Plan USL8686 Lot 4 Plan SP158389

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P12-G1	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P12-G2	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P12-G3	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P12-G4	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
P12-G5	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.

P12-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P12-G7	Dredging may only occur in the area "proposed dredged areas" shown in *Part 12 – Approved Plans*.
Agency interest: Air	
Condition number	**Condition**
P12-A1	When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s)relevant to the potentially affected dust sensitive place and at upwind control sites and must include: (a) for a complaint alleging dust nuisance, dust deposition; and (b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere over a 24hr averaging time)
P12-A2	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
P12-A3	Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial place: (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); OR (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with: Australian Standard AS 3580.9.6 of 2003 (or more recent editions) *'Ambient air – Particulate matter – Determination of suspended particulate PM_{10} high-volume sampler with size-selective inlet – Gravimetric method*'; or Any alternative method of monitoring PM_{10} which may be permitted by the '*Air Quality Sampling Manual*' as published from time to time by the administering authority.
Agency interest: Water	
Condition number	**Condition**
P12-WT1	**Monitoring** Monitoring must be undertaken and records kept of contaminant releases to waters from the dredging works for the quality characteristics and not less frequently than specified in *Part 12 - Table 2 – Contaminant release limits to water*. All determinations of the quality of contaminants released must be: (a) made in accordance with methods prescribed in the latest edition of the administering authority's *Water Quality Sampling Manual*; and (b) carried out on samples that are representative of the discharge.

Part 12 -Table 2 – Contaminant release limits to water

		Units	Release limit	Monitoring frequency

	Quality characteristics	**Monitoring point (refer to Map 2)**		**minimum**	**maximum**	
	Turbidity	W1[1], W2[2]	NTU	-	Refer to condition W3	Every three hours during dredging operation for the first five days, thereafter refer to W2[7]
		W3[3], W4[4]	NTU	-	-	Every three hours during dredging operation for the first five days, thereafter refer to W2
		W5[5]	NTU	-	Refer to condition W4	Every three hours during dredging operation for the first five days, thereafter refer to W2
		W6[6]	NTU	-	50	Once per day whilst discharging
	DO	W1[1], W2[2]	% saturation	80	-	Every three hours during dredging operation for the first five days, thereafter refer to W2[7]
		W3[3], W4[4]	% saturation	80	-	Every three hours during dredging operation for the first five days, thereafter refer to W2
		W5[5]	% saturation	80	-	Every three hours during dredging operation for the first five days, thereafter refer to W2
		W6[6]	% saturation	80	-	Once per day whilst discharging
	pH	W1[1], W2[2]	pH units	6.5	8.4	Every three hours during dredging operation for the first five days, thereafter refer to W2[7]
		W3[3], W4[4]	pH units	6.5	8.4	Every three hours during dredging operation for the first five days, thereafter refer to W2
		W5[5]	pH units	6.5	8.4	Every three hours during dredging operation for the first five days, thereafter refer to W2
		W6[6]	pH units	6.5	8.4	Once per day whilst discharging
	[1] W1 The edge of the coral habitat area. [2] W2 The edge of the coral habitat area. [3] W3 Directly up-current of the dredge vessel within 20m or as close as possible to the vessel maintaining correct safety standards. When dredging in Dredge Area G (refer to map 1), W3 is to be located 20m down-current of the harbour entrance. [4] W4 200m upstream of Closehaven Marina. Measurements are to be taken adjacent to the end of the access road. [5] W5 Within 1m of the clear water outlet from the disposal site into the mangroves. [6] W6 Within 1m of the clear water outlet from the disposal site into the mangroves. [7] Monitoring at W1 and W2 is not required when dredging occurs in Dredge Area G (refer to map 1).					
P12-WT2	At the end of the initial 5 day monitoring period the data will be reviewed and a report submitted to the administering authority within a week outlining any trends in the data, including a description of all exceedances of release limits *Part 12 -Table 2* or trigger values *Part 12 - Table 3* (if any) and response measures taken. If there is no exceedance of trigger values or release limits associated with the dredging the monitoring reverts to once per day. The daily water quality measurement is to be taken after the first hour of dredging operation and where possible must not be taken in periods of slack water. Results will be analysed and submitted to the administering authority every 2 weeks. If there is an exceedance of the trigger values (*Part 12 - Table 3*) or release limits (*Part 12 - Table 2*) occurs, which is attributable to the dredging operation, further monitoring (as described for the first five days indicated above) will be undertaken every 3 hours on a daily basis until the end of dredging operations. Results will be analysed and submitted to administering authority every 2 weeks. At the completion of monitoring a report is to be submitted to administering authority outlining all exceedances (if any) and response measures taken to mitigate potential impacts.					

<table>
<tr><td>P12-WT3</td><td>If trigger values listed (Part 12 - Table 3) are met at W1 and W2 resulting from the dredging operations, monitoring is to occur at the site every three hours during dredging until turbidity is down to the recovery value for the site. Once a trigger value has been met, up-current[5] and down current[6] turbidity are to be compared to determine if there is a 30% increase in turbidity down current of the operation. If there is an increase of over 30% the dredging operation is to be reviewed to identify ways to reduce turbidity. If turbidity has not dropped to the recovery values (Part 12 - Table 3) by the duration period, dredging is to stop until turbidity has returned to beneath the recovery value.

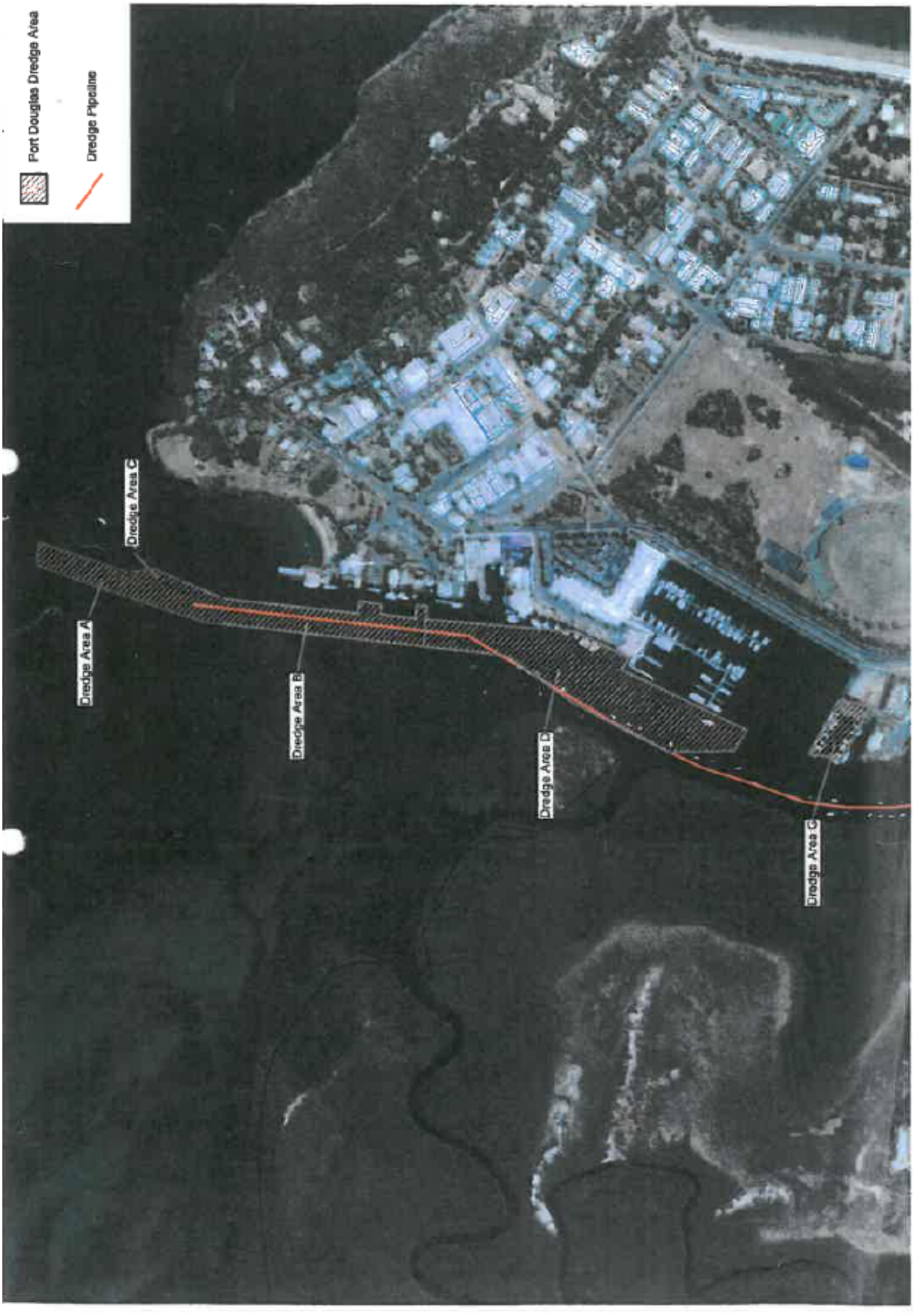
Part 12 - Table 3 – Trigger value, recovery values and duration periods for turbidity release to water
<table>
<tr><th>Monitoring Points</th><th>Trigger Value (NTU)</th><th>Duration (hours)</th><th>Recovery value (NTU)</th></tr>
<tr><td>W1</td><td>19</td><td>8</td><td>7</td></tr>
<tr><td>W2</td><td>42</td><td>8</td><td>13</td></tr>
</table>
[5]up current – a location determined by permit holder up current of beach nourishment and dredging works;
[6]down current – 50m down current of beach nourishment and dredging works.</td></tr>
<tr><td>P12-WT4</td><td>If turbidity at W5 is greater than 10% of the up current turbidity at W3 as a result of dredging operations, when the dredge is located in dredge area D and G (Refer to Map 1), dredging operations shall be amended to reduce the W5 values to background, if a reduction is not achieved dredging will cease until background levels at W5 are reached.</td></tr>
<tr><td>P12-WT5</td><td>Dredging operations must cease if the release limits for pH (Part 12 - Table 2) are exceeded as a result of dredging operations. Discharges at W6 can only occur when pH is within release limits for pH (Part 12 - Table 2) or at background values.</td></tr>
<tr><td>P12-WT6</td><td>Complaints in relation to contamination of water quality that are attributed to dredging operations must be reported to the administering authority within 24 hours. When requested by the administering authority, a water quality investigation must be undertaken within a reasonable and practicable timeframe to investigate the complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer). The results of the investigation (including associated water quality results and actions to mitigate impacts, if applicable) must be reported within 14 days to the administering authority. If requested by the administering authority, additional water quality sampling is to be undertaken.</td></tr>
<tr><td colspan="2">Agency interest: Noise</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P12-N1</td><td>Noise Nuisance.
Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.</td></tr>
<tr><td>P12-N2</td><td>Noise from the activity must not exceed the levels identified in Part 12 - Table 1—Noise limits when measured in accordance with the associated monitoring requirements.</td></tr>
</table>

Part 12 - Table 1 - Noise limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
$L_{A10, adj, 10 mins}$	50	45	35	50	45	35
$L_{A1, adj, 10 mins}$	55	50	40	55	50	40
Noise measured at a Commercial place'						
$L_{A10, adj, 10 mins}$	55	50	40	55	50	40
$L_{A1, adj, 10 mins}$	60	55	45	60	55	45

P12-N3	**Noise monitoring** When requested by the Administering Authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include: - $L_{A 10, adj, 10 mins}$; - $L_{A 1, adj, 10 mins}$; - the level and frequency of occurrence of impulsive or tonal noise; - atmospheric conditions including wind speed and direction; - effects due to extraneous factors such as traffic noise; and - location, date and time of recording.
P12-N4	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's *Noise Measurement Manual*.
Agency interest: Waste	
Condition number	**Condition**
P12-WS1	Dredge spoil is to be disposed at the land based disposal facility on Lot 3 Plan SP183025.
P12-WS2	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Community	
Condition number	**Condition**
P12-C1	**Complaint Response** The operator of the ERA 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) conclusion formed; and (e) any actions taken.

Part 12 – Approved Plans Map 1



Part 12 – Approved Plans Map 2



Part 13 – Dredge Area – Entrance Channel to Pelican Park (Former EPPR02885615)

Environmentally Relevant Activity	Locations
16-(1a) Dredging >1000t but <10000t/yr	Dredge Area - entrance channel to Pelican Park CLONTARF QLD 4019 Adjacent to Lot 610 Plan CP859632

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P13-G1	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P13-G2	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency; 2. establish and maintain control measures that minimise the potential for environmental harm; 3. ensure plant, equipment and measures are maintained in a proper and effective condition; 4. ensure plant, equipment and measures are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P13-G3	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P13-G4	Treatment and management of acid sulfate soils must comply with the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
P13-G5	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P13-G6	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P13-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P13-G8	**Definition of Dredging Area** The only areas and depths permitted to be dredged under this approval are those shown in the attached *Part 13 – Approved Plans Locality Plan, Dredge Area and Notes, ref no. BN-66-4-1, revision A, amended 18 November 2014.*
P13-G9	Provide to the **administering authority** written notification of the date when **dredging** will commence at least five (5) business days prior to establishing a new **dredging activity**.

Agency interest: Air	
Condition number	**Condition**
P13-A1	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P13-A2	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
P13-A3	Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial place: (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); OR (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with: Australian Standard AS 3580.9.6 of 2003 (or more recent editions) '*Ambient air – Particulate matter – Determination of suspended particulate PM_{10} high-volume sampler with size-selective inlet – Gravimetric method*'; or Any alternative method of monitoring PM_{10} which may be permitted by the '*Air Quality Sampling Manual*' as published from time to time by the administering authority.
Agency interest: Water	
Condition number	**Condition**
P13-WT1	**Monitoring** Monitoring must be undertaken and records kept of contaminant releases to waters from the discharge location for the quality characteristics and not less frequently than specified in *Part 13 - Table 2 – Dredging water contaminant release limits.* All determination of the quality of contaminants released must be: (a) made in accordance with methods prescribed in the latest edition of the administering authority's *Water Quality Sampling Manual*; and (b) carried out on samples that are representative of the discharge.
P13-WT2	The only contaminants to be released to surface **waters** are dredging waters in accordance with *Part 13 - Table 2—Dredging water contaminant release limits* and the associated monitoring requirements.
P13-WT3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P13-WT4	**Disposal of Dredged Spoil.** The only areas permitted to receive dredged soil under this approval are those described as:

	'*Spoil Disposal Site Locality Plan'* on plan Spoil Disposal Site Locality Plan, Typical Dredge Section, and Notes, re no. BN-66-4-2, revision A, amended 18 November 2014. '*Mud Island Dredge Material Disposal Site'* with clearly indicated 'boundary of disposal area' as shown in the attached map. *Moreton Bay Marine Park Zoning Map* MP3: Map 7 of 19.
P13-WT5	A maximum quantity of 1300m^3 of spoil is to be disposed of at Scarborough dredge ponds in any one year.
P13-WT6	The registered operator is not to dispose of spoil at the Scarborough dredge ponds if the dredge ponds contain more than 35,000m^3 of spoil
Agency interest: Noise	
Condition number	**Condition**
P13-N1	**Noise Nuisance.** Noise from the ERA must not cause an environmental nuisance at any nuisance **sensitive place** or **commercial place**.
P13-N2	Noise from the **activity** must not exceed the levels identified in *Part 13 - Table 1—Noise limits* when measured in accordance with the associated monitoring requirements.
P13-N3	**Noise monitoring** When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include: - $L_{A90, 10 mins}$; - $L_{A10, adj, 10 mins}$; - $L_{A1, adj, 10 mins}$; - the level and frequency of occurrence of impulsive or tonal noise; - atmospheric conditions including wind speed and direction; - effects due to extraneous factors such as traffic noise; and - location, date and time of recording.
P13-N4	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's *Noise Measurement Manual*.
Agency interest: Land	
Condition number	**Condition**
P13-L1	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
P13-L2	The rehandling area as shown in *Part 13 – Approved Plans* must be bunded to ensure that contaminants are not released from this area; drainage of this bunded area must only be directed back to the dredged area specified in *Part 13 – Approved Plans*.
Agency interest: Community	
Condition number	**Condition**
P13-WS1	**Complaint Response**

	The operator of the ERA 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) conclusion formed; and (e) any actions taken.

Part 13 – Table 1 Noise Limits

Sound Pressure Level dB(A)	***Monday to Saturday***			***Sundays and public holidays***		
	7am - 6pm	***6pm - 10pm***	***10pm - 7am***	***9am - 6pm***	***6pm - 10pm***	***10pm - 9am***
	Noise measured at a 'Noise sensitive place'					
$L_{Aeq, adj,T}$	Background + 5 dB(A)	Background + 5 dB(A)	Background + 3 dB(A)	Background + 3 dB(A)	No audible noise	No audible noise
Noise measured at a Commercial place'						
$L_{Aeq, adj,T}$	Background + 10 dB(A)	Background + 10 dB(A)	Background + 5 dB(A)	Background + 5 dB(A)	Background + 3 dB(A)	Background + 3 dB(A)

Where “T” is 10 minutes and ‘Background’ means background sound pressure level measured in accordance with the latest edition of the Department of Environment and Science *Noise Measurement Manual*.

Table 1 does not purport to set operating hours for the ERA.

Part 13 – Table 2 Dredging Water Contaminant Release Limits

Monitoring locations	Water quality parameter	Release limit		Monitoring frequency
		Minimum	Maximum	
Down current[2] of release point[3] and background[4] sampling point.	pH	6.5	8.5	One test to be undertaken before dredging. Thereafter weekly during dredging.
	Turbidity	-	No visible plume	Daily during dredging
	Suspended Solids (mg/L)	Must not exceed 10mg/L above a background value where the background value is less than 10mg/L or 10 percent greater than a background value where the background value is greater than 100mg/L.		One test to be undertaken before dredging. Thereafter weekly during dredging.
	Oil, grease, floating scum and litter	No visible oil, grease, floating scum or litter.		Daily during dredging

[2] A down current sampling point is any sampling point in the receiving waters situated:

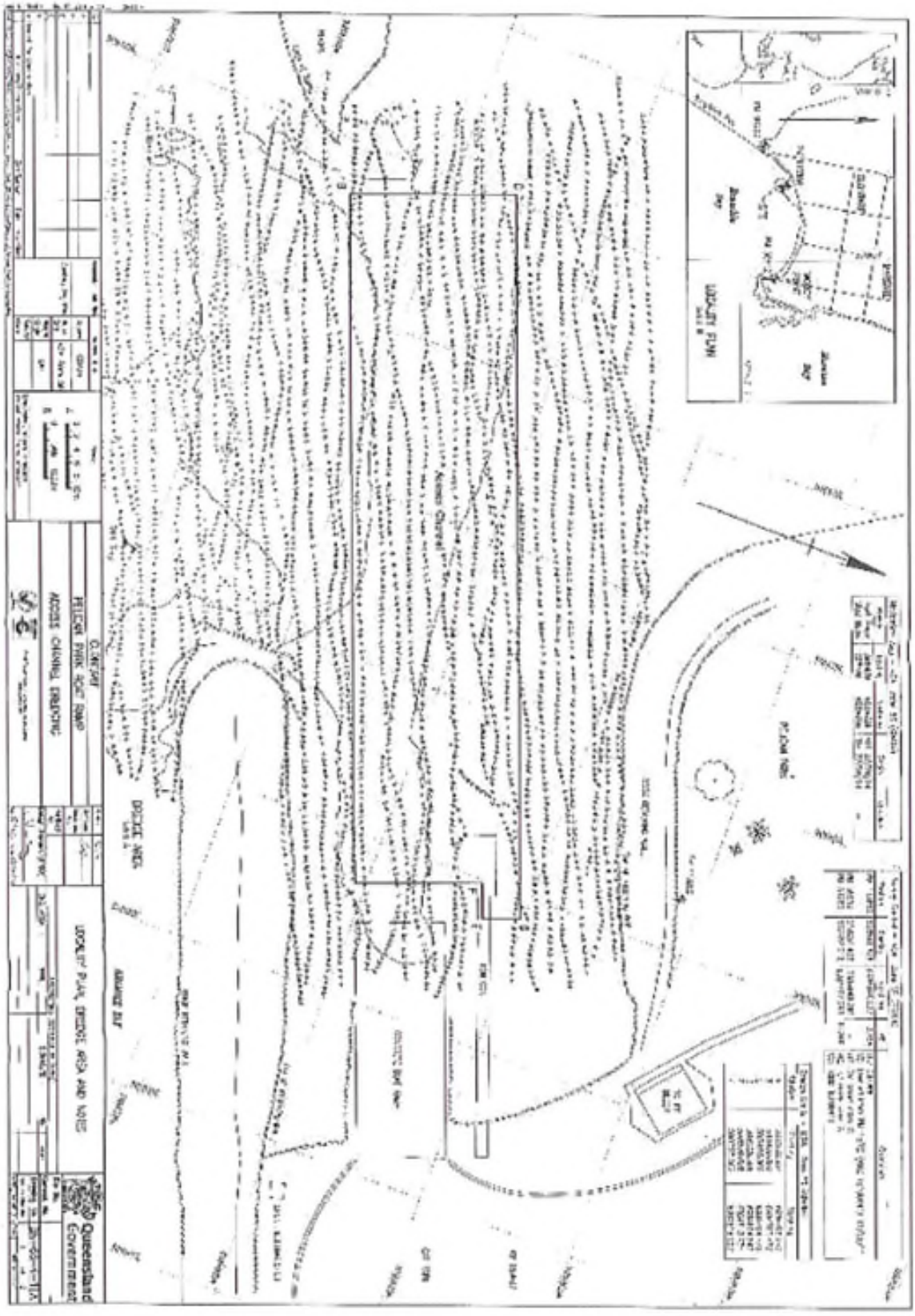
(i) not more than 200 metres from the release point(s) in the down-current direction at times when tidal flows or other flows are occurring; and

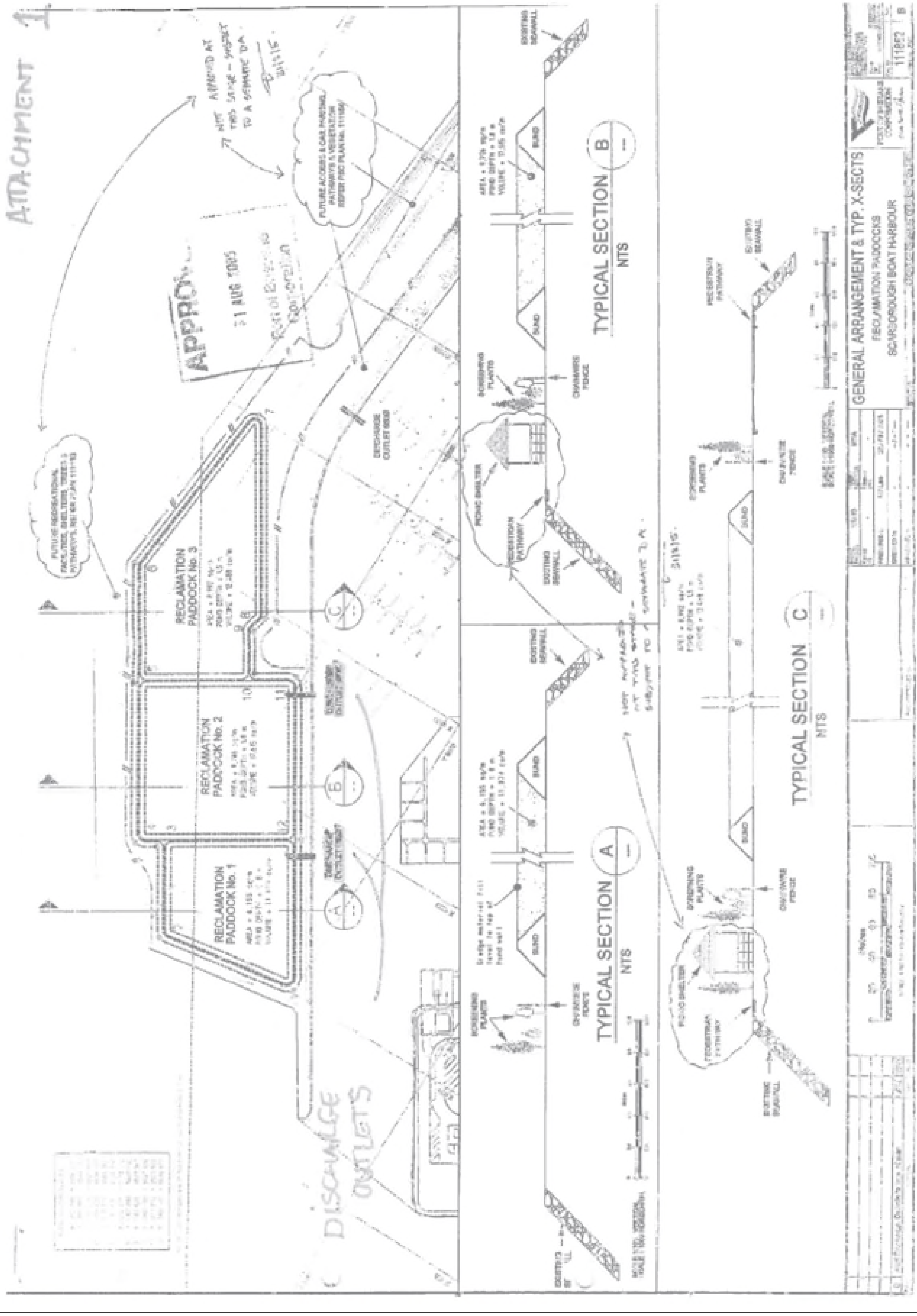
(ii) not more than 50 metres distant from the release point(s) during slack water conditions and at other times when negligible flow is occurring in the receiving waters.

[3] For the purpose of monitoring, the release point is defined as the discharge point of any wastewater settled in the barge or dredge and/or any dredge spoil discharged into Pelican Park Boat Ramp Entrance Channel during the dredging activity.

[4] 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 60 and 100 metres up current from the release point(s) at times when tidal flows are occurring and must not be determined within the period of one hour either side of slack tide.

Part 13 – Approved Plans (sheet 1-3).




ATTACHMENT 1
RECLAMATION PADDOCK No. 1
RECLAMATION PADDOCK No. 2
RECLAMATION PADDOCK No. 3
DISCHARGE OUTLETS
TYPICAL SECTION A
NTS
TYPICAL SECTION B
NTS
TYPICAL SECTION C
NTS
BUND
EXISTING SEAWALL
GENERAL ARRANGEMENT & TYP. X-SECTS
RECLAMATION PADDOCKS
SCARBOROUGH BOAT HARBOUR

Part 14 – Mooloolaba Boat Harbour (Former EPPR00730013 (SPDE00269110))

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Mooloolaba Boat Harbour, MOOLOOLABA QLD 4557 Lot 1 Plan SP143293; and Coral Sea offshore: 513 356.000E - 7 049 180.000N 513 275.000E – 7 049 165.000N 513 204.153E – 7 049 114.802N 513 187.158E – 7 049 051.396N 513 491.828E – 7 048 782.532N 513 414.116E – 7 048 781.926N 513 173.678E – 7 048 994.107N 513 100.000E – 7 048 800.000N 512 800.000E – 7 048 800.000N 512 800.000E – 7 049 100.000N 513 356.000E – 7 049 358.604N

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P14-G1	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P14-G2	The works must be in accordance with *Part 14 – Approved Plans 'Mooloolah River Entrance – Mooloolaba Dredge and Disposal Areas Approval* Drawing BN-15-49-1A dated 7.5.10 annexed Maps\Plans hereto.
P14-G3	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P14-G4	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P14-G5	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.

P14-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P14-G7	The operator of the activity 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.
Agency interest: Dredging	
Condition number	**Condition**
P14-D1	All **dredging** works must comply with the standards of the *National Assessment Guidelines for Dredging 2009* and the *National Ocean Disposal Guidelines for Dredged Material Commonwealth of Australia, 2002*.
P14-D2	An assessment of the sediment sand quality is to occur every ten years in accordance with section 3.0 Detailed Guidelines for Investigating and Assessing Dredged material of the National Ocean Disposal Guidelines for Dredged Material 2002 or undertaken earlier if instructed by the administering authority.
P14-D3	The permit holder must provide written notification to the administering authority one week prior to commencing **dredging** and\or ceasing **dredging**.
P14-D4	The material to be dredged is confined to within the boundaries of the dredge area indicated on *Part 14 – Approved Plans 'Mooloolah River Entrance – Mooloolaba Dredge and Disposal Area Approval* Drawing – BN-15-49-1A annexed Maps\Plans hereto.
P14-D5	The placement of dredged material may only be transferred to either the sand replenishment pipe system used in the Mooloolaba Beach nourishment works or the works must be in accordance with *Part 14 – Approved Plans 'Mooloolah River Entrance – Mooloolaba Dredge and Disposal Area Approval* Drawing – BN-15-49-1A annexed Maps\Plans hereto.
P14-D6	The dredger shall not remove dredge material from the bed below -6.0m LAT or to bedrock whichever occurs first.
P14-D7	The sand being transferred from the dredge to the beach via the pipe network system must be clean and free of silt, clay, organic material or any other deleterious substance, and must be of grain size compatible with the existing beach sand.
P14-D8	Beach nourishment profiles are to be as per specifications as indicated on *Part 14 – Approved Plans 09S-032-C202 Mooloolaba Spit Beach Renourishment Deposition Area* – Type Cross Section dated August 2009 annexed Maps\Plans hereto.
P14-D9	Before **dredging** commences, and during the whole of the **dredging** operations, each dredge and each item of equipment carrying out the actual removal of the material shall display a sign which is clearly legible from either side of the dredge or equipment. This sign shall display the name of the dredger and the number of this permit. The lettering on the above sign shall be at least three hundred millimetres high and formed of strokes each a minimum of fifty millimetres wide.
P14-D10	On completion of the **dredging** operation or when directed by the administering authority to do so, the dredger shall remove all dredge plant and equipment (including pipes, floats and other equipment used in or in connection with the **dredging** operations) from the site.
P14-D11	The dredge and\or deposition area must be surveyed and submitted to the administering

	authority upon request.
P14-D12	If **dredging** works have not been conducted in accordance with this approval the dredger shall, at their expense rectify the works when directed by the administering authority. Only granular material of a quality and grading approved by the administering authority shall be used to repair over dredged areas.
P14-D13	**Dredging** works must ensure that no significant hydrological changes to tidal hydrodynamics, wave or current conditions occur either directly or indirectly in the immediate area that could induce detrimental impacts on the adjacent coastline or beach profiles.
P14-D14	For works above high water, there must be no disturbance of any turtle or shorebird nest identified within the area to be nourished. Should any turtle or shorebird nest be identified as a result of these works then works are to cease immediately, and the administering authority must be contacted. Works are not to recommence until advised by the administering authority.
P14-D15	All practical and reasonable measures must be taken to prevent the occurrence of by-catch associated with the **dredging** operation and associated activities.
P14-D16	Recording of any inadvertent by-catch associated with the sand **dredging** activity must be undertaken on a daily basis during **dredging** operations. Records of any by-catch must be provided to the administering authority upon request.
P14-D17	Records of the volume of sand dredged are to be kept and provided to the administering authority upon request.
Agency interest: Air	
Condition number	**Condition**
P14-A1	The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the works must not cause a nuisance at any nuisance sensitive or commercial place.
Agency interest: Water	
Condition number	**Condition**
P14-WT1	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P14-WT2	In the event of a toxicity or contaminant incident occurring as a direct result of the **dredging** works, all works associated with this approval are to cease immediately until further notice by the administering authority.
P14-WT3	If any foaming or scum develops at the dredge site a means of containing and preventing the dispersion of this material must be implemented. Such actions may include, but are not limited to: (a) the use of a floating boom; (b) physically dispersing or removing the foam or scum.
P14-WT4	Any control measures installed in receiving waters may only be removed when water quality monitoring results demonstrate that the removal of such measures will not have any adverse impacts on adjacent water quality.
P14-WT5	No visible turbidity plume is to occur 50m beyond the point of **dredging** or the point of deposition or impact upon the recreational use values of Mooloolaba Beach.
P14-WT6	If a visible plume exists or develops beyond the limits defined in (P14-WT5), or the turbidity release limit is exceeded, then the works must cease until the cause and nature of the plume is determined and action is taken to prevent any further release. Appropriate actions may include, but not be limited to:

	(a) ceasing the activity causing the plume or release; (b) installation of a silt curtain to enclose the area.
P14-WT7	Monitoring. Water quality monitoring (visual) must be undertaken daily of the dredge extraction area and disposal area and records kept of any observations.
P14-WT8	Monitoring frequency includes when **dredging**, during **dredging** and/or when conducting beach nourishment works.
P14-WT9	In the event that the administering authority requires water quality sampling or dredge material sampling, all determinations of the quality of the samples must be: (a) made in accordance with methods prescribed in the latest edition of the **administering authority**'s *Water Quality Sampling Manual*; and (b) carried out on samples that are representative of the discharge.
Agency interest: Noise	
Condition number	**Condition**
P14-N1	Noise from the **activity** must not exceed the levels identified in *Part 14 -Table 1—Noise limits* when measured in accordance with the associated monitoring requirements.

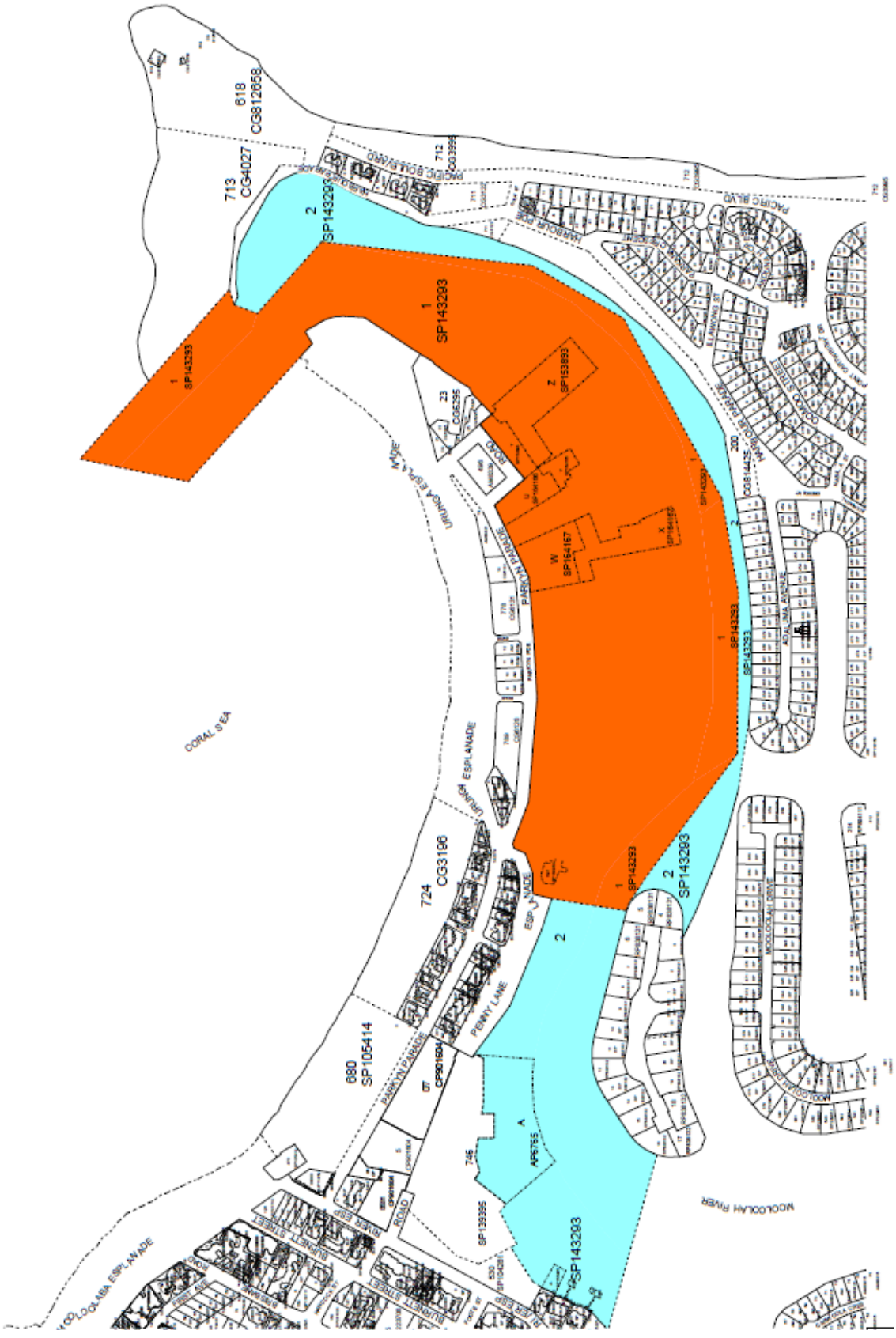
Part 14 -Table 1 - Noise limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
$L_{A10, adj, 10 mins}$	Bkg + 5	Bkg + 5	Bkg + 0	Bkg + 5	Bkg + 5	Bkg + 0
$L_{A1, adj, 10 mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
Noise measured at a Commercial place'						
$L_{A10, adj, 10 mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
$L_{A1, adj, 10 mins}$	Bkg + 15	Bkg + 15	Bkg + 10	Bkg + 15	Bkg + 15	Bkg + 10

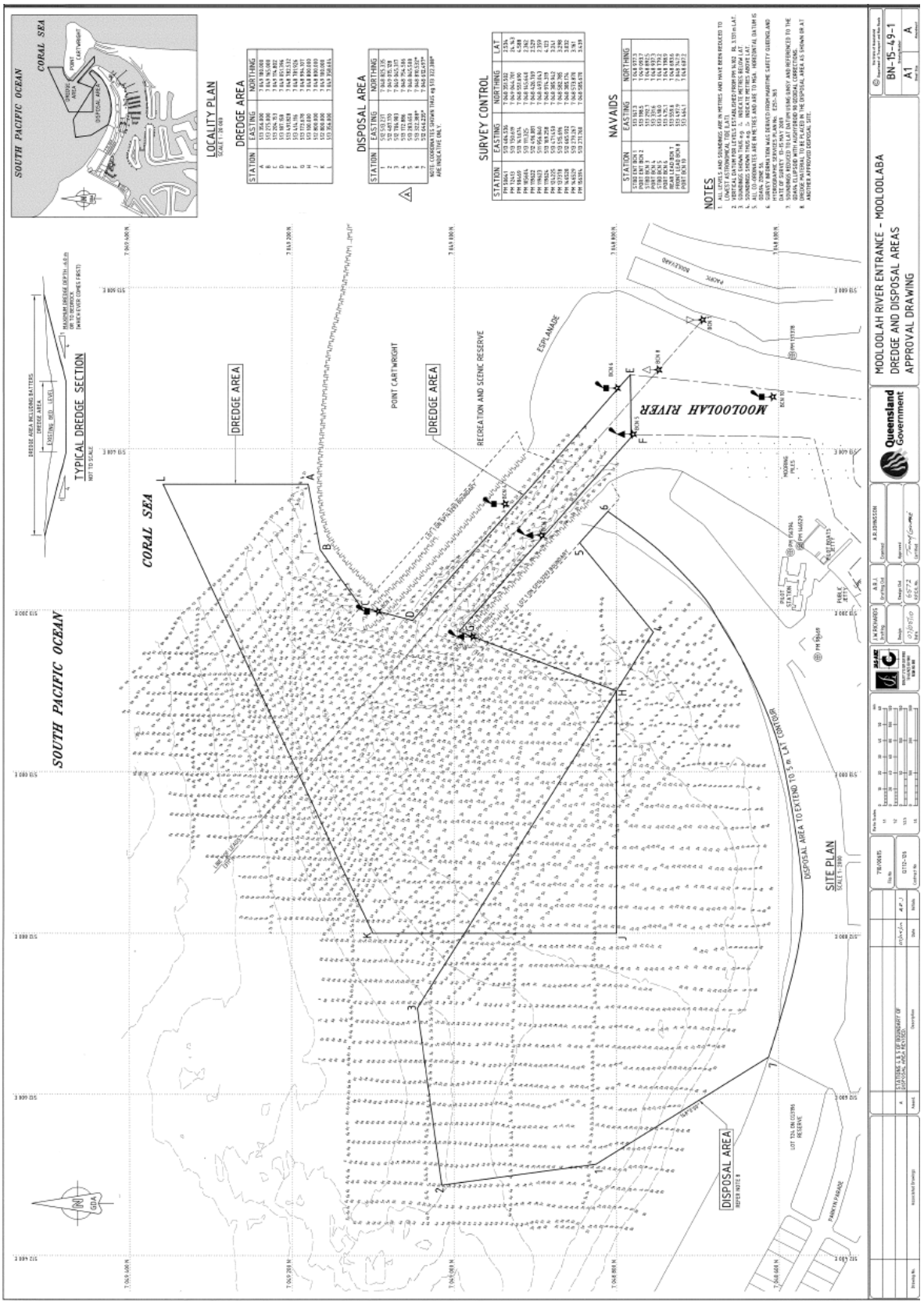
P14-N2	When requested by the **administering authority**, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include: - $L_{A 10, adj, 10 mins}$; - $L_{A 1, adj, 10 mins}$; - the level and frequency of occurrence of impulsive or tonal noise; - atmospheric conditions including wind speed and direction; - effects due to extraneous factors such as traffic noise; and - location, date and time of recording.
P14-N3	The method of measurement and reporting of noise levels must comply with the latest edition of the **administering authority**'s *Noise Measurement Manual*.
P14-N4	If in the opinion of an authorised person monitoring results indicate environmental nuisance is being caused by noise from the works, the registered operator must: (a) address the complaint including the use of appropriate dispute resolution if required; or

	(b) immediately implement abatement measures so that noise from the works do not result in any further environmental nuisance.
Agency interest: Waste	
Condition number	**Condition**
P14-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

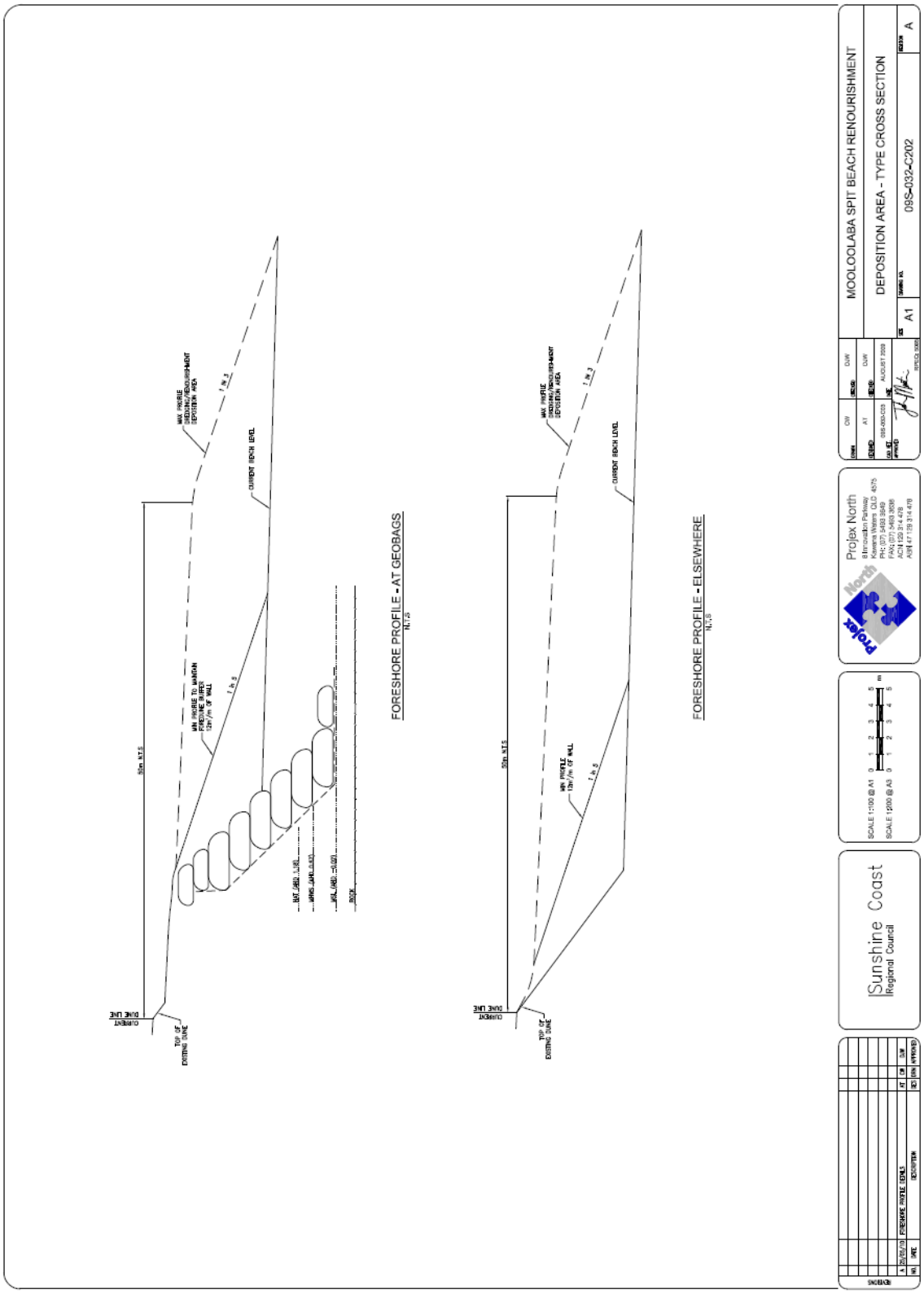
Part 14 – Approved Plans (sheets 1-3) **Lot & Plan – Lot 1 on SP143293 (Orange shaded).**



Mooloolah River Entrance – Mooloolaba Dredge and Disposal Areas Approval Drawing BN-15-49-1A dated 7.5.10.



Drawing 09S – 032 - C202 – Mooloolaba Spit Beach Renourishment Deposition Area – Type Cross Section – Dated August 2009 – RPEQ5085.



Part 15 – Manly Boat Harbour (Former EPPR04467216)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Manly Boat Harbour, MANLY 4179 Lot 687 Plan SP172860

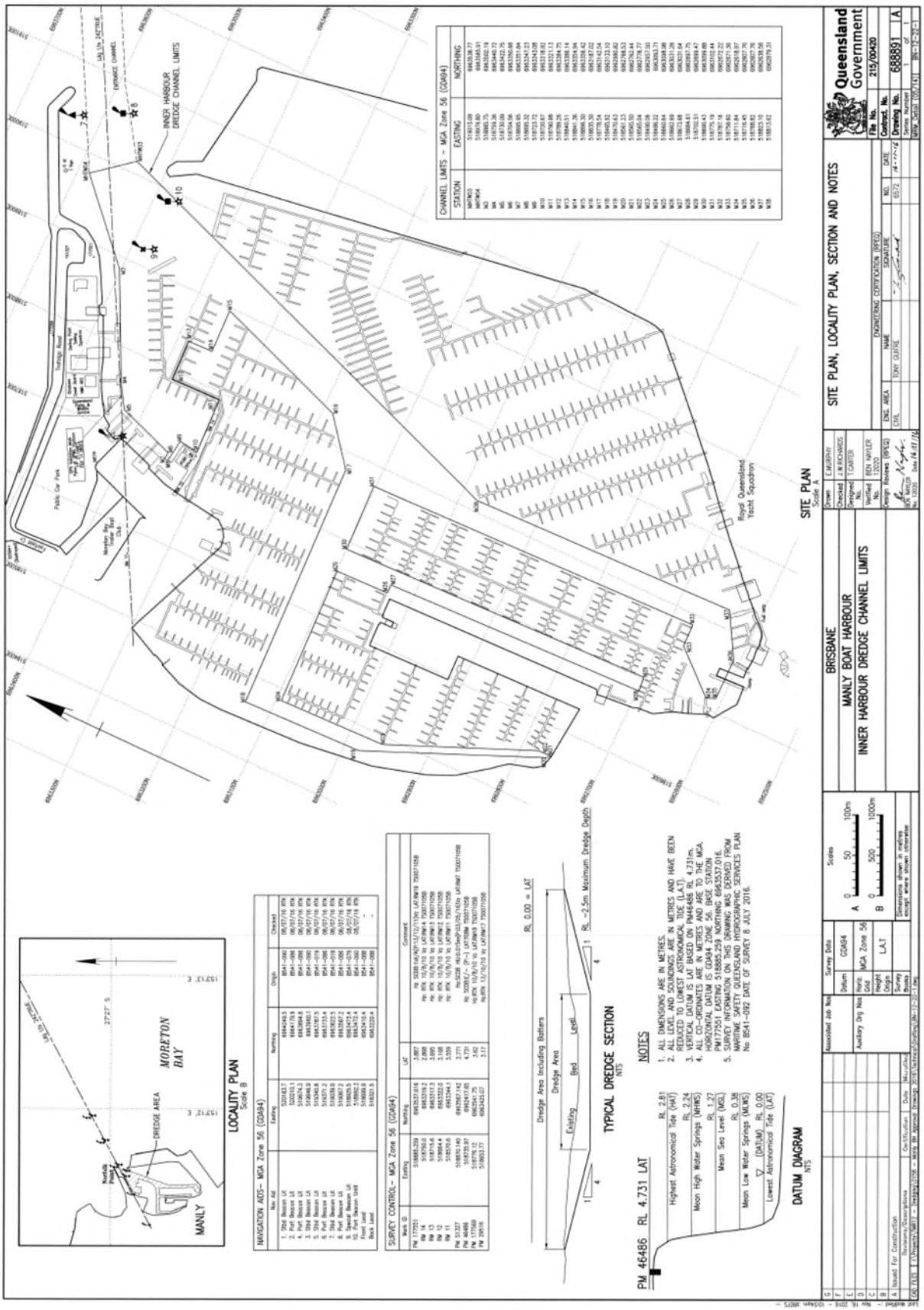
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P15-G1	**Activities** conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. the amount of material dredged in a year must not exceed 100,000t; 2. must be only carried out within the areas shown in *Part 15 – Approved Plans Drawing No. 688891 (Version A) - Inner Harbour Dredge Channel Limits dated 16 November 2016*; and 3. maximum depth of dredging works must not to exceed -2.5m LAT (Lowest Astronomical Tide).
P15-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P15-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P15-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P15-G5	All **records** must be kept for a period of at least five years and provided to the **administering authority** upon request.
P15-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P15-G7	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority**, or **nominated delegate**, within the required timeframe and in the specified format upon request.
P15-G8	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P15-G9	The dredging **activity** must not commence unless the lawful disposal of the **dredge spoil** has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland

	governments. Evidence of all necessary approvals must be provided to the **administering authority** upon request.
P15-G10	**You** must record the following details for all environmental **complaints** received: (a) date and time complaint was received (b) name and contact details of the complainant (c) nature of the complaint (d) investigations undertaken (e) conclusions formed (f) actions taken.
P15-G11	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Air	
Condition number	**Condition**
P15-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P15-WT1	The only contaminants to be released to surface waters are bed sediments necessarily disturbed during dredging at locations indicated in condition P15-G1. The release of contaminants to waters must not cause environmental harm.
P15-WT2	The release to water permitted in condition P15-WT1 must not produce any slick or other visible evidence of oil or grease, scum, little or other visually objectionable matter.
P15-WT3	All reasonable and practicable measures must be undertaken to ensure the release to water permitted in condition P15-WT1 does not extend more than 350m beyond the inner harbour dredge channel limits specified in condition P15-G1.
P15-WT4	All reasonable and practicable **measures** must be undertaken to minimise the size of the sediment plume and concentration of suspended solids during the conduct of the dredging **activity**.
Agency interest: Noise	
Condition number	**Condition**
P15-N1	Noise generated by the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
Agency interest: Land	
Condition number	**Condition**
P15-L1	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*

Agency interest: Waste	
Condition number	**Condition**
P15-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.
P15-WS2	The only areas permitted to receive dredge spoil under this environmental authority are those described as a '*Material disposal area - MDA01 – Mud Island'* indicated within Schedule 2, Part 6 – Material disposal area, section 24 - MDA01 – Mud Island of the *Marine Parks (Moreton Bay) Zoning Plan 2008.* Any material that is not able to be deposited at the '*Material disposal area – MDA01 – Mud Island'* must be deposited at either: (a) an approved reclamation area; or (b) at a landfill site or other location lawfully able to receive this material.
P15-WS3	The dredging **activity** must not commence unless the lawful disposal of the **dredge spoil** has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments. Evidence of all necessary approvals must be provided to the **administering authority** upon request.

Part 15 – Approved Plans - Proposed internal channels dredge areas and sampling locations.



Part 16 – Raby Bay (Former EPPR04040316)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	9 William Street, Raby Bay CLEVELAND QLD 4163 Adjacent to Lot 130 Plan SP120286

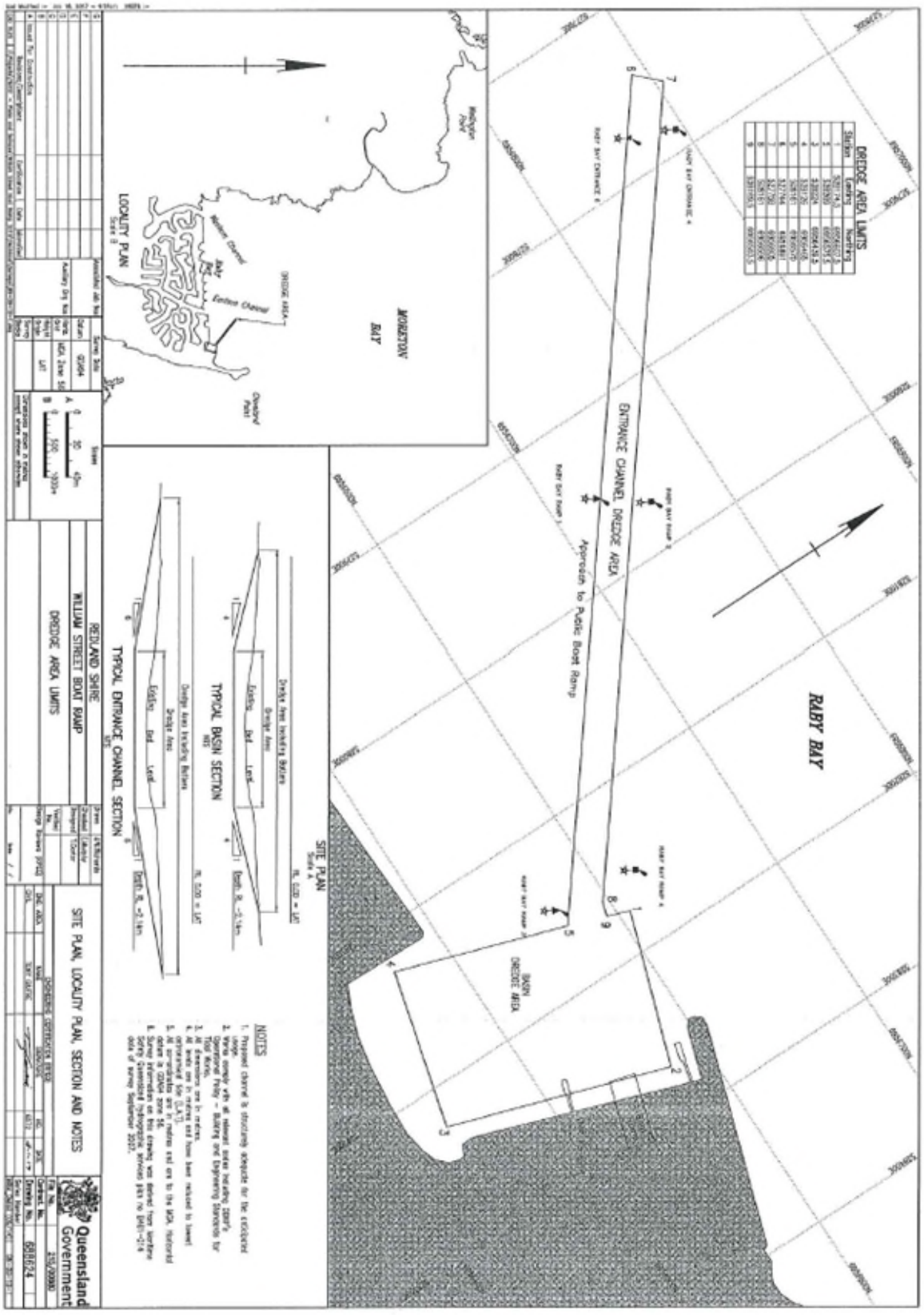
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P16-G1	Any **activity** operating under this environmental authority must not be conducted contrary to any of the following limitations: 1. **Dredging** is limited to sediment extraction for the purposes of maintenance of the William Street Public Boat Ramp access channel in accordance with approved drawings as specified in *Part 16 – Approved Plans*. 2. **Dredge spoil** is to be placed at the Mud Island disposal area in Moreton Bay or at a site that can lawfully accept the spoil.
P16-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P16-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P16-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P16-G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P16-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P16-G7	All analyses required under this environmental authority must be carried out by a laboratory that has NATA certification, or an equivalent certification, for such analyses.

P16-G8	When required by the **administering authority,** monitoring must be undertaken in the manner prescribed by the **administering authority,** to investigate a complaint of environmental nuisance arising from the **activity.** The monitoring results must be provided to the **administering authority,** or **nominated delegate,** within the required timeframe and in the specified format upon request.
P16-G9	The activity must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
Agency interest: Air	
Condition number	**Condition**
P16-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause **nuisance** to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P16-WT1	The only contaminants to be released to surface **waters** are sediment extracted from the dredged areas of the William Street Public Boat Ramp and disposed of to the approved disposal grounds area at Mud Island or to a site that can lawfully accept the extracted sediment in accordance with the relevant drawing specified in condition P16-G1.
P16-WT2	Dredging must not result in a visible sediment plume greater than 350m of the dredging site.
P16-WT3	When required by the **administering authority,** monitoring must be undertaken in the manner prescribed by the **administering authority,** to investigate a breach of the condition P16-WT2. The monitoring results must be provided to the **administering authority** upon request.
P16-WT4	In addition to condition P16-WT1, the release to waters must not: 1. have any other properties at a concentration that is capable of causing environmental harm; 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
Agency interest: Noise	
Condition number	**Condition**

P16-N1	Noise generated by the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
P16-N2	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's noise measurement manual.
Agency interest: Land	
Condition number	**Condition**
P16-L1	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
Agency interest: Waste	
Condition number	**Condition**
P16-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 16 – Approved Plan



Part 17 – Kedron Brook, Brisbane Airport (Former EA0001146)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Kedron Brook BRISBANE AIRPORT QLD 4008 Lot 3 Plan SP272478

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P17-PMG001	The **dredging activity** must not commence unless the lawful disposal of the **dredged material** has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments. Evidence of all necessary approvals must be provided to the **administering authority** upon request.
P17-PMG010	**Activities** under this environmental authority must be conducted in accordance with the following limitations: (a) the amount of material dredged in a year must not exceed 100,000t; and (b) must only be carried out within the areas shown in *Part 17 – Approved Plans*: (i) drawing no. 724557 (version A) *Site Plan, Locality Plan, Section and Notes,* Sheet 1 of 2, dated 19/05/2017; and (ii) drawing no. 724558 (version A) *Site Plan,* Sheet 2 of 2, dated 19/05/2017.
P17-PMG007	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
P17-PMG008	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activities**.
P17-PMG009	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental nuisance** arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
P17-PMG014	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.

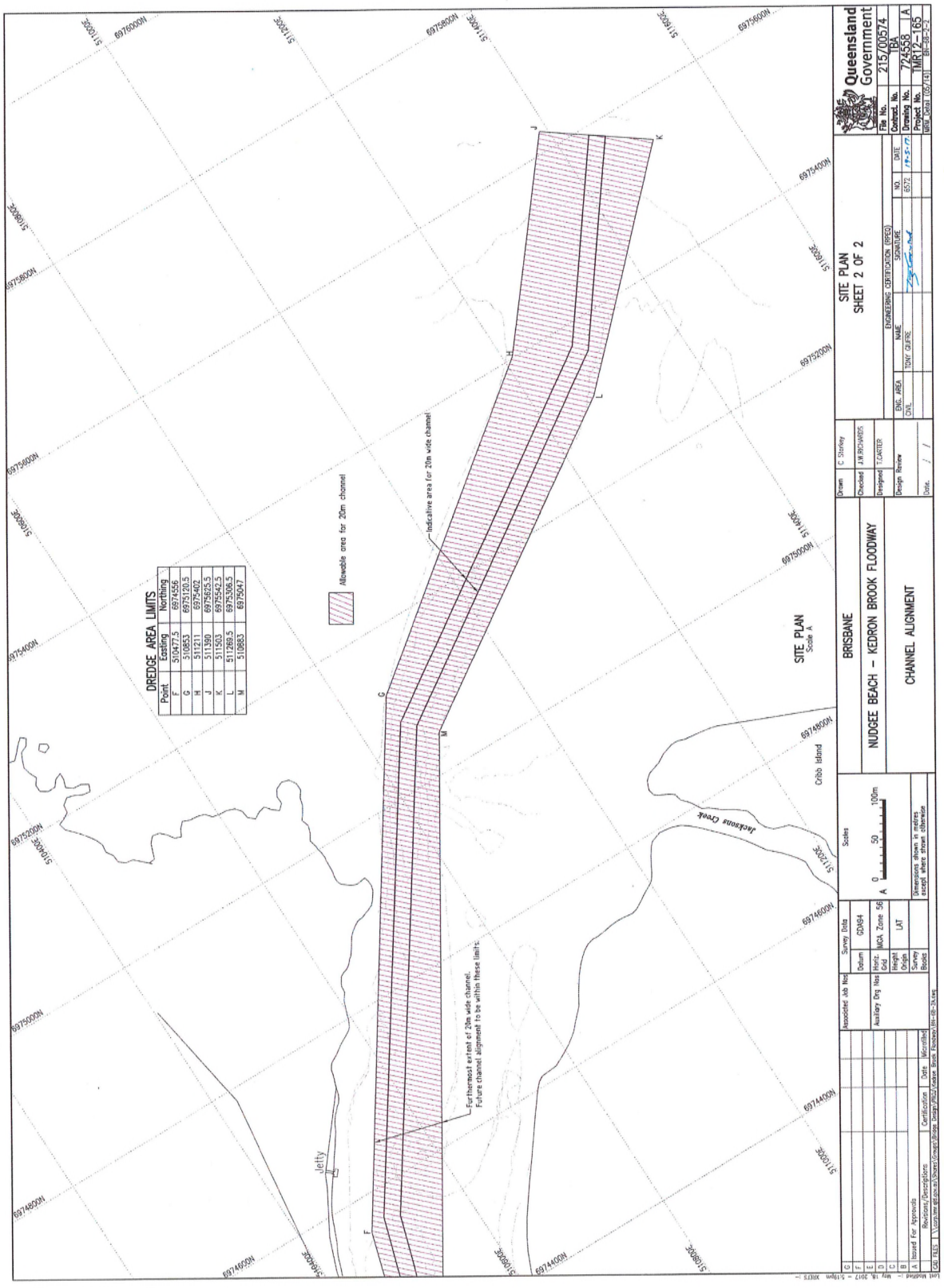
P17-G6	Prior to the commencement of the dredging **activity**, a **Dredge Management Plan (DMP)**[1] for the **activity** must be developed and implemented, and the DMP must contain the following: 1. Clearly stated aims and objectives. 2. Description of dredging operation including: (a) type of equipment to be used in dredging; (b) volume of dredged material to be removed, and duration and timing of the dredging campaign; (c) methods to be utilised for transporting dredged material; and (d) dredged material disposal methods. 3. Maps or plans showing: (a) legend, north arrow and scale; (b) boundaries of dredging operation; (c) estimated or modelled zone of influence of sediment plumes; (d) location of designated disposal sites; (e) location of sensitive receptors; and (f) all monitoring locations. 4. A detailed description of sediment plume-associated monitoring program including: (a) sampling regime and methods; and (b) monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation to trigger values that will define alert levels. 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of alert levels will be determined. 7. Management actions to be initiated if alert levels are exceeded. [1] Note: The **Dredge Management Plan** is subject to review and amendment as required by changing regulation, monitoring results, Technical Advisory Group, or administering authority recommendations.
P17-G1	The **Dredge Management Plan** must be submitted to the **administering authority** at least 20 business days prior to the commencement of **dredging** and, amended in accordance with any comments made by the **administering authority**.
P17-G2	Condition P17-G1 applies each time the **Dredge Management Plan** is amended.
P17-G3	The **dredging activity** must be undertaken in accordance with the **Dredge Management Plan** required in condition P17-G6.
P17-PMG004	The **Dredge Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
P17-PMG015	An **appropriately qualified person(s**) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P17-PMG016	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and **records t**hat are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and **records** required by the conditions of this environmental authority must be provided to **the administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P17-PMG017	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained in and aware of their obligations under the *Environmental Protection Act 1994*; and 6. ensure that reviews of environmental performance are undertaken at least annually.

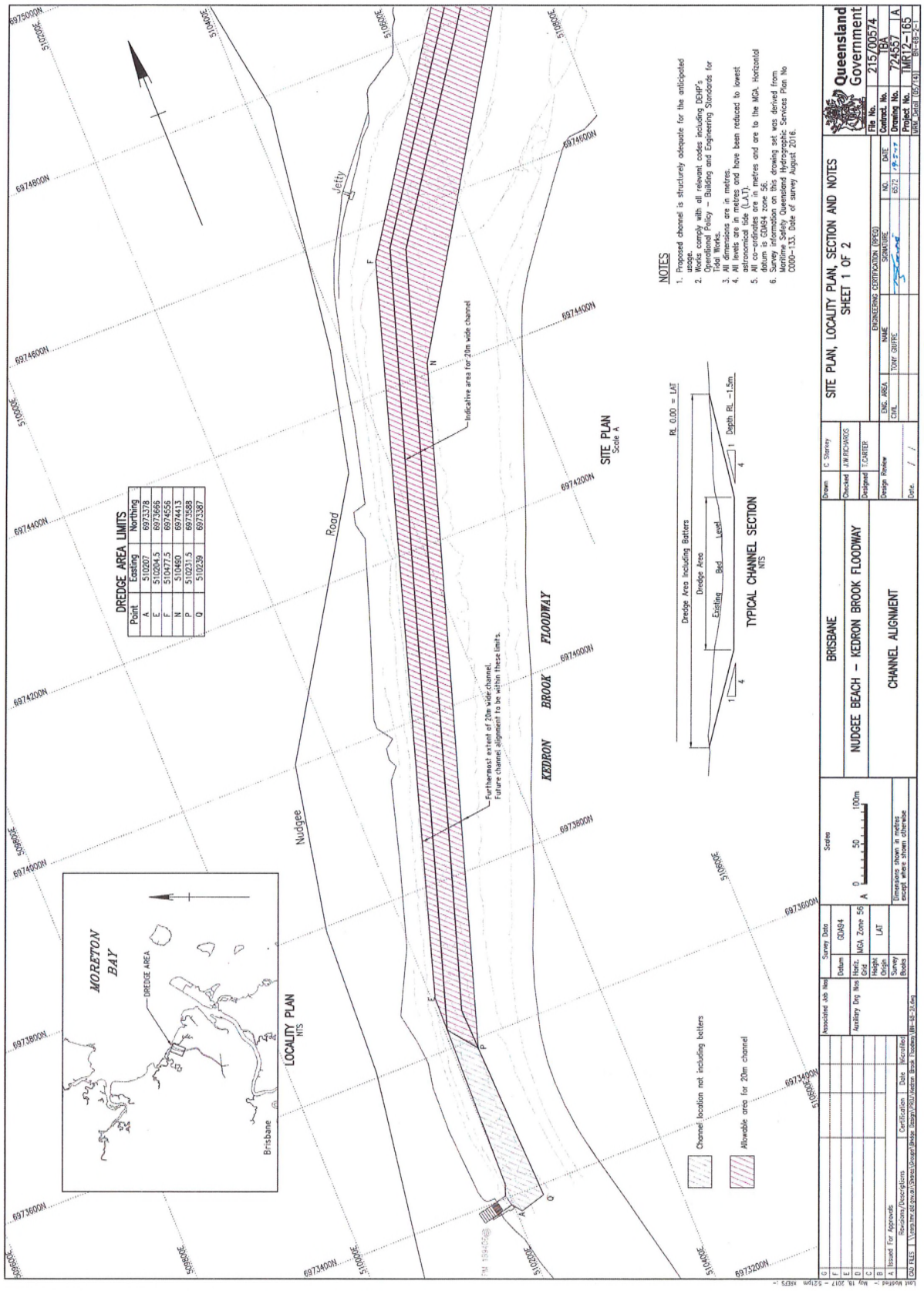
<table>
<tr><th colspan="2">Agency interest: Air</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P17-PMA001</td><td>Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place.</td></tr>
<tr><th colspan="2">Agency interest: Land</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P17-PML003</td><td>Treatment and management of acid sulfate soils must comply with the latest edition of the Queensland Acid Sulfate Soil Technical Manual.</td></tr>
<tr><th colspan="2">Agency interest: Noise</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P17-PMN001</td><td>Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><th colspan="2">Agency interest: Water</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P17-WT1</td><td>The only contaminants to be released to surface waters are bed sediments necessarily disturbed during dredging at locations specified in condition P17-PMG010. The release of contaminants to waters must not cause environmental harm.</td></tr>
<tr><td>P17-WT2</td><td>The release to waters permitted in condition P17-WT1 must not produce any slick or other visible evidence of oil or grease, scum, litter or other visually objectionable matter.</td></tr>
<tr><td>P17-WT3</td><td>All reasonable and practicable measures must be taken to minimise the size of the sediment plume and concentration of suspended solids during the conduct of the dredging activity.</td></tr>
<tr><td>P17-WT4</td><td>The only contaminants to be released to surface waters are turbid plumes in accordance with Part 17 - Table 1—Surface water release limits and the associated monitoring requirements.

Part 17 - Table 1—Surface water release limits
<table>
<tr><th>Release Point(s) Description</th><th>Quality characteristic</th><th>Limit</th><th>Limit Type</th><th>Minimum Monitoring Frequency</th></tr>
<tr><td>Dredging footprint boundary</td><td>Turbid plumes</td><td>No visible turbidity plume from dredging greater than 350m from footprint boundary of dredge area.
If plume becomes visible at 350m, appropriate mitigation measures to be undertaken to ensure plume does not extend beyond 700m from footprint boundary.
If visible plume extends to 700m beyond footprint, dredging to cease until visible plume contained within 350m of dredge footprint.</td><td>Maximum</td><td>Continuous visual monitoring</td></tr>
</table>
Associated monitoring requirements
1. Monitoring must be undertaken at all reasonable times during the dredging campaign and at the frequency stated.</td></tr>
</table>

P17-PMW002	**Dredged material** must not be placed at sea except at a designated place authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments.
P17-PMW003	With the exception of floating equipment, all machinery and ancillary equipment for the **activity** must be stored on the landward side of the high banks of any surface waters.
Agency interest: Waste	
Condition number	**Condition**
P17-PMG038	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility or designated onsite location(s) that can lawfully accept the waste.

Part 17 – Approved Plan




DREDGE AREA LIMITS
Point | Easting | Northing
A | 510207 | 6973378
E | 510294.5 | 6973666
F | 510477.5 | 6974556
N | 510480 | 6974413
P | 510231.5 | 6973588
Q | 510239 | 6973387
SITE PLAN
Scale A
LOCALITY PLAN
NTS
MORETON BAY
DREDGE AREA
Brisbane
Nudgee Road
Jetty
KEDRON BROOK FLOODWAY
Indicative area for 20m wide channel
Furthermost extent of 20m wide channel.
Future channel alignment to be within these limits.
TYPICAL CHANNEL SECTION
NTS
Dredge Area Including Batters
Dredge Area
Existing Bed Level
RL 0.00 = LAT
Depth RL -1.5m
NOTES
1. Proposed channel is structurely adequate for the anticipated usage.
2. Works comply with all relevant codes including DCHP's Operational Policy – Building and Engineering Standards for Tidal Works.
3. All dimensions are in metres.
4. All levels are in metres and have been reduced to lowest astronomical tide (LAT).
5. All co-ordinates are in metres and are to the MGA. Horizontal datum is GDA94 zone 56.
6. Survey information on this drawing set was derived from Maritime Safety Queensland Hydrographic Services Plan No C000-133. Date of survey August 2016.
Channel location not including batters
Allowable area for 20m channel
BRISBANE
NUDGEE BEACH – KEDRON BROOK FLOODWAY
CHANNEL ALIGNMENT
SITE PLAN, LOCALITY PLAN, SECTION AND NOTES
SHEET 1 OF 2
Queensland Government
File No. 215/00574
Contract No. TBA
Drawing No. 7245571 A
Project No. TMR12-165
Scales
Survey Data
Datum GDA94
Horiz. Grid MGA Zone 56
Height Origin LAT
Survey Books
Dimensions shown in metres except where shown otherwise
Drawn C Stanley
Checked J.W.RICHARDS
Designed T.CARTER
Design Review
Date / /
ENGINEERING CERTIFICATION (RPEQ)
ENG. AREA CIVIL
NAME TONY GRIFFIS
SIGNATURE
NO. 6572
DATE 19-5-17
Issued For Approvals
Revisions/Descriptions
Certification
Date
CAD FILES

Part 18 – Pumicestone Passage, Bribie Island (Former EPPR04467116)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Pumicestone Passage, opposite public boat ramp at BELLARA QLD 4507 Bribie Island Adjacent to Lot 187 Plan SP172796

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P18-G1	Any **activity** operating under this environmental authority must not be conducted contrary to any of the following limitations: 1. the amount of material dredged in a year must not exceed 100,000t; 2. must be in accordance with the Part 18 – Approved Plan Drawing No. 688920 *A Bribie Island Bellara Boat Ramp Dredge Area Limits* dated 16 November 2016.
P18-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P18-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P18-G4	Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.
P18-G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority,** or **nominated delegate** upon request, within the required timeframe and in the specified format.
P18-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority
P18-G7	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority**, or **nominated delegate**, within the required timeframe and in the specified format upon request.
P18-G8	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and

	6. ensure that reviews of environmental performance are undertaken at least annually.
P18-G9	The dredging **activity** must not commence unless the lawful disposal of the **dredge spoil** has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments. Evidence of all necessary approvals must be provided to the **administering authority** upon request.
P18-G10	**You** must record the following details for all environmental **complaints** received: (a) date and time complaint was received; (b) name and contact details of the complainant; (c) nature of the complaint; (d) investigations undertaken; (e) conclusions formed; (f) actions taken.
P18-G11	With the exception of floating equipment, all machinery and ancillary equipment for the **activity** must be stored on the landward side of the high banks of any surface **waters**.
P18-G12	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Air	
Condition number	**Condition**
P18-A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Land	
Condition number	**Condition**
P18-L1	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
Agency interest: Noise	
Condition number	**Condition**
P18-N1	Noise generated by the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.
Agency interest: Waste	
Condition number	**Condition**
P18-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Agency interest: Water

Condition number	Condition
P18-WT1	The only contaminants to be released to surface waters are bed sediments necessarily disturbed during dredging at locations indicated in condition P18-G1 in accordance with *Part 18 - Table 1—Surface water release limits* and the associated monitoring requirements.

Part 18 - Table 1—Surface water release limits

Monitoring location(s)	Water quality characteristics	Trigger Limit		Monitoring frequency
		Minimum	Maximum	
Background sampling point [1]	Turbidity [3] (NTU)	N/A	N/A	Concurrently with down-current turbidity sampling frequency (Daily and Event-based[4])
Down-current sampling point [2] within existing seagrass meadows most likely affected by the activity	Visual sediment plume monitoring	No visible sediment plume beyond 350m down-current of the dredge **activity**		Daily
	Petroleum products, scum or litter	Not visible or noticeable		Daily
	pH	7.0	8.5	Daily
	If visible sediment plume is observed beyond 350m down-current of the dredge **activity** the following additional water quality monitoring requirement is triggered:			
	Turbidity [3] (NTU)	Daily average [5] turbidity must be ≤10 NTU above the daily average [5] background value [1] when the background value [1] is <100 NTU OR Daily average [5] turbidity must be ≤ 10% above the daily average [5] background value [1] when the background value [1] is > 100 NTU		Event-based [4]

[1] A background sampling point is a water quality monitoring site located (at minimum) 100m up-current of the dredging activity. A background value for a quality characteristic is the value of the quality characteristics measured at a background sampling point, and must not be determined using data collected within the period of one hour either side of the slack water.

[2] A down-current sampling point that is no more than 350 meters from the dredge activity in the down-current direction. Water quality determinations must be made at times when tidal flows or other flows are occurring (i.e. measurements collected within the period of one hour either side of the slack water cannot be used).

[3] Non-logger-based turbidity monitoring must be conducted by completing profile readings at -0.2m, -2m and every whole 2m depth interval thereafter. All turbidity profile depths should be represented when calculating average values.

[4] An 'Event' is defined as being the occurrence of a visible sediment plume observed beyond 350 metres of the dredging activity, the extent and intensity of the plume must be investigated for the purposes of reporting in accordance with condition P18-G3.

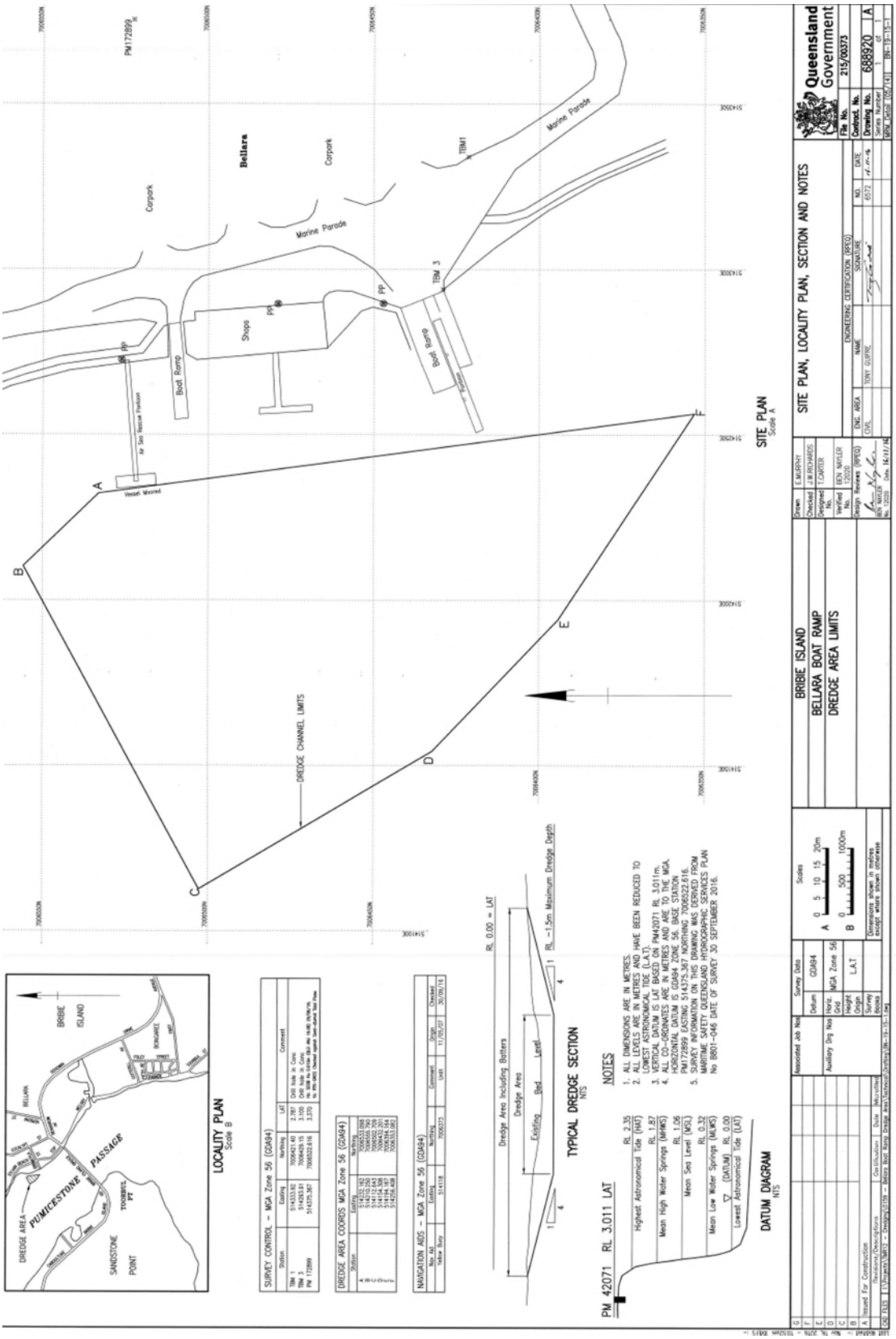
[5] Calculating averages must only be performed using turbidity data collected during daylight hours, with 'daylight hours' for this purpose being defined as the time of day between 60 minutes after sunrise to 60 minutes before sunset.

Associated monitoring requirements

1. Monitoring must be conducted in accordance with the methods prescribed in the current edition of the administering authority's *Monitoring and Sampling Manual.*
2. Water quality samples must be representative of water being tested.
3. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable reliable comparisons to be made against the assessment criteria relevant to the particular water quality characteristic.
4. Monitoring must be undertaken during a release as per the frequency stated.
5. All monitoring devices must be correctly calibrated and maintained.

P18-WT2	The release to waters permitted under P18-WT1 must not contain any other properties at a concentration capable of causing environmental harm.

Part 18 – Approved Plan Drawing No. 688920 - A Bribie Island Bellara Boat Ramp Dredge Area Limits dated 16 November 2016.



Part 19 – Port Douglas Boat Harbour (Former EA0000828)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Port Douglas Boat Harbour Adjacent to Lot 5 Plan SP288958 (entrance channel)

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General

Condition number	Condition
P19-PMG010(V)	Activities under this environmental authority must be conducted in accordance with the following limitations: **Point / Latitude / Longitude** W / -16.476062 / 145.461920 X / -16.476299 / 145.462217 A / -16.477001 / 145.461809 K / -16.477507 / 145.461843 L / -16.478974 / 145.460941 M / -16.478801 / 145.460765 N / -16.479072 / 145.460716 J / -16.478771 / 145.460381
P19-PMG003	Prior to the commencement of the **dredging activity**, a **Dredge Management Plan (DMP)** for the activity must be developed and implemented, and the **DMP** must contain the following: 1. Clearly stated aims and objectives. 2. Description of **dredging operation** including: (a) type of equipment to be used in **dredging**; (b) volume of **dredge material** to be **removed**, and duration and timing of the **dredging** campaign; (c) methods to be utilised for transporting **dredge spoil**; and (d) **dredge spoil** disposal methods. 3. Maps or plans showing: (a) legend, north arrow and scale; (b) boundaries of **dredging operation**; (c) estimated or modelled **zone of influence** of sediment plumes; (d) location of designated disposal sites; (e) location **of sensitive receptors**; and (f) all monitoring locations. 4. A detailed description of **sediment plume-associated monitoring** program including: (a) sampling regime and methods; and (b) monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation **to trigger values** that will define **alert levels**. 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of **alert levels** will be determined. 7. Management actions to be initiated if **alert levels** are exceeded. 8. Details of any **technical advisory group** members and their respective role.

P19-PMG004	The **Dredge Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
P19-PMG005	Written notification of the commencement date must be provided to the **administering authority** at least five (5) business days prior to establishing a **new dredging activity**.
P19-PMG008	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the activities.
P19-PMG007	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
P19-PMG014	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P19-PMG015	An **appropriately qualified person(s**) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P19-PMG016	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and **records** that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and **records** required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P19-PMG038	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility or designated onsite location(s) that can lawfully accept the waste.
P19-PMG12	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
P19-PMG009	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental nuisance** arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
P19-PMG13	You must record the following details for all environmental complaints received: (a) date and time complaint was received; (b) name and contact details of the complainant; (c) nature of the complaint; (d) investigations undertaken; (e) conclusions formed; (f) actions taken.
Agency interest: Noise	
Condition number	**Condition**
P19-PMN001	Noise generated by the activity must not cause **environmental nuisance** to any **sensitive place** or **commercial place**.

Agency interest: Air	
Condition number	**Condition**
P19-PMA001	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause **environmental nuisance** at a **sensitive place** or **commercial place**.
Agency interest: Land	
Condition number	**Condition**
P19-PML001(V)	Authorised dredged material disposal to land must only take place within the following location – Lot 3 SP183025.
P19-PML002(V)	Any containment area specified in condition P19-PML001(V) must be certified by appropriately qualified person(s) (e.g. registered professional engineer of Queensland) and maintained to that condition.
P19-PML003	Treatment and management of acid sulfate soils must comply with the latest edition of the Queensland *Acid Sulfate Soil Technical Manual*.
P19-PMW001(V)	The characterisation of sediments and suitability for land based disposal of **dredge spoil** must be submitted to the **administering authority** in accordance with methodology provided in the latest edition of the *National Environment Protection (Assessment of Site Contamination) Amendment Measure* and Queensland *Acid Sulfate Soil Technical Manual* and any other relevant guideline specified by the **administering authority**, at 20 business days prior to the commencement of the **dredging activity**. *Note: It is the responsibility of the operator to determine whether previous characterisation of sediments are suitable for assessing risks to **environmental values** associated with the **dredging** campaign to which this environmental authority relates.*
P19-PMG002	Where the **zone of influence** of a sediment plume generated by the **activity** encroaches upon a **sensitive receptor**, **slightly disturbed** or **high ecological value waters**, **sediment plume-associated monitoring (SPAM)** is to be undertaken as follows. The default SPAM requirement is: 1. For small-scale **dredging operations** (<50,000 cubic metres): (a) **continuous visual monitoring**, and (b) **spot-checking** (weekly and event-based concern site monitoring with **control site**-based checking). 2. For smaller medium-scale dredging operations (50,000 cubic metres -250,000 cubic metres): (a) **continuous visual monitoring**, and (b) **spot-checking** (weekly and event-based concern site monitoring with control site-based checking). 3. For larger medium-scale **dredging operations** (250,000 cubic metres -500,000 cubic metres): **continuous logging** at **concern sites** and **control sites**, control site-based checking. 4. For large-scale dredging operations (>500,000 cubic metres): continuous logging at concern sites and control sites, with a baseline collection phase (**baseline-based assessment** with **control site**-based checking).

Agency interest: Water

Condition number	Condition
P19-PMG006(V)	**Part 19 - Table 1 – Surface water release limits**

Quality Characteristic	Monitoring point (refer to map 3)	Units	Release limit		Monitoring Frequency
			Minimum	Maximum	
Turbidity	W1[1] W2[2]	NTU	-	Refer to condition WT3	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2[7]
	W3[3] W4[4]		-	-	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2
	W5[5]		-	Refer to condition WT4	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2
	W6[6]		-	50	Once per day whilst discharging
DO	W1[1] W2[2]	% saturation	80	-	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2[7]
	W3[3] W4[4]		80	-	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2
	W5[5]		80	-	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2
	W6[6]		80	-	Once per day whilst discharging
pH	W1[1] W2[2]	pH units	6.5	8.4	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2[7]
	W3[3] W4[4]		6.5	8.4	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2
	W5[5]		6.5	8.4	Every three (3) hours during dredging operation for the first five (5) days, thereafter refer to condition WT2
	W6[6]		6.5	8.4	Once per day whilst discharging

[1] W1 The edge of the coral habitat area.
[2] W2 The edge of the coral habitat area.
[3] W3 Directly up-current of the dredge vessel within 20m or as close as possible to the vessel maintaining

<table>
<tr><td></td><td>
correct safety standards. When dredging in Dredge Area D, W3 is to be located 20m down-current of the harbour entrance.
[4] W4 200m upstream of Closehaven Marina. Measurements are to be taken adjacent to the end of the access road.
[5] W5 Within 1m of the clear water outlet from the disposal site into the mangroves.
[6] W6 Within 1m of the clear water outlet from the disposal site into the mangroves.
[7] Monitoring at W1 and W2 is not required when dredging occurs in Dredge Area D.

Associated monitoring requirements
1. Monitoring location and release points must be situated and maintained in accordance with Map 3 attached.
2. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority's Monitoring and Sampling Manual.
3. Water and sediment samples must be representative of the general condition of the water body or sediments.
4. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristic.
5. Monitoring must be undertaken during a release and at the frequency stated.
6. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.
</td></tr>
<tr><td>P19-WT2</td><td>
At the end of the initial 5 day monitoring period the data will be reviewed and a report submitted to the department within a week outlining any trends in the data, including a description of all exceedances of release limits in Part 19-Table 1 or trigger values in Part 19-Table 2 (if any) and response measures taken. If there is no exceedance of trigger values or release limits associated with the dredging the monitoring reverts to once per day. The daily water quality measurement is to be taken after the first hour of dredging operation and where possible must not be taken in periods of slack water. Results will be analysed and submitted to the administering authority every 2 weeks.

If there is an exceedance of the trigger values (Part 19-Table 2) or release limits (Part 19-Table 1) occurs, which is attributable to the dredging operation, further monitoring (as described for the first five days indicated above) will be undertaken every 3 hours on a daily basis until the end of dredging operations. Results will be analysed and submitted to the department every 2 weeks. At the completion of monitoring a report is to be submitted to the department outlining all exceedances (if any) and response measures taken to mitigate potential impacts.
</td></tr>
<tr><td>P19-WT3</td><td>
If trigger values listed (Part 19 -Table 2) are met at W1 and W2 resulting from the dredging operations, monitoring is to occur at the site every three hours during dredging until turbidity is down to the recovery value for the site. Once a trigger value has been met, up-current[1] and down current[2] turbidity are to be compared to determine if there is a 30% increase in turbidity down current of the operation. If there is an increase of over 30% the dredging operation is to be reviewed to identify ways to reduce turbidity. If turbidity has not dropped to the recovery values (Part 19 - Table 2) by the duration period, dredging is to stop until turbidity has returned to beneath the recovery value.
Part 19 - Table 2 – Trigger value, recovery values and duration periods for turbidity releases to water
<table>
<tr><th>Monitoring Points</th><th>Trigger Value (NTU)</th><th>Duration (hours)</th><th>Recovery value (NTU)</th></tr>
<tr><td>W1</td><td>19</td><td>8</td><td>7</td></tr>
<tr><td>W2</td><td>42</td><td>8</td><td>13</td></tr>
</table>
[1] up-current – a location determined by permit holder up current of beach nourishment and dredging works;
[2] down current – 50m down current of beach nourishment and dredging works.
</td></tr>
</table>

Part 20 – Schooner Road Boat Ramp (Former EA0001216)

Environmentally Relevant Activity	Locations
16-(1a) Dredging >1000t but <10000t/yr	Schooner Road Boat Ramp, TRINITY PARK, QLD 4879 Adjacent to Lot 1860 Plan SP264300 Adjacent to Lot 906 Plan SP165903

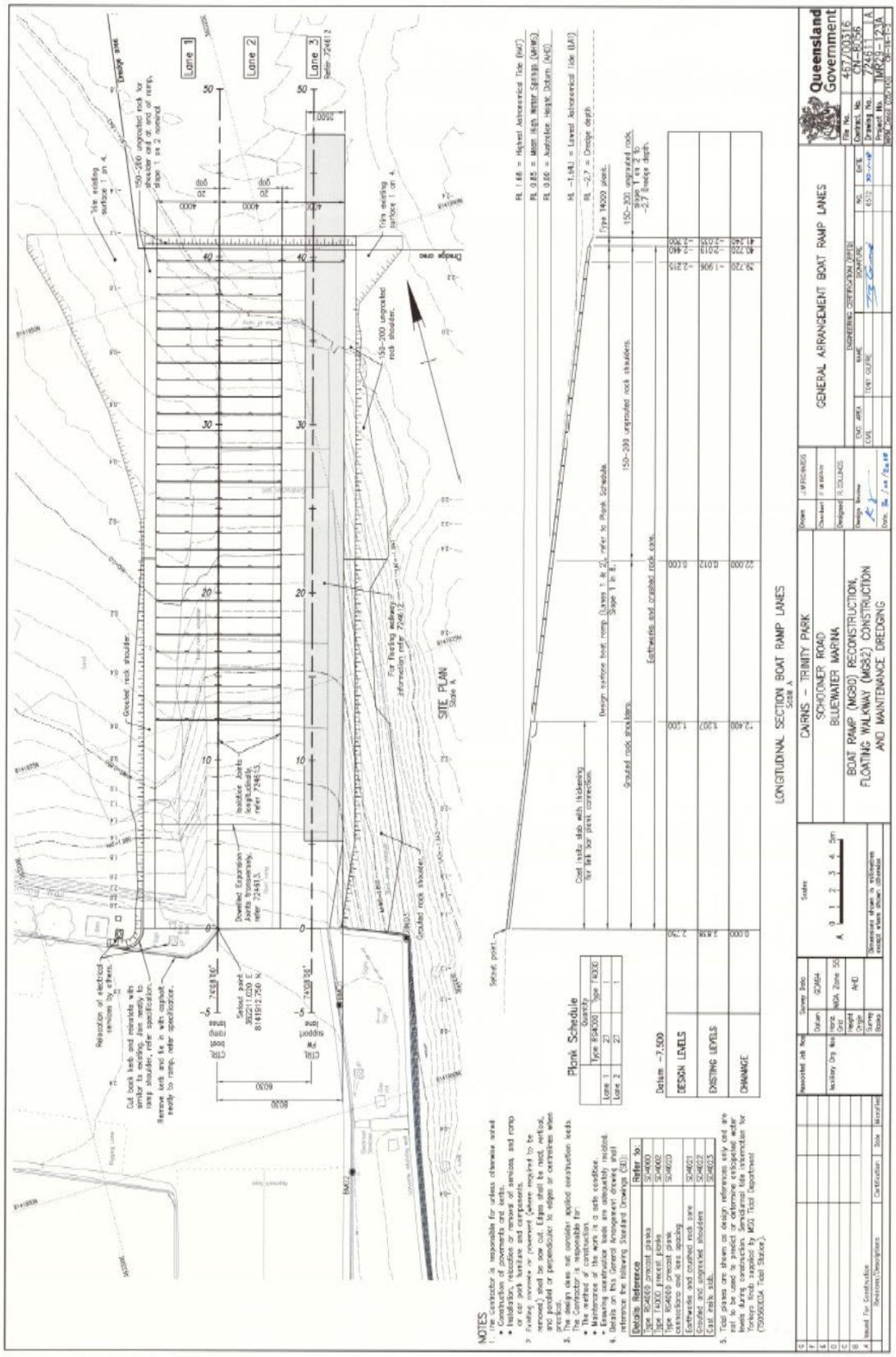
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P20-PMG010	Activities under this environmental authority must be conducted in accordance with the following limitations: 1. the amount of material to be dredged in a year must not exceed 10,000 tonnes; 2. must only be carried out within the area shown on *Site Plan, Locality Plan and Cadastral Plan*, drawing no 724610, version A, dated 30/01/2018 and in accordance with the plan Dredge Area and Joint Details drawing no 724613, version A dated 30/01/2018 and must be for the purpose of boat ramp upgrade works.
P20-PMG005	Written notification of the commencement date must be provided to the administering authority at least five (5) business days prior to establishing a new dredging activity.
P20-PMG001	The dredging activity must not commence unless the lawful disposal of the dredged material has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments. Evidence of all necessary approvals must be provided to the administering authority upon request.
P20-PMG008	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.
P20-PMG007	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
P20-PMG014	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P20-PMG016	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and **records** that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and **records** required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P20-PMG015	An **appropriately qualified person(s**) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P20-PMG009	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental**

	nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
P20-PMG017	The activity must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency; 2. establish and maintain control measures that minimise the potential for environmental harm; 3. ensure plant, equipment and measures are maintained in a proper and effective condition; 4. ensure plant, equipment and measures are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994;* and 6. ensure that reviews of environmental performance are undertaken at least annually.
P20-BWG02	Prior to the commencement of the dredging activity, a Dredge Management Plan (DMP)[1] for the activity must be developed and implemented, and the DMP must contain the following: 1. Clearly stated aims and objectives. 2. Description of dredging operation including: a) type of equipment to be used in dredging; b) volume of to be removed, and duration and timing of the dredging campaign; c) methods to be utilised for transporting dredged material; and d) dredged material disposal methods. 3. Maps or plans showing: a) legend, north arrow and scale; b) boundaries of dredging operation; c) estimated or modelled zone of influence of sediment plumes; d) location of designated disposal sites; e) location of sensitive receptors; and f) all monitoring locations. 4. A detailed description of sediment plume-associated monitoring program including: a) sampling regime and methods; and b) monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation to the trigger values that are turbid plumes extending more than 100m from the dredging site or sediment remaining suspended for more than one day. 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of trigger values will be determined. 7. Management actions to be initiated if trigger values are exceeded. *[1] Note: The Dredge Management Plan is subject to review and amendment as required by changing regulation, monitoring results, or administering authority recommendations.*
P20-BWG01	The Dredge Management Plan must be submitted to the administering authority at least 20 business days prior to the commencement of dredging and, amended in accordance with any comments made by the administering authority.
P20-PMG004	The Dredge Management Plan must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
Agency interest: Air	
Condition number	**Condition**
P20-PMA001	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.

Agency interest: Land	
Condition number	**Condition**
P20-PML003	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual*.
Agency interest: Noise	
Condition number	**Condition**
P20-PMN001	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.
Agency interest: Water	
Condition number	**Condition**
P20-PMW003	With the exception of floating equipment, all machinery and ancillary equipment for the activity must be stored on the landward side of the high banks of any surface waters.
P20-BWG03	Sediment plume-associated monitoring (SPAM) is to be undertaken as follows. The default SPAM requirement is: 1. For small-scale dredging operations (<50,000 cubic metres): (a) continuous visual monitoring, and (b) spot-checking (weekly and event-based concern site monitoring with control site-based checking). 2. For smaller medium-scale dredging operations (50,000 cubic metres - 250,000 cubic metres): (a) continuous visual monitoring, and (b) spot-checking (weekly and event-based concern site monitoring with control site-based checking). 3. For larger medium-scale dredging operations (250,000 cubic metres - 500,000 cubic metres): (a) continuous logging at concern sites and control sites, control site-based checking. 4. For large-scale dredging operations (>500,000 cubic metres): (a) continuous logging at concern sites and control sites, with a baseline collection phase (baseline based assessment with control site-based checking).
Agency interest: Waste	
Condition number	**Condition**
P20-PMG038	All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

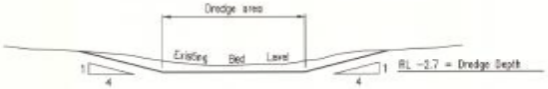
Part 20 – Approved Plans



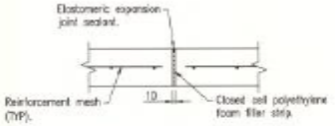
NOTES
1. Soundings are in metres reduced to Australian Height Datum (AHD).
2. Survey information is derived from:
   Queensland Government Hydrographic Services Plan No. J366-011.
   Date of survey 22 November 2016.
3. Horizontal datum origin PM200698.
   Vertical datum based on PM200698 RL 2.634 m AHD.

DREDGE AREA TABLE

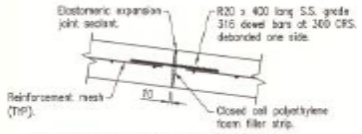
STATION	EASTING	NORTHING
A	362217.1	8141953.1
B	362219.8	8141975.3
C	362231.8	8141982.3
D	362255.8	8141950.2
E	362243.8	8141941.2
F	362240.2	8141946.5



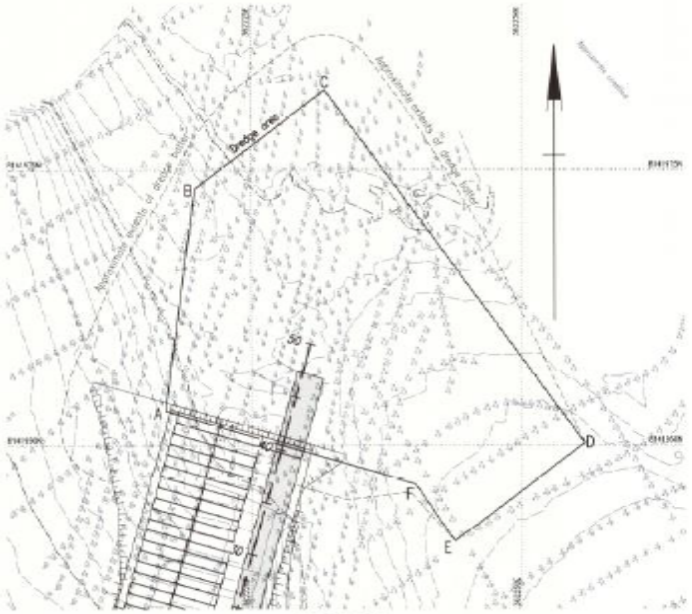
TYPICAL DREDGE SECTION
NTS



Isolation Joint (IJ) detail
Scale B



Dowelled Expansion Joint (DEJ) detail
Scale B



DREDGE AREA
Scale A

G						Associated Job Nos	Survey Data		
F							Datum	GDA94	
E						Auxiliary Dry Nos	Horiz. Grid	MGA, Zone 55	
D							Height Origin	AHD	
C							Survey Blocks		
B									
A	Issued For Construction								
	Revisions/Descriptions	Certification	Date	Initialled					

Scales
A 0 2 4 6 8 10m
B 0 200 400mm

CAIRNS – TRINITY PARK
SCHOONER ROAD
BLUEWATER MARINA
BOAT RAMP (MG80) RECONSTRUCTION,
FLOATING WALKWAY (MG82) CONSTRUCTION
AND MAINTENANCE DREDGING

Drawn	J.WARD-ARDS
Checked	E.MURPHY
Designed	R.COLLINGS
Design Review	
Date	30/4/2018

DREDGE AREA AND JOINT DETAILS

ENGINEERING CERTIFICATION (RPEQ)

DES. AREA	NAME	SIGNATURE	NO.	DATE
CIVIL	TONY GOFFE		6572	30-4-18

Queensland Government

File No.	467/00316
Contract No.	CN-8056
Drawing No.	714513 A
Project No.	TMP28-123A
MRC Detail (35/100)	08-16-1-4

Part 21 – Port of Hay Point (Former EPPR00876513)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Port of Hay Point, HAYPOINT QLD 4740 Lot 143 Plan SP121683 (dredging of material from Half Tide Beach Harbour) Adjacent to Lot 126 Plan SP123776

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P21-A1	This environmental authority authorises the removal of a maximum quantity of 17,000 cubic meters (m^3) of material and operations must be confined to: (a) the removal of maintenance dredge material from Half Tide Beach Harbour at the locations shown in Drawing HTBR_TW_001 titled *Half Tide Tug Harbour — Boat Ramp Access Channel* dated 1 November 2011 (Part 21 - Approved Plans - Figure 1). (b) placement of dredge spoil at the North Queensland Bulk Ports Material Relocation area defined by the coordinates (GDA94) stated in Table 1 - *Dredge Spoil Disposal Area*.
P21-A2	The administering authority must be advised in writing of the date of commencement of a dredge campaign at least five (5) business days prior to that date.
P21-A3	A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activity.
P21-A4	In carrying out an environmentally relevant activity (ERA) to which this approval relates, all reasonable and practicable measures must be taken to prevent and/or minimise the likelihood of environmental harm being caused.
P21-A5	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; (b) maintain such measures, plant and equipment in a proper and efficient condition; and (e) operate such measures, plant and equipment in a proper and efficient manner.
P21-A6	The holder of this environmental authority must provide a copy of the finalised Environmental Management Plan (EMP) to the department at least twenty-eight (28) business days prior to commencement of an ERA to which this approval relates.
P21-A7	From commencement of an ERA to which this approval relates, a site based management plan (SBMP), which incorporates the EMP, must be implemented. The SBMP 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

Table 1 - Dredge Spoil Disposal Area

Longitude	Latitude
149.3019269	-21.21998327
149.3348576	-21.20192259
149.3342955	-21.16552190
149.2806085	-21.10450986

	likelihood of environmental harm being caused. The SBMP must also provide for the review and continual improvement in the overall environmental performance of all activities that are carried out. The SBMP must provide for at least the following functions: (a) staff training in awareness of the environmental issues related to the activities and operational procedures and responsibilities for minimising potential impacts; (b) an environmental policy and commitments to best practice environmental management of the activities including specific performance targets and objectives; (c) control procedures to be implemented for routine operations for day to day activities to minimise the likelihood of environmental harm, however occasioned or caused; (d) contingency plans and emergency procedures to be implemented for non-routine situations to deal with foreseeable risks and hazards, including corrective responses to prevent and mitigate environmental harm (including any necessary site rehabilitation); (e) organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to ensure effective management of environmental issues; (f) effective communication procedures to ensure two-way communication on environmental matters between operational staff and higher management; (g) monitoring of contaminant releases to the environment including procedures, methods and record keeping and investigation into the environmental impact of any release that causes or is likely to cause serious or material environmental harm; (h) the periodic review of environmental performance and procedures, not less frequently than annually; and (i) a program for continuous improvement.
P21-A8	The SBMP must not be implemented or amended in a way that contravenes any condition of this approval. If there is a potential conflict between the SBMP and the conditions of this permit, the conditions of this permit take precedent.
P21-A9	If a condition of this approval requires the person undertaking the activity to which this approval relates to make or keep a record (however described), or prepare a document, the person must: (a) keep the record or document at the approved place; (b) keep the record or document in a place that is accessible by all persons engaged In the activity; (c) produce the record or document for inspection by an authorised person if requested or upon request from the administering authority, supply the record or document in the form and by means requested by the administering authority within fourteen (14) days; (d) for each document or record made or created in response to a monitoring requirement, reporting requirement, investigation or incident -- keep the record for a minimum of five (5) years from the date the document is made or created; and (e) if the record of document is sent (in any form) to the administering authority — keep a copy of the document at the approved place in a way that is accessible to any person engaged in the activity at the approved place.
P21-A10	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.
P21-A11	All relevant personnel operating under this approval must be trained in the use of spill kits(s).
P21-A12	All instruments, equipment, measuring devices used for measuring or monitoring in accordance with any condition of this approval must he calibrated and appropriately operated and maintained.
P21-A13	A suitably qualified and competent person(s) must conduct any monitoring required by this approval.
P21-A14	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:

	- comply with the conditions of this development approval; and - prevent environmental harm during normal operation and emergencies; or (d) under the close supervision of trained person that meets the requirements of the above subsection.
P21-A15	All chemicals, fuels and other liquid contaminants must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and in accordance with AS4326 *Storage and Handling of Oxidising Substances*, AS1940 - *Storage and Handling of Flammable and Combustible Liquids* and AS3780 — *The Storage and Handling of Corrosive Substances.*
P21-A16	Any spills and/or release of regulated waste or chemicals must be cleaned up as soon as practicable after the spill event.
P21-A17	All chemicals and flammable or combustible liquids stored on site must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian Standard is applicable, the following must be applied: (a) storage tanks must be bunded so that the capacity and construction of the bund is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and (b) drum storages must be bunded so that the capacity and construction of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
P21-A18	The final dredge report titled "*Post-dredge reporting for Half Tide Beach Harbour*" must be forwarded to the administering authority within sixty (60) days from the completion of the dredging campaign. The report shall include, but not be limited to, the following: (a) results of the pre and post bathymetric survey of the disposal site; (b) results of the pre and post dredge campaign water quality monitoring; (c) copies of all laboratory analyses untaken; (d) a summary of any complaints received and actions taken in response; (e) details of any environmental incidents or emergencies and the outcome; (f) the volumes and locations of material dredged from the Half Tide Beach Tug Harbour; and (g) the volumes and locations of spoil deposited within the Dredge Spoil Disposal Area.

Agency interest: Air

Condition number	**Condition**
P21-B1	The release of noxious or offensive odours, or any other noxious or offensive airborne contaminants resulting from the activity, must not cause, or be likely to cause, a nuisance at or beyond the boundary of the approved place.
P21-B2	When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable timeframe nominated by the administering authority, to investigate any complaint of environmental nuisance caused by dust and/or particulate matter. The results of the monitoring must be notified to the administering authority within fourteen (14) days following completion of the monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected nuisance sensitive place and at upwind control sites and must include: (a) for a complaint alleging dust nuisance, dust deposition; and (b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than ten (10) micrometre (µm) (PM_{10}) suspended in the atmosphere over a twenty-four (24) hour averaging time.
P21-B3	The person undertaking the activity to which this approval relates must investigate, or commission the investigation of, any complaints of nuisance caused by noxious or offensive odours or airborne contaminants and, if these complaints are validated, make reasonable and

	appropriate adjustments to processes or equipment to prevent a recurrence of the nuisance and provide a report associated with the investigation within fourteen (14) days of completion of the investigation to the administering authority.
Agency interest: Water	
Condition number	**Condition**
P21-C1	No contaminants, other than dredge spoil, are authorised to be deposited/released to waters.
P21-C2	No dredging is permitted for the period between November and March inclusive, in order to minimise impacts on seagrass, coral and turtle communities. The period when dredging is permitted may be extended with the written agreement of the administering authority.
P21-C3	The dredger(s) must be fitted with Differential Global Positioning System (DGPS) and depth sounding to ensure that the dredger(s) accurately dredge within the approved dredge areas.
P21-C4	Prior to commencement of dredging, the dredger(s) DGPS must be loaded with the coordinates of the approved dredge areas.
P21-C5	The removal of material within the approved dredging areas, as stated in condition P21-A1, must not exceed a depth of 1 metre lowest astronomical tide.
P21-C6	Where trailer suction dredging is carried out, an effective turtle exclusion device must be fitted to the dredge head.
P21-C7	Mobile dredging operations and spoil disposal activities must cease, or relocate to another site, if dugongs, turtles, or cetaceans, are either likely to be struck or captured, or are observed within one-hundred-fifty (150) metres of the activities being undertaken.
P21-C8	Prior to disposing of spoil within the approved Dredge Spoil Disposal Area, pursuant to condition P21-C1, the barge(s) or hopper(s) must accurately locate the Dredge Spoil Area using DGPS.
P21-C9	The location of each spoil deposit within the Dredge Spoil Disposal Area must be recorded and provided to the administering authority upon request.
P21-C10	The registered operator of an ERA to which this approval relates must provide the administering authority with a comprehensive water quality monitoring program twenty-eight (28) business days prior to the commencement of dredging activities that includes, but is not limited to, the following: (a) regular monitoring of turbidity within the approved dredge areas and Dredge Spoil Disposal Area, compared to background site(s); (b) regular monitoring of current velocity within the approved dredge areas and Dredge Spoil Disposal Area, compared to background site(s); and (c) surveys of the bed levels (bathymetry) of the approved dredge areas and Dredge Spoil Disposal Area prior to, and after, the dredging campaign.
P21-C11	If during operations, Acid Sulfate Soils or Potential Acid Sulfate Soils are found to be present at the dredge site, the holder of this approval must manage the works in accordance with the *Queensland Acid Sulfate Soils Technical Manual, Soil Management Guidelines*.
Agency interest: Land	
Condition number	**Condition**
P21-D1	Contaminants, including dredge spoil, must not be disposed of on land.

<table>
<tr><th colspan="2">Agency interest: Noise</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>P21-F1</td><td>Noise from activities must not cause an environmental nuisance at any nuisance sensitive place or commercial place.</td></tr>
<tr><td>P21-F2</td><td>Noise from the dredging activities must not exceed the levels specified in Table 1 - Noise Limits at any nuisance sensitive or commercial place.

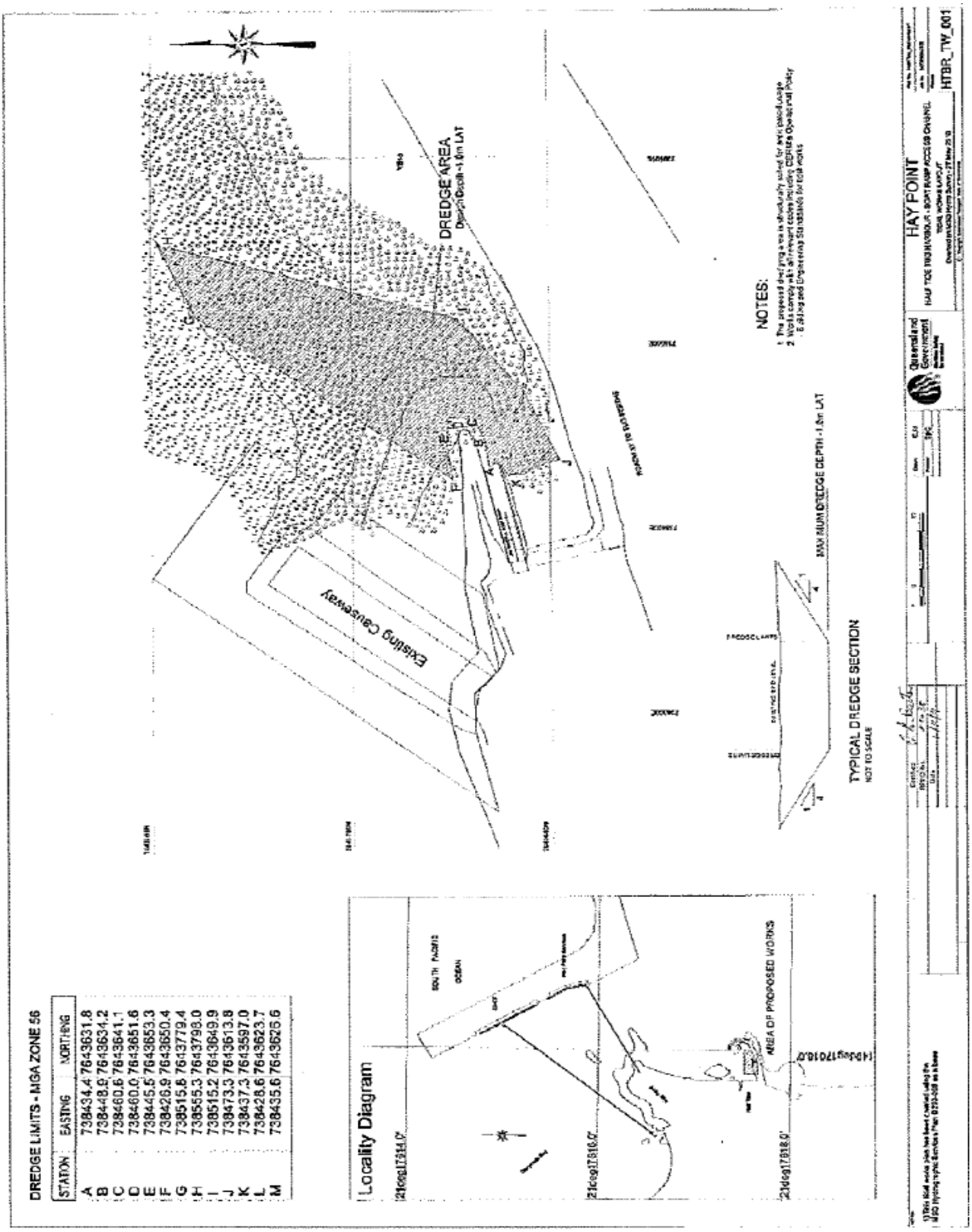
Table 1 - Noise Limits
<table>
<tr><td rowspan="2">Noise level dB(A) measured as</td><td colspan="3">Monday to Saturday</td><td colspan="3">Sundays and public holidays</td></tr>
<tr><td>7am - 6pm</td><td>6pm - 10pm</td><td>10pm -7am</td><td>9am - 6pm</td><td>6pm - 10pm</td><td>10pm - 9am</td></tr>
<tr><td></td><td colspan="6">Noise measured at a 'Noise sensitive place'</td></tr>
<tr><td>$L_{A10, adj. 10 mins}$</td><td>Bkg + 5</td><td>Bkg + 5</td><td>Bkg + 0</td><td>Bkg + 5</td><td>Bkg + 5</td><td>Bkg + 0</td></tr>
<tr><td>$L_{A1, adj. 10 mins}$</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td></tr>
<tr><td></td><td colspan="6">Noise measured at a 'Commercial place'</td></tr>
<tr><td>$L_{A10, adj. 10mins}$</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td></tr>
<tr><td>$L_{A1, adj. 10 mins}$</td><td>Bkg + 15</td><td>Bkg + 15</td><td>Bkg + 10</td><td>Bkg + 15</td><td>Bkg + 15</td><td>Bkg + 10</td></tr>
</table>
Note: All noise monitoring is to be conducted in accordance with the most recent version of the administering authority's Noise Measurement Manual.</td></tr>
<tr><td>P21-F3</td><td>When requested by the administering authority, noise monitoring, which addresses the following issues, must be undertaken to investigate any complaint of noise nuisance, and the results notified within fourteen (14) days to the administering authority. Monitoring must include:
(a) background noise level;
(b) $L_{A\ 10, adj.\ 10\ mins}$;
(c) $L_{A\ 1, adj.\ 10\ mins}$;
(d) $L_{A\ max, adj.\ T}$;
(e) the level and frequency of occurrence of impulsive or tonal noise;
(f) atmospheric conditions including wind speed and direction;
(g) effects due to extraneous factors such as traffic noise; and
(h) location, date and time of recording.</td></tr>
<tr><td>P21-F4</td><td>Subject to condition P21-F5, the person undertaking the activity to which this approval relates must investigate, or commission the investigation of, all complaints alleging noise nuisance[1] from the activity to which this approval relates.

[1] The form of any investigations made under condition P21-F4 should be sufficient to enable a conclusion about the validity of the complaint to be made, but do not necessarily require formal noise monitoring in the form required under condition P21-F3.</td></tr>
<tr><td>P21-F5</td><td>The obligation for the person undertaking the activity to which this approval relates to investigate a nuisance complaint is extinguished if all the following apply:
(a) the facts and circumstances forming the basis for the complaint are substantially the same as those alleged in a former complaint by the same complainant;
(b) the results of an investigation into the former complaint was that the complaint cannot be</td></tr>
</table>

	substantiated; and (c) the administering authority or an authorised person has not, by written notice, otherwise revived the obligation to investigate the complaint.
P21-F6	The person undertaking the activity to which this approval relates must make reasonable adjustment[2] for practices, procedures or equipment to resolve any validated complaint investigated under condition P21-F4. *[2] See section 319 of the Environmental Protection Act 1994 (General environmental duty) for things that must be considered in determining whether a change is a reasonable adjustment.*
Agency interest: Monitoring and Reporting	
Condition number	**Condition**
P21-G1	The registered operator must telephone the administering authority's Pollution Hotline or local office as soon as practicable, but within twenty-four (24) hours, after becoming aware of any release of contaminants not in accordance with the conditions of this approval or where environmental harm has been caused or may be threatened.
P21-G2	Written advice detailing the following information must be provided to the administering authority within fourteen (14) days following any notification in accordance with condition P21-G1: (a) the name of the operator, including their approval / registration number; (b) the name and telephone number of a designated contact person; (c) quantity and substance(s) released; (d) vehicle and registration details; (e) person/s involved (driver and any others); (f) the location and time of the release; (g) the suspected cause of the release; (h) a description of the effects of the release; (i) the results of any sampling performed in relation to the release, (j) actions taken to mitigate any environmental harm caused by the release; and (k) proposed actions to prevent a recurrence of the release.
P21-G3	An annual monitoring report must be prepared each year and presented to the administering authority with the annual return. This report shall include but not be limited to: (a) a summary of the previous twelve (12) months monitoring results obtained under any monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the previous twelve (12) months monitoring results to both this approvals limits and to relevant prior results; (b) an evaluation/explanation of the data from any monitoring programs; (c) a summary of any record of quantities of releases required to be kept under this approval; (d) a summary of the record of equipment failures or events recorded for any site under this approval; and (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency by the monitoring or recording programs.
Agency interest: Community	
Condition number	**Condition**
P21-H1	The operator of this activity 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) the allegation made by the complainant; (c) details of communication with the complainant; (d) any investigations undertaken; and

	(e) conclusions formed and any actions taken.
P21-H2	The operator of the activity must attempt to make contact with any complainant within twenty-four (24) hours of a complaint being received and initiate complaint resolution measures.

Part 21 – Approved Plan Figure 1 - Drawing HTBR_TW_001 titled *Half Tide Tug Harbour — Boat Ramp Access Channel* dated 1 November 2011.



Definitions (Parts 1 – 21)

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Science or its successor or predecessors.

Alert level represents tiers in a hierarchy of increasing environmental risk and are defined by **trigger values**. Three alert levels (low, moderate, and high) are typically used in a management action framework to indicate adverse conditions and guide management responses that aim to prevent and minimise environmental harm.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 per cent of the time period of not less than 15 minutes, using Fast response.

Blasting is the use of explosives to fracture:

• rock, coal and other minerals for later recovery; or

• structural components or other items to facilitate removal from a site or for reuse.

Commercial place means 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.

Contaminant can be:

- a gas, liquid or solid; or

- an odour; or

- an organism (whether alive or dead), including a virus; or

- energy, including noise, heat, radioactivity and electromagnetic radiation; or

- a combination of contaminants.

Continuous visual monitoring means visual appraisal of the sediment plume extent and intensity as performed by the dredge crew throughout the day on an ad hoc basis (i.e. whenever it is safe and non-disruptive to do so). The **continuous visual monitoring** requirement is intended to facilitate an early response feature in the dredge management plan, so that the dredge operator remains cognisant of the extent and intensity of the sediment plume being generated and reacts according to the **dredge management plan** accordingly. This requirement must be supplemented with empirical data (e.g. photography, when water quality instruments are not in use) taken at key indicative points in the tidal cycle (where applicable) to demonstrate the extent and intensity of the sediment plume

Deposit means drop, place or throw a contaminant in waters or onto a place or releases the contaminant or otherwise cause it to move into waters or onto a place.

Dredge footprint is the area being dredged including batters.

Dredge management plan (DMP) is an environmental management plan for the **dredging activity**. It defines and describes the:

a) scope, timing and duration of the dredging operation
b) sediment plume-associated monitoring programs
c) assessment of data, trigger values and alert levels, and
d) management actions that may be required in response to adverse monitoring results.

The **DMP** includes an aim to prevent and minimise environmental harm to sensitive receptors as a result of the dredging activity.

Dredged material means mud, sand, coral, shingle, gravel, clay, earth and other material removed by dredging. Dredged material includes dredge spoil and extracted quarry material.

Dredge spoil means material taken from the bed or banks of waters by using dredging equipment or other equipment designed for use in extraction of earthen material.

Dredging includes extraction of mud, sand, coral, ballast, shingle, gravel, clay, earth and other material from the bed of Queensland tidal and non-tidal **waters**. Dredging does not include the banks of a waterway.

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994*.

High water mark means the ordinary high water mark at spring tides.

Impulse adjustment means an adjustment applied if impulsiveness is significant characteristic of the sound within a measurement time interval. If impulsive components are clearly audible, the adjustment will be 5 dB(A). If the components are just detectable, an adjustment of 2 dB(A) will be appropriate.

Infrastructure includes roads, trucks bridges, culverts, dams, levees, bunds, bores, buildings, fixed machinery, hardstand areas, pipelines, power lines, airstrips, helipads etc., which are constructed or installed specifically for the project.

$L_{Aeq\ adj,T}$ means the adjusted A weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the activity is causing a steady state noise, and no shorter than one hour when the approved activity is causing an intermittent noise.

Max$_{LpA,T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

$L_{A\ 10,adj,\ 10\ mins}$ means the A-weighted sound pressure level (adjusted for tonal character and impulsiveness of the sound), exceeded for 10% of any 10 minute measurement period, using Fast response.

$L_{A\ 1,\ adj.\ 10\ mins}$ means the A-weighted sound pressure level (adjusted for tonal character and impulsiveness of the sound), exceeded for 1% of any 10 minute measurement period, using Fast response.

Land means any land, whether above or below the ordinary high-water mark at spring tides.

Measures has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

NATA means National Association of Testing Authorities.

Noxious means harmful or injurious to health or physical well-being.

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Prescribed contaminants means contaminants listed within Schedule 9 of the Environmental Protection Regulation 2019.

Reference site refers to a monitoring site located not only beyond the anticipated **zone of influence** of a sediment plume, but also beyond other sources of environmental impacts, and has **site pairing** with one or more **test sites** or sentinel sites. In monitoring programs, **reference sites** serve the same role as do **control sites** but can generally be suitable for a broader set of parameters.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, groundwater, or surface waters.

Sediment plume-associated impacts are impacts associated with sediment plumes including turbidity and suspended solids concentrations, light attenuation or sedimentation rates elevated above either **control site** or **reference site** readings or baseline conditions for an equivalent time of year. Where **dredge material** possesses acid sulfate soil-related properties, sediment plume-associated impacts may also include pH, dissolved oxygen and metal and metalloid-related toxicity impacts.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- 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 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

Substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurement, with a predominant component within the frequency range 10 to 200Hz. It includes any noise emission likely to cause an overall sound pressure level at a sensitive place exceeding 55dB(Z).

Trigger values are physicochemical, parameter-specific measurement values used to indicate a condition where an **environmental value** or **sensitive receptor** may be at low, moderate or high risk, or some other risk-related indicator.

24 hour storm event with an average recurrence interval of 1 in 5 years means the maximum rainfall depth from a 24 hour duration precipitation event with an average recurrence interval of once in 5 years. *For example, an Intensity-Frequency-Duration table for a 24 hour duration event with an average recurrence interval of 1 in 5 years, identifies a rainfall intensity of 7.09mm/hour. The rainfall depth for this event is therefore 24 hour x 7.09mm/hour = 170.16mm.*

Vibration is the oscillating or periodic motion of a particle, group of particles, or solid object about its equilibrium position.

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 groundwater and any part thereof.

You means the holder of the environmental authority.

Zone of influence of a sediment plume is, in its broadest application, defined by the **dredge footprint** and the area beyond the **dredge footprint** where at least some level of **sediment plume-associated impacts** are expected to occur. The overall **zone of influence** may be broken down into more risk-relevant sub-categories, such as the Zone of Unavoidable Loss (the **dredge footprint** and immediately adjacent areas), the Zone of Moderate Impact, or the Zone of Marginal Impact, with each zone being defined according to its purpose or role in environmental management.

Part 22 – Clump Point (Former EPPR03740716)

Environmentally Relevant Activity	Locations
16=1(a) Dredging >1000t but <10000t/yr	Clump Point, Bingil Bay QLD 4852 Lot 550 Plan NR7351 and adjacent road reserve

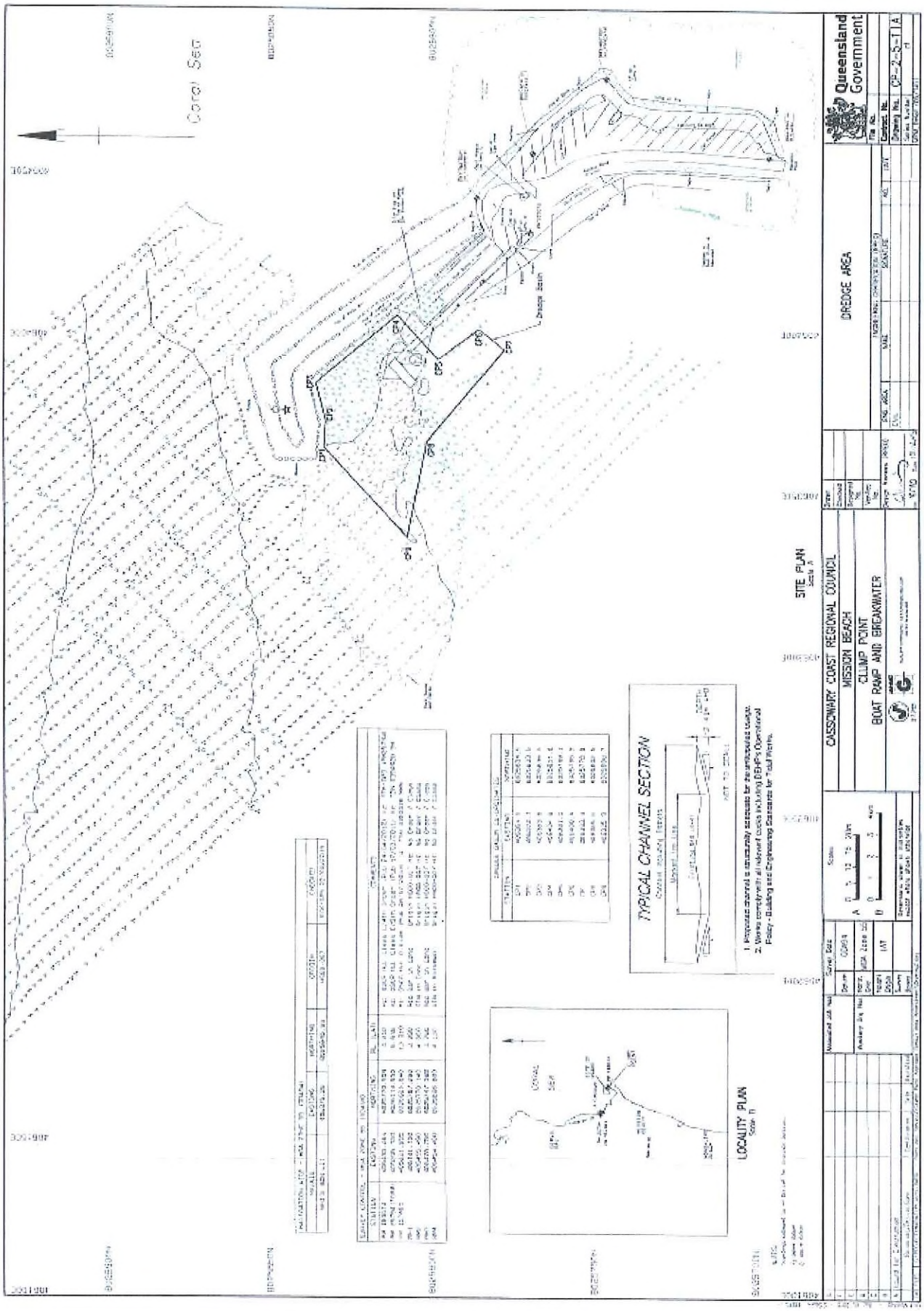
The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

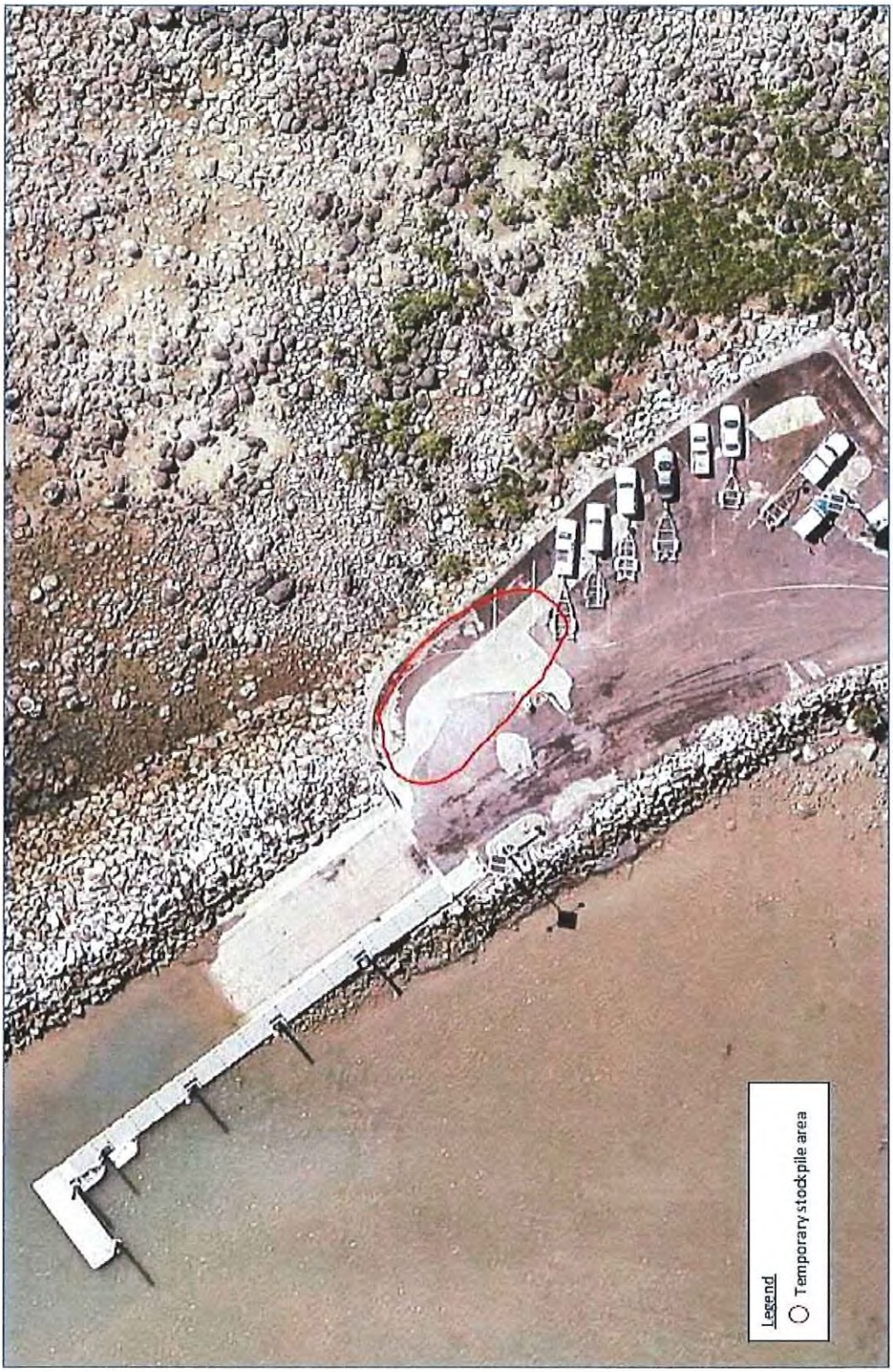
Agency interest: General	
Condition number	**Condition**
P22-G1	Any **activity** operating under this environmental authority must not be conducted contrary to any of the following limitations: 1. **Dredging** is limited to sediment extraction for the purposes of maintenance of the Clump Point Boat Ramp access channel in accordance with approved drawings as specified in *Schedule 1—Approved plans.* 2. **Dredge spoil** must be temporarily stored at the stockpile location as specified in *Schedule 1—Approved plans* and the **dredge spoil** must be removed to a facility that can lawfully accept the **dredge spoil.**
P22-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
P22-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P22-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P22-G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority,** or **nominated delegate** upon request, within the required timeframe and in the specified format.
P22-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P22-G7	When required by the **administering authority,** monitoring must be undertaken in the manner prescribed by the **administering authority,** to investigate a complaint of environmental nuisance arising from the **activity.** The monitoring results must be provided to the **administering authority,** or **nominated delegate,** within the required timeframe and in the specified format upon request.
P22-G8	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency 2. establish and maintain control **measures** that minimise the potential for environmental harm

<table>
<tr><td></td><td>3. ensure plant, equipment and measures are maintained in a proper and effective condition
4. ensure plant, equipment and measures are operated in a proper and effective manner
5. ensure that staff are trained and aware of their obligations under the Environmental Protection Act 1994
6. ensure that reviews of environmental performance are undertaken at least annually.</td></tr>
<tr><td colspan="2">Agency interest: Air</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P22-A1</td><td>Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any sensitive place or commercial place.</td></tr>
<tr><td colspan="2">Agency interest: Land</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P22-L1</td><td>Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the Queensland Acid Sulfate Soil Technical Manual.</td></tr>
<tr><td colspan="2">Agency interest: Waste</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P22-WS1</td><td>All waste generated in carrying out the activity must be reused, recycled or removed to a facility that can lawfully accept the waste.</td></tr>
<tr><td colspan="2">Agency interest: Dredging, General</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P22-DG1</td><td>Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><td>P22-DG2</td><td>The only contaminants to be released to surface waters are turbid plumes within the bounds of a silt curtain, to waters described as Clump Point boat ramp navigational channel in accordance with Table 2—Surface water release limits and the associated monitoring requirements.
Table 1—Surface water release limits
<table>
<tr><th>Release Point(s) Description</th><th>Quality characteristic (units)</th><th>Limit</th><th>Limit Type</th><th>Minimum Monitoring Frequency</th></tr>
<tr><td>The bounds of a silt curtain</td><td>Turbid plumes</td><td>No visible turbid plume</td><td>Maximum</td><td>Continuous visual monitoring</td></tr>
</table>
Associated monitoring requirements
1. Monitoring must be undertaken at all reasonable times during the dredging campaign and at the frequency stated.</td></tr>
<tr><td>P22-DG3</td><td>When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a breach of the condition DG2. The monitoring results must be provided to the administering authority upon request.</td></tr>
</table>

Schedules
Schedule 1 – Approved Plans

a. Drawing Number CP-2-5-1, Revision A, titled “Clump Point Boat Ramp and Breakwater – Dredge Area”, prepared by Queensland Government, and dated 18/12/2015.
b. Plan 1, titled “Temporary Stockpile Area”, prepared (with mark-up) by TMR and text added by EHP, received by EHP on 01/02/2016.


Coral Sea
SITE PLAN
LOCALITY PLAN
TYPICAL CHANNEL SECTION
DREDGE AREA
CASSOWARY COAST REGIONAL COUNCIL
MISSION BEACH
CLUMP POINT
BOAT RAMP AND BREAKWATER
Queensland Government



Plan 1—Temporary Stockpile Area | Received by EHP on 01/02/2016

(Image with mark-up supplied by TMR as Attachment D with application)

Definitions (Part 22)

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Heritage Protection or its successor or predecessors.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Commercial place means 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.

Continuous visual monitoring means visual appraisal of the sediment plume extent and intensity as performed by the dredge crew throughout the day on an ad hoc basis (i.e. whenever it is safe and non-disruptive to do so). The **continuous visual monitoring** requirement is intended to facilitate an early response feature in the dredge management plan, so that the dredge operator remains cognisant of the extent and intensity of the sediment plume being generated and reacts according to the **dredge management plan** accordingly. This requirement must be supplemented with empirical data (e.g. photography, when water quality instruments are not in use) taken at key indicative points in the tidal cycle (where applicable) to demonstrate the extent and intensity of the sediment plume

Dredge spoil means material taken from the bed or banks of waters by using dredging equipment or other equipment designed for use in extraction of earthen material.

Dredging means to clear out **dredge material**.

Measures has the broadest interpretation and includes

- **Procedural measures** such as standard operating procedures for dredging operations, environmental risk assessment, management actions, departmental direction and competency expectations under relevant guidelines
- **Physical measures** such as plant, equipment, physical objects (such as bunding, containment systems etc.), ecosystem monitoring and bathymetric surveys.

Nominated delegate means another government agency that provides services to the **administering authority**.

Noxious means harmful or injurious to health or physical well-being.

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- 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 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

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 groundwater and any part thereof.

You means the holder of the environmental authority.

Part 23 – Wellington Point Maintenance Dredging (Former EA0002847)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Wellington Point, QLD 4160 Adjacent to Lot 89 Plan SL10815 Authorised Disturbance Area

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

AGENCY INTEREST: GENERAL	
Condition reference	**Condition**
P23-G1	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
P23-G2	**Activities** under this environmental authority must be conducted in accordance with the following limitations: *a) Appendix 1: Site Plan, Locality Plan, Typical Dredge Section and Notes.* b) Material won from the activity to which this environmental authority related must be disposed of at Mud Island Dredge Material Placement Area. c) The amount of **dredged material** in a year must not exceed 40,000t. d) The activity must not occur outside the hours of 6:30 to 18:30 Monday to Saturday except for travel to the spoil disposal ground and the subsequent release of dredged material, which has no time constraints.
P23-G3	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P23-G4	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activities**.
P23-G5	The **activity** must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the **activity** during routine operations and a) emergencies; and b) establish and maintain control **measures** that minimise the potential for environmental harm; and c) ensure plant, equipment and **measures** are maintained in a proper and effective condition; and d) ensure plant, equipment and **measures** are operated in a proper and effective manner; and e) ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994*; and f) ensure that reviews of environmental performance are undertaken at least annually.
P23-G6	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required

	by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P23-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P23-G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request
P23-G9	Storage of chemicals and fuels in bulk or in containers of greater than 15 litres must be within a **secondary containment system** and releases from the containment system controlled in a manner that prevents environmental harm.
P23-G10	Written notification of the commencement date must be provided to the **administering authority** at least five (5) business days prior to establishing a **new dredging activity**.
P23-G11	The characterisation of sediments and suitability for unconfined disposal to waters of dredged material must be submitted to the administering authority in accordance with methodology provided in the latest edition of the: • National Assessment Guidelines for Dredging • Queensland Acid Sulfate Soil Technical Manual …and any other relevant guideline specified by the **administering authority**, at 20 business days prior to the commencement of the dredging **activity**.
P23-G12	**Dredged material** must not be placed at sea except at a designated place authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments.
P23-G13	**Dredging** operations: (a) must not commence if dugongs, turtles or cetaceans are observed within 200 meters of the dredge; and (b) where underway, must alter the course if dugongs, turtles or cetaceans are likely to be struck or captured; and (c) must temporarily cease if dugongs, turtles or cetaceans are observed within 50 metres of the dredge head and must not commence until dugongs, turtles or cetaceans have moved greater than 50m from the dredge head.
P23-G14	Operating procedures must be developed prior to the commencement of **dredging** activities that minimise the risk of turtle capture by the dredge head and the risk from all activities of injury to marine species of conservation significance and provided to the **administering authority** upon request.
P23-G15	The **administering authority** must be immediately notified of any turtle captures by the dredge or injury to any marine species of conservation significance.
P23-G16	All reasonable and practicable measures must be taken to minimise the impact of **dredging** activities on marine fauna.
AGENCY INTEREST: NOISE	
Condition reference	**Condition**
P23-N1	Noise generated by the **activity** must not cause **environmental nuisance** to any **sensitive place** or **commercial place**.

<table>
<tr><th colspan="2">AGENCY INTEREST: AIR</th></tr>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P23-A1</td><td>Odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><th colspan="2">AGENCY INTEREST: LAND</th></tr>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P23-L1</td><td>Contaminants from the activity must not be released to land.</td></tr>
<tr><td>P23-L2</td><td>Treatment and management of acid sulfate soils must comply with the guidance provided in the latest edition of the Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines.</td></tr>
<tr><th colspan="2">AGENCY INTEREST: WATER</th></tr>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P23-WT1</td><td>Other than as permitted within this environmental authority, contaminants must not be released to any waters.</td></tr>
<tr><td>P23-WT2</td><td>Where the zone of influence of a sediment plume generated by the activity encroaches upon a sensitive receptor, slightly disturbed or high ecological value waters, sediment plume-associated monitoring (SPAM) is to be undertaken as follows. The default SPAM requirement is:
1. Small scale dredging operations (<50,000 m3)
a) continuous visual monitoring, and
b) spot-checking (weekly and event-based concern site monitoring with control site-based checking).</td></tr>
<tr><td>P23-WT3</td><td>The only contaminants to be released to surface waters are sediments suspended during the activity to waters described as Moreton Bay in accordance with Table 1 - Surface water release limits and the associated monitoring requirements.
Table 1 – Surface water release limits
<table>
<tr><th rowspan="2">Monitoring location(s)</th><th rowspan="2">Quality characteristic</th><th colspan="2">Limits</th><th rowspan="2">Limit type</th><th rowspan="2">Minimum monitoring frequency</th></tr>
<tr><th>Minimum</th><th>Maximum</th></tr>
<tr><td>A background* sampling point*</td><td>pH, turbidity</td><td colspan="2">N/A</td><td>N/A</td><td>Concurrently with down current sampling frequency</td></tr>
<tr><td rowspan="2">A down-current sampling point**</td><td>pH</td><td>7.0</td><td>8.5</td><td>Range</td><td>Daily for the first week then fortnightly thereafter[1]</td></tr>
<tr><td>Turbidity Plume</td><td colspan="2">< 10 NTU above background
when background < 100 NTU</td><td>Maximum</td><td>Daily for the first week then fortnightly thereafter[2]</td></tr>
</table></td></tr>
</table>

			OR 10% above background when background > 100 NTU		
		Petroleum products, scum or litter from the works	None visible		Daily

Associated monitoring requirements

1. Monitoring must be in accordance with the methods prescribed in the current edition of the Department of Environment and Science *Monitoring and Sampling Manual*.
2. Water and sediment samples must be representative of the general condition of the water body or sediments.
3. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristic.
4. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.

* A background value for a water quality characteristic is the value of the quality characteristics measured at a background sampling point in receiving waters situated between 50 and 100 metres up-current from the release point at times when tidal flows are occurring, and must not be determined within the period of one hour either side of the slack tide.

** A down-current sampling point no greater than 200m down-current from the dredge apparatus.

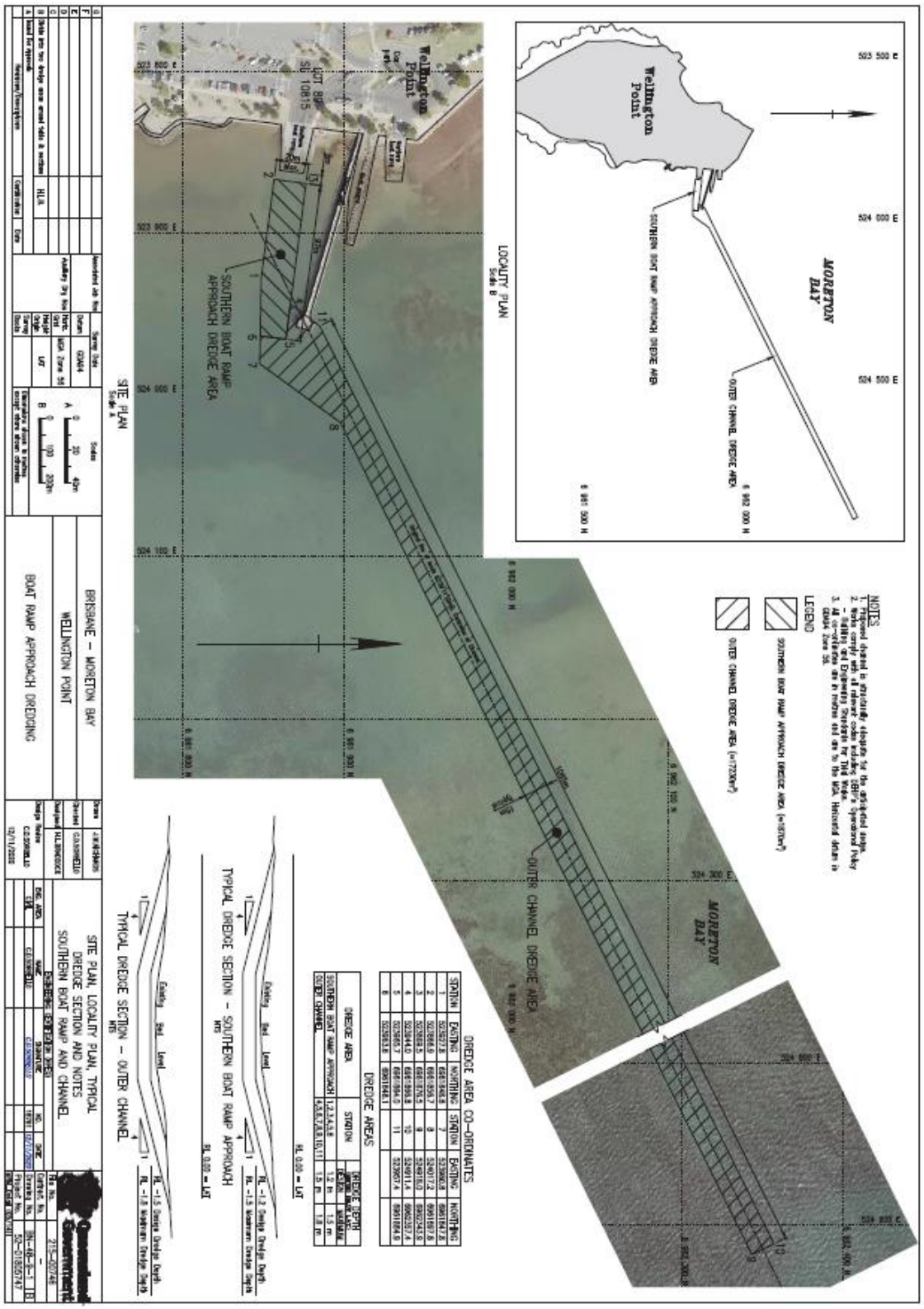
[1] Should the pH monitoring results comply with the release quality limits for eight (8) consecutive **monitoring events** from the commencement of the environmental authority (EA), monitoring for pH shall cease. The results of the monitoring must be submitted to the **administering authority** upon request. Monitoring may be required to recommence at the request of the **administering authority**.

[2] Should the turbidity monitoring results comply with the release quality limits for eight (8) consecutive **monitoring events** from the commencement of the EA, monitoring for turbidity shall cease and daily visual monitoring shall commence. The results of the monitoring must be submitted to the **administering authority** upon request. Monitoring may be required to recommence at the request of the **administering authority**.

P23-WT4	Prior to the commencement of the dredging activity, an **Environmental Management Plan** (EMP) for the **activity** must be developed and implemented, and the **EMP** must contain the following: 1. Clearly stated aims and objectives. 2. Description of dredging operation including: a) type of equipment to be used in **dredging**; b) volume of **dredged material** to be removed, and duration and timing of the **dredging** campaign;

	c) methods to be utilised for transporting **dredged material**; and d) **dredged material** disposal methods. 3. Maps or plans showing: a) legend, north arrow and scale; b) boundaries of **dredging** operation; c) estimated or modelled **zone of influence** of sediment plumes; d) location of designated disposal sites; e) location of **sensitive receptors**; and f) all monitoring locations. 4. A detailed description of **sediment plume-associated monitoring** program including: a) sampling regime and methods; and b) monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation to **trigger values** that will define **alert levels**. 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of **alert levels** will be determined. 7. Management actions to be initiated if **alert levels** are exceeded
P23-WT5	The **Environmental Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
WASTE	
Condition reference	**Condition**
P23-W1	All waste generated in carrying out the **activity** must be reused, recycled or lawfully removed, transported and disposed of offsite.

Appendix 1: Authorised Disturbance Footprint



Definitions (Part 23)

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Science or its successor or predecessors.

Alert level represents tiers in a hierarchy of increasing environmental risk and are defined by **trigger values**. Three alert levels (low, moderate, and high) are typically used in a management action framework to indicate adverse conditions and guide management responses that aim to prevent and minimise environmental harm.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Commercial place means 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.

Continuous visual monitoring means visual appraisal of the sediment plume extent and intensity as performed by the dredge crew throughout the day on an ad hoc basis (i.e. whenever it is safe and non-disruptive to do so). The **continuous visual monitoring** requirement is intended to facilitate an early response feature in the dredge management plan, so that the dredge operator remains cognisant of the extent and intensity of the sediment plume being generated and reacts according to the **dredge management plan** accordingly. This requirement must be supplemented with empirical data (e.g. photography, when water quality instruments are not in use) taken at key indicative points in the tidal cycle (where applicable) to demonstrate the extent and intensity of the sediment plume

Dredged material means material that has been removed from under surface water, including spoil, other than a mineral within the meaning of any Act relating to mining. Material includes, for example, stone, gravel, sand, rock, clay, mud, silt and soil.

Dredging includes extraction of mud, sand, coral, ballast, shingle, gravel, clay, earth and other material from the bed of Queensland tidal and non-tidal **waters**. **Dredging** does not include the banks of a waterway.

Environmental management plan (EMP) is plan for the dredging activity. It includes information that defines and describes the:

- scope, timing and duration of the **dredging** operation
- **sediment plume-associated monitoring programs**
- assessment of data, **trigger values** and **alert levels**, and
- management actions that may be required in response to adverse monitoring results.

The EMP includes an aim to prevent and minimise environmental harm to **sensitive receptors** as a result of the dredging activity.

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994*.

High Ecological Value (HEV) is the ‘management intent’ for the ‘ecosystem condition’ as defined in Schedule 1 of the Environmental Protection Policy (Water) 2009 for scheduled waters, or the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (ANZECC & ARMCANZ 2000) for non-scheduled waters. HEV ecosystems are intact and typically exhibit relatively insignificant levels of anthropogenic impacts.

Land means any land, whether above or below the ordinary high-water mark at spring tides (i.e. includes **tidal land**).

Measures has the broadest interpretation and includes:

(a) procedural **measures** such as standard operating procedures for **dredging** operations, environmental risk assessment, management actions, departmental direction and competency expectations under relevant guidelines; physical measures such as plant, equipment,

(b) physical objects (such as bunding, containment systems etc.), ecosystem monitoring and bathymetric surveys.

Monitoring event means single sample taken for the purpose of determining compliance with a condition.

New dredging activity means a dredging **activity** that is currently not underway, the next stage of a dredging campaign that is currently underway, or a discretely separate area in a larger dredge campaign that is currently underway.

Nominated delegate means another government agency that provides services to the **administering authority**.

Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape

fail to prevent the contaminant from escaping.

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, **groundwater**, or surface waters.

Sediment plume-associated monitoring (SPAM) means environmental monitoring associated with risk management of **sediment plume-associated impacts.**

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- 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 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or

for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

Sensitive receptor includes biological sensitive receptors together with other **environmental values** sensitive to the effects of dredge-generated **sediment plume-associated impacts**.

(a) river, creek or stream in which water flows permanently or intermittently—
  (i) in a natural channel, whether artificially improved or not; or
  (ii) in an artificial channel that has changed the course of the **watercourse.**
(b) **watercourse** includes the bed and banks and any other element of a river, creek or stream confining or containing water**.**

Slightly disturbed is the 'management intent' for the 'ecosystem condition' as defined in Schedule 1 of the Environmental Protection Policy (Water) 2009. Slightly disturbed ecosystems should generally be regarded as **high ecological value** ecosystems in all respects except for some relatively minor disturbances (usually water-quality related e.g. nutrient concentrations exceeding the water quality objective).

Spot-checking refers to a non-continuous monitoring approach performed at a fixed distance and direction from a mobile impact source (in the context of this guidance, dredging vessels) or at other key points of interest.

Spot-checking may be routine or **event-based**, and may also include monitoring at fixed monitoring sites, such as **reference sites** or **control sites** and **test sites** or **sentinel sites***,* although the same sites need not necessarily be monitored on every sampling event.

Trigger values are physicochemical, parameter-specific measurement values used to indicate a condition where an **environmental value** or **sensitive receptor** may be at low, moderate or high risk, or some other risk-related indicator.

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 groundwater and any part thereof.

Zone of influence of a sediment plume is, in its broadest application, defined by the **dredge footprint** and the area beyond the **dredge footprint** where at least some level of **sediment plume-associated impacts** are expected to occur. The overall **zone of influence** may be broken down into more risk-relevant sub-categories, such as the Zone of Unavoidable Loss (the **dredge footprint** and immediately adjacent areas), the Zone of Moderate Impact, or the Zone of Marginal Impact, with each zone being defined according to its purpose or role in environmental management.

Part 24 – Wellington Point North Capital Dredging (Former P-EA-100116769)

Environmentally Relevant Activity	Locations
16-(1b) Dredging >10000t but <100000t/yr	Wellington Point, QLD 4160 Adjacent to Lot 89 Plan SL10815 Authorised Dredge Footprint Area

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

AGENCY INTEREST: GENERAL	
Condition reference	**Condition**
P24-G1	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
P24-G2	**Activities** under this environmental authority must be conducted in accordance with the following limitations: *a) Appendix 1: Site Plan, Locality Plan, Typical Dredge Section and Notes, Northern Boat Ramp.* b) Material won from the activity to which this environmental authority related must be disposed of at Mud Island Dredge Material Placement Area. c) The amount of **dredged material** in a year must not exceed 12,000t. d) The activity must not occur outside the hours of 06:30 to 18:30 Monday to Saturday except for travel to the spoil disposal ground and the subsequent release of dredged material, which has no time constraints.
P24-G3	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P24-G4	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activities**.
P24-G5	The **activity** must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the **activity** during routine operations and a) emergencies; and b) establish and maintain control **measures** that minimise the potential for environmental harm; and c) ensure plant, equipment and **measures** are maintained in a proper and effective condition; and d) ensure plant, equipment and **measures** are operated in a proper and effective manner; and e) ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994*; and f) ensure that reviews of environmental performance are undertaken at least annually.

P24-G6	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P24-G7	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P24-G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request
P24-G9	Storage of chemicals and fuels in bulk or in containers of greater than 15 litres must be within a **secondary containment system** and releases from the containment system controlled in a manner that prevents environmental harm.
P24-G10	Written notification of the commencement date must be provided to the **administering authority** at least five (5) business days prior to establishing a **new dredging activity**.
P24-G11	The characterisation of sediments and suitability for unconfined disposal to waters of dredged material must be submitted to the administering authority in accordance with methodology provided in the latest edition of the: • National Assessment Guidelines for Dredging • Queensland Acid Sulfate Soil Technical Manual …and any other relevant guideline specified by the **administering authority**, at least 20 business days prior to the commencement of the dredging **activity**.
P24-G12	**Dredged material** must not be placed at sea except at a designated place authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments.
P24-G13	**Dredging** operations: (a) must not commence if dugongs, turtles or cetaceans are observed within 200 meters of the dredge; and (b) where underway, must alter the course if dugongs, turtles or cetaceans are likely to be struck or captured; and (c) must temporarily cease if dugongs, turtles or cetaceans are observed within 50 metres of the dredge head and must not commence until dugongs, turtles or cetaceans have moved greater than 50m from the dredge head.
P24-G14	Operating procedures must be developed prior to the commencement of **dredging** activities that minimise the risk of turtle capture by the dredge head and the risk from all activities of injury to marine species of conservation significance and provided to the **administering authority** upon request.
P24-G15	The **administering authority** must be immediately notified of any turtle captures by the dredge or injury to any marine species of conservation significance.
P24-G16	All reasonable and practicable measures must be taken to minimise the impact of **dredging** activities on marine fauna.
AGENCY INTEREST: NOISE	

<table>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P24-N1</td><td>Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><th colspan="2">AGENCY INTEREST: AIR</th></tr>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P24-A1</td><td>Odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><th colspan="2">AGENCY INTEREST: LAND</th></tr>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P24-L1</td><td>Contaminants from the activity must not be released to land.</td></tr>
<tr><td>P24-L2</td><td>Treatment and management of acid sulfate soils must comply with the guidance provided in the latest edition of the Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines.</td></tr>
<tr><th colspan="2">AGENCY INTEREST: WATER</th></tr>
<tr><th>Condition reference</th><th>Condition</th></tr>
<tr><td>P24-WT1</td><td>Other than as permitted within this environmental authority, contaminants must not be released to any waters.</td></tr>
<tr><td>P24-WT2</td><td>Where the zone of influence of a sediment plume generated by the activity encroaches upon a sensitive receptor, slightly disturbed or high ecological value waters, sediment plume-associated monitoring (SPAM) is to be undertaken as follows. The default SPAM requirement is:
2. Small scale dredging operations (<50,000 m3)
a) continuous visual monitoring, and
b) spot-checking (weekly and event-based concern site monitoring with control site-based checking).</td></tr>
<tr><td>P24-WT3</td><td>The only contaminants to be released to surface waters are sediments suspended during the activity to waters described as Moreton Bay in accordance with Table 1 - Surface water release limits and the associated monitoring requirements.
Table 1 – Surface water release limits
<table>
<tr><th rowspan="2">Monitoring location(s)</th><th rowspan="2">Quality characteristic</th><th colspan="2">Limits</th><th rowspan="2">Limit type</th><th rowspan="2">Minimum monitoring frequency</th></tr>
<tr><th>Minimum</th><th>Maximum</th></tr>
<tr><td>A background* sampling point*</td><td>pH, turbidity</td><td colspan="2">N/A</td><td>N/A</td><td>Concurrently with down current sampling frequency</td></tr>
<tr><td>A down-current sampling point**</td><td>pH</td><td>7.0</td><td>8.5</td><td>Range</td><td>Daily for the first week then fortnightly thereafter[1]</td></tr>
</table></td></tr>
</table>

		Turbidity Plume	< 10 NTU above background when background < 100 NTU OR 10% above background when background > 100 NTU	Maximum	Daily for the first week then fortnightly thereafter[2]
		Petroleum products, scum or litter from the works	None visible		Daily

Associated monitoring requirements

1. Monitoring must be in accordance with the methods prescribed in the current edition of the Department of Environment and Science *Monitoring and Sampling Manual*.
2. Water and sediment samples must be representative of the general condition of the water body or sediments.
3. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristic.
4. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.

* A background value for a water quality characteristic is the value of the quality characteristics measured at a background sampling point in receiving waters situated between 50 and 100 metres up-current from the release point at times when tidal flows are occurring, and must not be determined within the period of one hour either side of the slack tide.

** A down-current sampling point no greater than 200m down-current from the dredge apparatus.

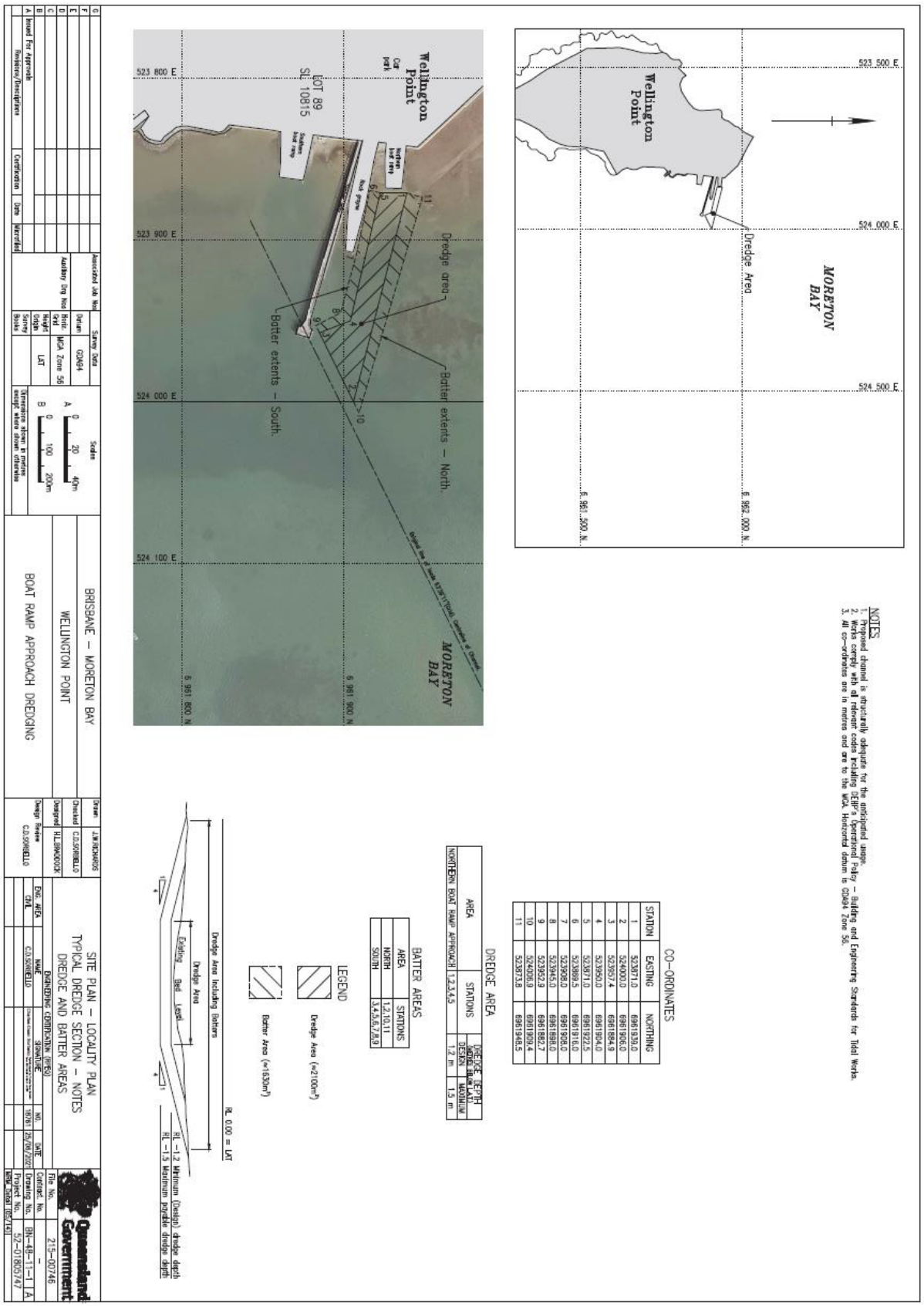
[1] Should the pH monitoring results comply with the release quality limits for eight (8) consecutive **monitoring events** from the commencement of the environmental authority (EA), monitoring for pH shall cease. The results of the monitoring must be submitted to the **administering authority** upon request. Monitoring may be required to recommence at the request of the **administering authority**.

[2] Should the turbidity monitoring results comply with the release quality limits for eight (8) consecutive **monitoring events** from the commencement of the EA, monitoring for turbidity shall cease and daily visual monitoring shall commence. The results of the monitoring must be submitted to the **administering authority** upon request. Monitoring may be required to recommence at the request of the **administering authority**.

P24-WT4	Prior to the commencement of the dredging activity, an **Environmental Management Plan** (EMP) for the **activity** must be developed and implemented, and the **EMP** must contain the following:

	1. Clearly stated aims and objectives. 2. Description of dredging operation including: e) type of equipment to be used in **dredging**; f) volume of **dredged material** to be removed, and duration and timing of the **dredging** campaign; g) methods to be utilised for transporting **dredged material**; and h) **dredged material** disposal methods. 3. Maps or plans showing: g) legend, north arrow and scale; h) boundaries of **dredging** operation; i) estimated or modelled **zone of influence** of sediment plumes; j) location of designated disposal sites; k) location of **sensitive receptors**; and l) all monitoring locations. 4. A detailed description of **sediment plume-associated monitoring** program including: c) sampling regime and methods; and d) monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation to **trigger values** that will define **alert levels**. 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of **alert levels** will be determined. 7. Management actions to be initiated if **alert levels** are exceeded
P24-WT5	The **Environmental Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
WASTE	
Condition reference	**Condition**
P24-W1	All waste generated in carrying out the **activity** must be reused, recycled or lawfully removed, transported and disposed of offsite.

Appendix 1: Authorised Dredge Footprint Area



Part 25 – Yorkey's Knob (Former EA0002459)

Environmentally Relevant Activity	Location
ERA16 – Extraction and Screening 1: Dredging, in a year, the following quantity of material (b) more than 10,000t but not more than 100,000t	Adjacent to Lot 24 on SP122863

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
P25-G1	**Activities** under this environmental authority must be conducted in accordance with the following limitations: 1. The amount of material dredged must not exceed 40,000t per year. 2. Within the bounds and specifications of the following approved plan: a. **Marine Civil – Dredge Plan** prepared by **Royal HaskoningDHV** dated **14/08/20**, **Drawing Number DRG1200**. 3. **Dredged material** is to be placed only within the area identified as "**Dredge Material Placement Area**" on the plan **Marine Civil – Dredge Plan** prepared by **Royal HaskoningDHV** dated **14/08/20**, **Drawing Number DRG1200** for permanent disposal, or rehandling (if material has unsuitable physical properties for use in the reclamation). 4. If **dredged material** is excess upon completion of reclamation requirements it may be used for **lawful beach nourishment**. 5. If **dredged material** cannot be utilised in reclamation or beach nourishment because it has unsuitable physical properties it is to be disposed to an approved land-based disposal site.
P25-G2	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activity**.
P25-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
P25-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P25-G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority, or nominated delegate** upon request**,** within the required timeframe and in the specified format.
P25-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P25-G7	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses. The only exception to this condition is for *in situ* monitoring of water quality parameters.

P25-G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
P25-G9	Written notification of the commencement date must be provided to the **administering authority** at least five (5) business days prior to establishing a **new dredging activity**.
P25-G10	The characterisation of sediments and suitability for **land**-based disposal of **dredged material** must be submitted to the **administering authority** in accordance with methodology provided in the latest edition of the: • *National Environment Protection (Assessment of Site Contamination) Measure*; and • *Queensland Acid Sulfate Soil Technical Manual* …and any other relevant guideline specified by the **administering authority**, at least 20 business days prior to the commencement of the dredging **activity**. **Note**: It is the responsibility of the operator to determine whether previous characterisation of sediments are suitable for assessing risks to **environmental values** associated with the **dredging** campaign to which this environmental authority relates.
P25-G11	The **dredging activity** must not commence unless the lawful disposal of the **dredged material** has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments. Evidence of all necessary approvals must be provided to the **administering authority** upon request.
P25-G12	Prior to the commencement of the **dredging** activity, a Dredge Management Plan (DMP)[1] for the activity must be developed and implemented, and the DMP must contain the following: 1. Clearly stated aims and objectives. 2. Description of **dredging** operation including: a. type of equipment to be used in **dredging**; b. volume of **dredged material** to be removed, and duration and timing of the dredging campaign; c. methods to be utilised for transporting **dredged material**; and d. **dredged material** disposal methods. 3. Maps or plans showing: a. legend, north arrow and scale; b. boundaries of **dredging** operation; c. estimated or modelled zone of influence of sediment plumes; d. location of designated disposal sites; e. location of sensitive receptors; and f. all monitoring locations. 4. A detailed description of sediment plume-associated monitoring program including: a. sampling regime and methods; and b. monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation to **trigger values** that will define **alert levels**. 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of **alert levels** will be determined. 7. Management actions to be initiated if **alert levels** are exceeded. [1] Note: The Dredge Management Plan is subject to review and amendment as required by changing regulation, monitoring results, or **administering authority** recommendations.
P25-G13	The Dredge Management Plan must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.

P25-G14	The Dredge Management Plan (DMP) must be provided to the **administering authority** at either of the addresses below: palm@des.qld.gov.au; or Department of Environment and Science Permit and Licence Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001
P25-G15	The Dredge Management Plan must be submitted to the **administering authority** at least 20 business days prior to the commencement of **dredging** in accordance with that plan and amended in accordance with any comments made by the **administering authority**.
P25-G16	If the Dredge Management Plan is amended, it must be provided to the **administering authority** at least 20 business days prior to commencing activities under the amended Dredge Management Plan.
P25-G17	Any comments made by the **administering authority** on the amended Dredge Management Plan provided in accordance with condition G16 must be addressed to the satisfaction of the **administering authority** prior to implementing the amended Dredge Management Plan**.**
P25-G18	Condition G16 and G17 apply each time the Dredge Management Plan is amended.
P25-G19	The **dredging activity** must be undertaken in accordance with the Dredge Management Plan required in condition G12.
P25-G20	Authorised **dredged material** disposal to land must only take place within the following locations and for the following purposes: • Within the area identified as identified as "**Dredge Material Placement Area**" on the plan **Marine Civil – Dredge Plan** prepared by **Royal HaskoningDHV** dated **14/08/20**, **Drawing Number DRG1200** for the purpose of reclamation or rehandling in accordance with condition G1. • For **lawful beach nourishment**. • For permanent disposal at an approved land-based disposal site.

Agency interest: Air	
Condition number	**Condition**
P25-A1	Odours or airborne contaminants must not cause environmental nuisance to any **sensitive place** or **commercial place**.

Agency interest: Water	
Condition number	**Condition**
P25-WT1	The only contaminants to be released to surface **waters** are: 1. Bed sediments necessarily disturbed during **dredging** at locations indicated in condition G1; and 2. Contaminants released from the reclamation area in accordance with the Dredge Management Plan required under condition G12.

P25-WT2	Where the **zone of influence** of a sediment plume generated by the **activity** encroaches upon a **sensitive receptor**, **slightly disturbed** or **high ecological value waters**, **sediment plume-associated monitoring (SPAM)** is to be undertaken as follows. The default[1] **SPAM** requirement is: a. **continuous visual monitoring**[2], and b. **spot-checking** (weekly and **event-based concern site** monitoring with **control site**-based checking)
P25-WT3	In addition to WT1, the release to **waters** must not: 1. Have any other properties at a concentration that is capable of causing environmental harm. 2. Produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.

Agency interest: Land	
Condition number	**Condition**
P25-L1	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual.*
P25-L2	**Dredged material** placed for beach nourishment must be finished to create a safe landform that is uniform with surrounding environment.
P25-L3	Earthworks associated with beach nourishment must avoid underlying bedrock, coffee rock and other cemented sediment material or consolidated mud/organic material layers.
P25-L4	Sand placed for beach nourishment must not cover any dune vegetation.

Agency interest: Noise	
Condition number	**Condition**
P25-N1	Noise generated by the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.

Agency interest: Waste	
Condition number	**Condition**
P25-W1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

[1] The default **sediment plume-associated monitoring** program may be amended at the discretion of the **administering authority** to a more-intensive or less-intensive monitoring approach depending on the amount and quality of supporting information available at the time the dredging application is made, the management intent of waters under the Environmental Protection (Water) Policy 2009, and the level of perceived risk and protection status of each potentially-affected **environmental value**.
[2] The **continuous visual monitoring** methodology includes a subjective monitoring component, but must also be supplemented with daily, non-subjective (i.e. objective, empirical) data collection that must occur at the most appropriate times to report the full extent of the sediment plumes being generated (e.g. mid-ebb and flood tides whilst actively dredging) as detailed in the **Dredge Management Plan**.

Part 25 - Appendix 1

Authorised Dredge Footprint Area - Marine Civil – Dredge Plan prepared by Royal HaskoningDHV dated 14/08/20, Drawing Number DRG1200.

YORKEY'S KNOB BOATING INFRASTRUCTURE PROJECT
MARINE CIVIL - DREDGE PLAN
DRG 1200

LEGEND

- DREDGE / CUT
- DREDGE MATERIAL PLACEMENT AREA

NOTES

1. HYDROGRAPHIC AND LAND DETAIL SURVEY UNDERTAKEN BY QLD GOV. HYDROGRAPHIC SERVICES, DATED 14/09/2016 AND 21/07/2017.
2. HAT = 1.86m
   MHWS = 0.98m
   AHD = 0.00m
   MLWS = -0.86m
   LAT = -1.64m

MOON RIVER

EXCAVATE TO RL -3.15mAHD

CONSTRUCTION BATTER, 1V:2V SLOPE

E 362917.132
N 8141894.183

E 362967.895
N 8141969.956

CH 20.00
CH 40.00
CH 60.00
CH 80.00
CH 100.00
CH 120.00
CH 140.00
CH 160.00
CH 180.00
CH 200.00
CH 220.00
CH 242.58

EXISTING CHANNEL

RL -3.15mAHD CONTOUR

E 363036.859
N 8142011.956

1V:8V SLOPE

DREDGE TO RL -3.15mAHD

CH 60.00
CH 45.00
CH 30.00

E 363020.459
N 8141824.961

E 363077.730
N 8141910.448

E 363085.971
N 8141933.595

Rock Breakwall

Rocks

Grass

Sand Beach

Top of Bank

Toe of Bank

Rear Land Access Chainl

Front Land Access Chainl

Sunken Vessel in Vicinity

LINE OF LEADS 221?30' (True)

EXISTING BREAKWATER

1V:4V SLOPE

CONSTRUCTION BATTER, 1V:2V SLOPE

DREDGE QUANTITIES					
No.	MIN. (m)	MAX. (m)	AREA (m2)	VOL (m3)	COLOUR
1	-3.56	-3.00	337	73	
2	-3.00	-2.00	609	665	
3	-2.00	-1.00	8,866	5,842	
4	-1.00	0.00	2,767	11,194	
		TOTAL	12,579	17,774	

AUSTRALIAN HEIGHT DATUM | **NOT FOR CONSTRUCTION** | **S0 WORK IN PROGRESS**

8 0 8 16 24 32 40m
1:800 (A3) 1:400 (A1)

C:\Users\220025\Box\PA2158 Yorkeys Knob\PA2158 Yorkeys Knob Team\PA2158 Technical Data\E11 Working Drawings\PA2158-RHD-CO-M3-MA-1000-Civil Model-Coastal.dwg

SAVED: 14-Aug-20

Royal HaskoningDHV
Enhancing Society Together

Part 26 – Clump Point – (Former EA0001137)

Environmentally Relevant Activity	Locations
ERA 16 - Extraction and Screening 1: Dredging, in a year, the following quantity of material (a) more than 1,000t but not more than 10,000t	Lot 550 on Plan NR7351 Lot 540 on Plan SP287493

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition reference	**Condition**
P26-G1	Any **activity** operating under this environmental authority must not be conducted contrary to any of the following limitations: 1. Dredging is limited to sediment extraction for the purposes of maintenance of the Clump Point Boat Ramp in accordance with approved drawings as specified in Schedule 1 - Approved plans. 2. Dredge spoil must be temporarily stored at the stockpile location as specified in Schedule 1 — Approved plans and the spoil must be removed to a facility that can lawfully accept the spoil.
P26-G2	All reasonable and practicable measures must be taken to minimise the likelihood of environmental harm being caused.
P26-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of you becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions undertaken.
P26-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P26-G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P26-G6	An **appropriately qualified person(s**) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P26-G7	When required by the **administering authority,** monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of **environmental nuisance** arising from the activity. The monitoring results must be provided to the **administering authority**, or nominated delegate, within the required timeframe and in the specified format upon request.
P26-G8	The **activity** must be undertaken in accordance with written procedures that: 1. Identify potential risks to the environment from the activity during routine operations, closure and an emergency; 2. Establish and maintain control measures that minimise the potential for environmental harm;

<table>
<tr><td></td><td>3. Ensure plant, equipment and measures are maintained in a proper and effective condition;
4. Ensure plant, equipment and measures are operated in a proper and effective manner;
5. Ensure that staff are trained and aware of their obligations under the Environmental Protection Act 1994;
6. Ensure that reviews of environmental performance are undertaken at least annually.</td></tr>
<tr><td colspan="2">Agency interest: Waste</td></tr>
<tr><td>Condition reference</td><td>Condition</td></tr>
<tr><td>P26-WS1</td><td>All waste generated in carrying out the activity must be reused, recycled or removed to a facility that can lawfully accept the waste.</td></tr>
<tr><td colspan="2">Agency interest: Air</td></tr>
<tr><td>Condition reference</td><td>Condition</td></tr>
<tr><td>P26-A1</td><td>Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any sensitive place or commercial place.</td></tr>
<tr><td colspan="2">Agency interest: Coastal</td></tr>
<tr><td>Condition reference</td><td>Condition</td></tr>
<tr><td>P26-DG1</td><td>Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><td>P26-DG2</td><td>The only contaminants to be released to surface waters are turbid plumes within the bounds of a silt curtain, to waters described as Clump Point boat ramp navigational channel in accordance with Table 2—Surface water release limits and the associated monitoring requirements.
Table 1 – Surface water release limits
<table>
<tr><th>Release Point(s) Description</th><th>Quality characteristic (units)</th><th>Limit</th><th>Limit Type</th><th>Minimum Monitoring Frequency</th></tr>
<tr><td>The bounds of a silt curtain</td><td>Turbid plumes</td><td>No visible turbid plume</td><td>Maximum</td><td>Continuous visual monitoring</td></tr>
</table></td></tr>
<tr><td>P26-DG3</td><td>When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a breach of the condition DG2. The monitoring results must be provided to the administering authority upon request.</td></tr>
<tr><td colspan="2">Agency interest: Land</td></tr>
<tr><td>Condition reference</td><td>Condition</td></tr>
<tr><td>P26-L1</td><td>Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the Queensland Acid Sulfate Soil Technical Manual.</td></tr>
</table>

Part 27 – Newell Beach Boat Ramp – (Former EA0002901)

Environmentally Relevant Activity	Locations
ERA 16 - Extraction and Screening 1: Dredging, in a year, the following quantity of material (a) more than 1,000t but not more than 10,000t	Adjacent to Lot 382 on Plan SR864

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

AGENCY INTEREST: GENERAL	
Condition reference	**Condition**
P27-G1	The quantity of material removed under this permit must not exceed 4,000 tonnes per year
P27-G2	The **activity** under this environmental authority must be conducted within the bounds and specifications of the following approved plans: a) Site Plan prepared by Queensland Government dated 14/05/21, Drawing Number 270988-ARU-SPGA-DRG-0001 version 8.
P27-G3	**Dredged material** must only be placed in the following locations: 1. For beach nourishment in accordance with a valid Development Approval; or 2. The **Port Douglas Boat Harbour Rehandling Facility**
P27-G4	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activity**.
P27-G5	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
P27-G6	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P27-G7	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority, or nominated delegate** upon request, within the required timeframe and in the specified format.
P27-G8	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P27-G9	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses. The only exception to this condition is for in situ monitoring of water quality parameters.
P27-G10	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.

P27-G11	At least five (5) business days prior to commencing a **dredge** operation, written notification must be provided to the **administering authority** of the following: 1. Commencement date of the **dredge operation**. 2. Expected end date of the **dredge operation**.
P27-G12	Prior to commencing a **dredge operation**, sediments must be analysed in accordance with all of the following: • **Testing Parameters for Disposal to Land;** and • Queensland Acid Sulfate Soil Technical Manual
P27-G13	The holder of this environmental authority must give the administering authority a written **statement of compliance** assessing the proposed **dredge operation** against the following **compliance criteria**: 1. Based on the analysis in G12 (above), the **dredged material** is suitable for **land-based disposal**; and 2. The sampling on which the analysis is based is representative of the **dredged material**. The statement of compliance must: a) Be prepared by an **appropriately qualified person(s**); and b) be submitted to the **administering authority** at least 5 business days prior to the commencement of the dredge operation; and c) state whether the sediment sampling complies with the **compliance criteria**; and d) Contain any supporting information relied upon in making the statement.
P27-G14	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system
P27-G15	Any containment area specified in condition G14 must be certified by **appropriately qualified person(s)** (e.g. registered professional engineer of Queensland) and maintained to that condition.
P27-G16	Prior to the commencement of the **dredging activity**, a **Dredge Management Plan (DMP)**[1] for the activity must be developed and implemented, and the **DMP** must contain the following: 1. Clearly stated aims and objectives. 2. Description of **dredging** operation including: a. type of equipment to be used in **dredging**; b. volume of **dredged material** to be removed, and duration and timing of the **dredging** campaign; c. methods to be utilised for transporting **dredged material**; and d. **dredged material** disposal methods. 3. Maps or plans showing: a. legend, north arrow and scale; b. boundaries of **dredging** operation; c. estimated or modelled **zone of influence** of sediment plumes; d. location of designated disposal sites; e. location of **sensitive receptors**; and f. all monitoring locations. 4. A detailed description of **sediment plume-associated monitoring** program. [1] The Dredge Management Plan is subject to review and amendment as required by changing regulation or monitoring results.

P27-G17	The **Dredge Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
P27-G18	The **Dredge Management Plan (DMP)** must be provided to the **administering authority** at either of the addresses below: palm@des.qld.gov.au; or Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001
P27-G19	The **Dredge Management Plan** must be submitted to the **administering authority** at least 20 business days prior to the commencement of **dredging** and amended in accordance with any comments made by the **administering authority**.
P27-G20	If the Dredge Management Plan is amended, it must be provided to the administering authority at least 20 business days prior to commencing activities under the amended **Dredge Management Plan**
P27-G21	Any comments made by the **administering authority** on the amended **Dredge Management Plan** provided in accordance with condition G19 must be addressed to the satisfaction of the **administering authority** prior to implementing the amended **Dredge Management Plan**.
P27-G22	Condition G20 and G21 applies each time the **Dredge Management Plan** is amended.
P27-G23	The **dredging activity** must be undertaken in accordance with the **Dredge Management Plan** required in condition G16.
P27-G24	**Dredged Material** placed at **Port Douglas Boat Harbour Rehandling Facility** must be placed and managed in accordance with the requirements of the Environmental Authority for that site.
Agency interest: Air	
Condition number	**Condition**
P27-A1	Odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place.
Agency interest: Water	
Condition number	**Condition**
P27-WT1	The only contaminants to be released to surface waters are bed sediments necessarily disturbed during **dredging** at locations indicated in condition G2.
P27-WT2	Where the zone of influence of a sediment plume generated by the **activity** encroaches upon a **sensitive receptor, slightly** disturbed or **high ecological value waters, sediment plume associated monitoring** (SPAM) is to be undertaken as follows: 1. continuous visual monitoring[2] ; and 2. **spot-checking** (weekly and event-based concern site monitoring). [2] The continuous visual monitoring methodology includes a subjective monitoring component, but must also be supplemented with daily, non-subjective (i.e. objective, empirical) data collection that must occur at the most appropriate times to report the full extent of the sediment plumes being generated (e.g. mid-ebb and flood tides whilst actively dredging) as detailed in the Dredge Management Plan.

P27-WT3	In addition to WT1, the release to **waters** must not: 1. Have any other properties at a concentration that is capable of causing environmental harm. 2. Produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
P27-WT4	The activity must cease if the sediment plume exceeds 100 meters.
Agency interest: Land	
Condition number	**Condition**
P27-L1	Contaminants must not be released to **land**.
P27-L2	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the Queensland Acid Sulfate Soil Technical Manual.
Agency interest: Noise	
Condition number	**Condition**
P27-N1	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.
Agency interest: Waste	
Condition number	**Condition**
P27-W1	All waste generated in carrying out the activity must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 27 – Appendix 1

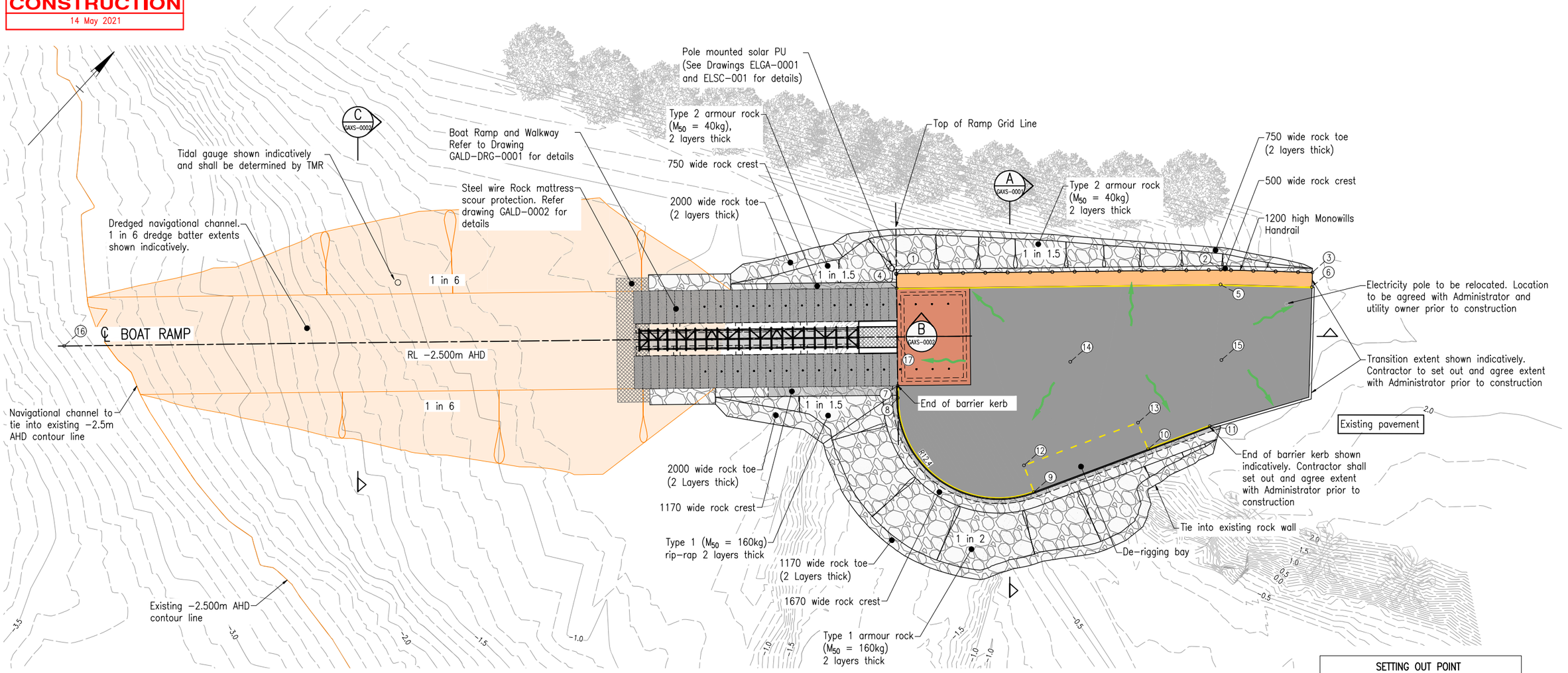
Site Plan prepared by Queensland Government dated 14/05/21, Drawing Number 270988-ARU-SPGADRG-0001 version 8.

ARUP
Level 4, 108 Wickham Street
Fortitude Valley, QLD, Australia

Drawing Number
270988-ARU-SPGA-DRG-0001

NOT FOR CONSTRUCTION
14 May 2021

DETAILED DESIGN



GENERAL ARRANGEMENT
SCALE 1:250

LEGEND

Direction of overland flow

NOTES

1. All dimensions are in millimeters unless otherwise noted
2. See Earthworks Specification for material and placement details as well as bulk placed density. All material to have a dry apparent density of 2.65 t/m3, similar to the local Greymetawacke quarried in the region.
3. Contractor to make nominal material allowances for breakage.
4. See Geotextile Specification for product details and installation requirements.
5. Unless shown otherwise geotextile shall be buried by at least one rock layer. Minimum overlap of 600 mm to be adopted.

SETTING OUT POINT TABLE

POINT	EASTINGS (m)	NORTHINGS (m)	LEVELS (m AHD)
1	329590.083	8182381.734	2.032
2	329610.846	8182415.825	2.032
3	329617.098	8182425.228	As Per Existing
4	329591.620	8182380.798	2.050
5	329612.365	8182414.858	2.050
6	329618.597	8182424.231	As Per Existing
7	329601.869	8182374.556	2.050
8	329603.150	8182373.775	2.050
9	329621.854	8182381.836	2.050
10	329624.840	8182396.536	2.050
11	329626.458	8182404.504	2.050
12	329618.424	8182382.532	2.085
13	329621.410	8182397.232	2.085
14	329610.640	8182394.134	2.200
15	329620.314	8182410.017	2.100
16	329543.347	8182290.127	N/A
17	329596.748	8182377.681	2.050

8	100% Detailed Design	ATM	14/05/21	
7	Revised 85% Detailed Design	ATM	12/02/21	
A	Issued For Construction			
	Revisions/Descriptions	Certification	Date	Microfiled

CAD FILES C:\projectwise\bne_projects\kurtis.pepler\d0230633\270988-ARU-SPGA-DRG-0001.dwg

Associated Job Nos
Auxiliary Drg Nos

Survey Data
Datum GDA94
Horiz. Grid MGA94 (Z55)
Height Origin AHD Derived
Survey Books

Scales
A1 / A3 1:250 / 1:500 0 2 4 6 8 10m
Dimensions shown in millimetres except where shown otherwise

DOUGLAS SHIRE COUNCIL
NEWELL BEACH BOAT RAMP
CTL CHGE

Reference Points

Preceding RP	Dist. to start of job (km)	From start to end of job	From end to Following RP	Following RP

Through Chainage from

NEWELL BEACH BOAT RAMP
GENERAL ARRANGEMENT
SITE PLAN

Drawn LMP
Designed ATM

ENGINEERING CERTIFICATION (RPEQ)

ENG. AREA	NAME	SIGNATURE	NO.	DATE

Queensland Government

Job No.
Contract. No. CN-12332
Drawing No. 8
Series Number 5 of 24
MRR_Detail (02/14)

Last Modified :- May 14, 2021 - 4:27pm XREFS :- MRR_DETAIL_A1_Ref.dwg ; X-270988-ARU-DROA.dwg ; X-270988-ARU-SSUR-EXISTING SURFACE_cad.dwg ; Option 4.dwg ;

Part 28 – Molongle Creek – (Former EA0002906)

Environmentally Relevant Activity	Locations
ERA 16 - Extraction and Screening 1: Dredging, in a year, the following quantity of material (c) more than 1000,000t but not more than 1,000,000t	Dredging – Lot 642 on Plan SP320984; and Placement – Molongle Creek Dredge Placement Facility on Lot 10 on SP312679

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

AGENCY INTEREST: GENERAL	
Condition reference	**Condition**
P28-G1	The quantity of material removed under this permit must not exceed 260,000 tonnes per year
P28-G2	The **activity** under this environmental authority must be conducted within the bounds and specifications of the following approved plans: a) **Site Plan, Locality Plan, Section and Notes** prepared by **Queensland Government** dated **12/04/21**, **Drawing Number 724574** version **D**
P28-G3	Dredged material is authorised for **placement** at the **Molongle Creek Dredge Placement Facility (MCDPF).**
P28-G4	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activity**.
P28-G5	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
P28-G6	Other than as permitted by this environmental authority, the release of a **contaminant into the environment** must not occur.
P28-G7	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format.
P28-G8	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P28-G9	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses. The only exception to this condition is for in situ monitoring of water quality parameters.
P28-G10	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
P28-G11	At least five (5) business days prior to commencing a dredge operation, written notification must be provided to the **administering authority** of the following: 1. Commencement date of the **dredge operation**.

	2. Expected commencement date of tailwater discharge from the **MCDPF**. 3. Expected end date of the **dredge operation**.
P28-G12	The characterisation of sediments and suitability for **land**-based disposal of **dredged material** must be submitted to the **administering authority** in accordance with methodology provided in the latest edition of the: • National Environment Protection (Assessment of Site Contamination) Amendment Measure; and • Queensland Acid Sulfate Soil Technical Manual …and any other relevant guideline specified by the **administering authority**, at 20 business days prior to the commencement of the **dredging activity**. **Note:** It is the responsibility of the operator to determine whether previous characterisation of sediments are suitable for assessing risks to **environmental values** associated with the **dredging** campaign to which this environmental authority relates.
P28-G13	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system
P28-G14	Any containment area specified in condition G13 must be certified by **appropriately qualified person(s**) (e.g. registered professional engineer of Queensland) and maintained to that condition.
P28-G15	Prior to the commencement of the **dredging activity**, a **Dredge Management Plan (DMP)**[1] for the **activity** must be developed and implemented, and the **DMP** must contain the following: 1. Clearly stated aims and objectives. 2. Description of **dredging** operation including: a) type of equipment to be used in **dredging**; b) volume of **dredged material** to be removed, and duration and timing of the **dredging** campaign; c) methods to be utilised for transporting **dredged material**; and d) **dredged material** disposal methods. 3. Maps or plans showing: a) legend, north arrow and scale; b) boundaries of **dredging** operation; c) estimated or modelled **zone of influence** of sediment plumes; d) location of designated disposal sites; e) location of **sensitive receptors**; and f) all monitoring locations. 4. A detailed description of **sediment plume-associated monitoring** program including: a) sampling regime and methods; and b) monitoring sites. c) A detailed description of the assessment methodology to provide data in relation to **trigger values** that will define **alert levels**. d) Clearly set out data handling and evaluation procedures that demonstrate how exceedance of **alert levels** will be determined. 5. Management actions to be initiated if alert levels are exceeded. 6. Measures to ensure no permanent impacts to seagrasses outside the approved dredge footprint.
P28-G16	The **Dredge Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.

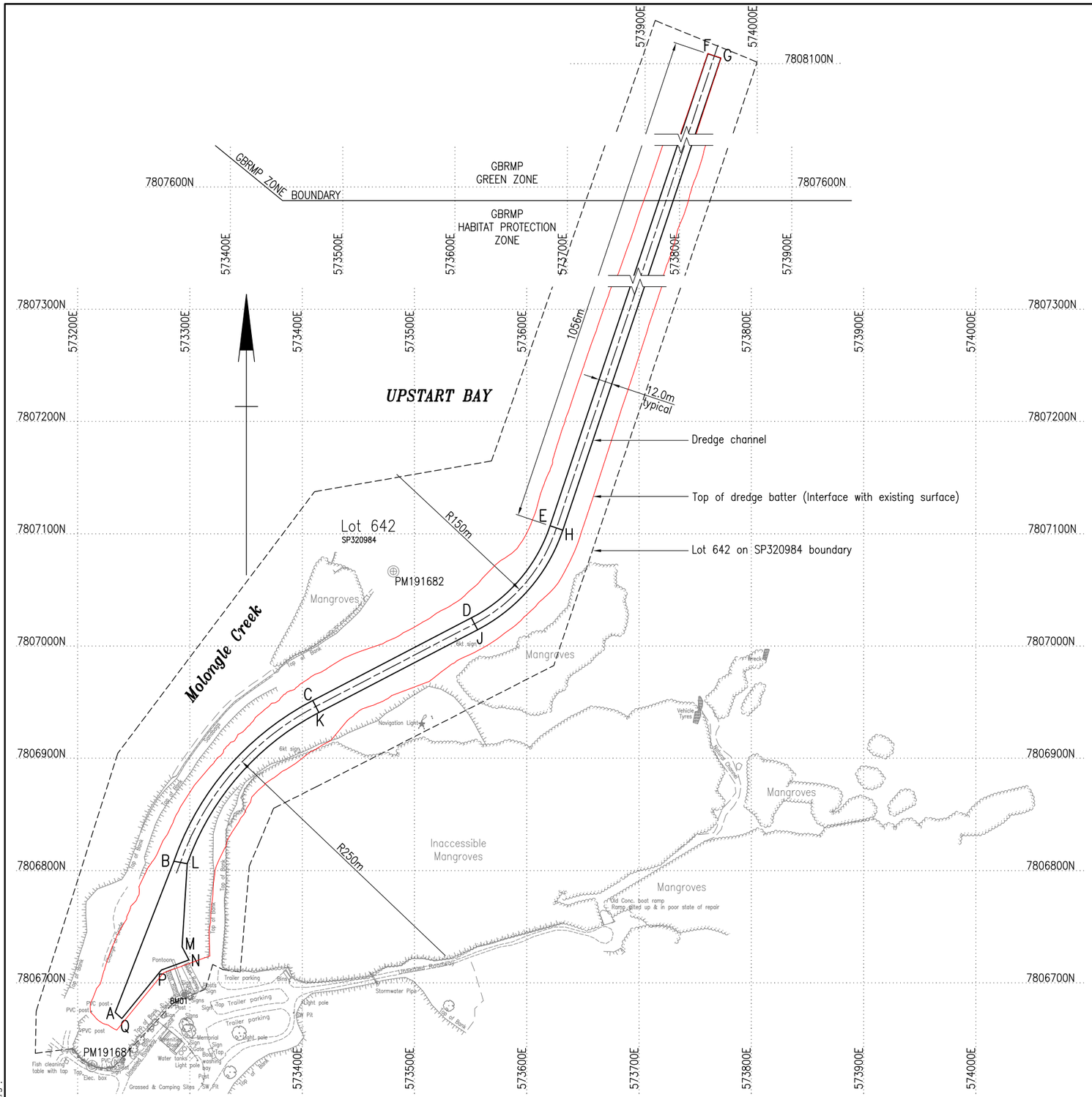
P28-G17	The **Dredge Management Plan (DMP)** must be provided to the **administering authority** at either of the addresses below: PALM@DES.qld.gov.au; or Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001
P28-G18	The **Dredge Management Plan** must be submitted to the **administering authority** at least 20 business days prior to the commencement of dredging and amended in accordance with any comments made by the **administering authority**.
P28-G19	If the Dredge Management Plan is amended, it must be provided to the administering authority at least 20 business days prior to commencing activities under the amended Dredge Management Plan
P28-G20	Any comments made by the administering authority on the amended Dredge Management Plan provided in accordance with condition G19 must be addressed to the satisfaction of the administering authority prior to implementing the amended Dredge Management Plan.
P28-G21	Condition G19 and G20 applies each time the **Dredge Management Plan** is amended.
P28-G22	The dredging activity must be undertaken in accordance with the **Dredge Management Plan** required in condition G15.
Agency interest: Air	
Condition number	**Condition**
P28-A1	Odours or airborne contaminants must not cause **environmental nuisance** at a **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P28-WT1	The only contaminants to be released to surface waters are: 1. bed sediments necessarily disturbed during dredging at locations indicated in condition G2; and 2. treated waters released to Release Point 1 in accordance with condition MCDPF2.
P28-WT2	Where the **zone of influence** of a sediment plume generated by the **activity** encroaches upon a **sensitive receptor, slightly disturbed** or **high ecological value waters, sediment plume associated monitoring** (SPAM) is to be undertaken as follows: 1. **continuous visual monitoring**[2] ; and 2. **spot-checking** (weekly and **event-based concern site** monitoring with **control** site-based checking). [2] The continuous visual monitoring methodology includes a subjective monitoring component, but must also be supplemented with daily, non-subjective (i.e. objective, empirical) data collection that must occur at the most appropriate times to report the full extent of the sediment plumes being generated (e.g. mid-ebb and flood tides whilst actively dredging) as detailed in the Dredge Management Plan.
P28-WT3	Monitoring of contaminant releases to **waters** must be undertaken in accordance with condition WT2 and **records** of the results must be kept.
P28-WT4	In addition to WT1, the release to waters must not:

<table>
<tr><td></td><td>1. Have any other properties at a concentration that is capable of causing environmental harm.
2. Produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.</td></tr>
<tr><td>P28-WT5</td><td>The activity must immediately cease if the sediment plume exceeds 100 meters</td></tr>
<tr><td colspan="2">Agency interest: Land</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P28-L1</td><td>Other than as permitted within this environmental authority, contaminants must not be released to land.</td></tr>
<tr><td>P28-L2</td><td>Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the Queensland Acid Sulfate Soil Technical Manual.</td></tr>
<tr><td colspan="2">Agency interest: Noise</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P28-N1</td><td>Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><td colspan="2">Agency interest: Waste</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P28-W1</td><td>All waste generated in carrying out the activity must be reused, recycled or removed to a facility that can lawfully accept the waste.</td></tr>
<tr><td colspan="2">Agency interest: Site Specific (MCDPF)</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>P28-MCDPF1</td><td>Odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place as a result of the activities at the MCDPF.</td></tr>
<tr><td>P28-MCDPF2</td><td>The only contaminants to be released to surface waters from the MCDPF are: 1. treated waters released to waters at Latitude -19.8418, Longitude 147.6918 (Release Point 1).</td></tr>
<tr><td>P28-MCDPF3</td><td>Waters are only permitted for release under condition MCDPF2 from the commencement date provided under G11 until two weeks after the completion of dredging.</td></tr>
<tr><td>P28-MCDPF4</td><td>Notwithstanding any other condition of this environmental authority, wastewater released from the MCDPF must be directed from the discharge structure in a manner that does not erode or otherwise disturb mangrove vegetation, the stream banks or the habitat in general.</td></tr>
<tr><td>P28-MCDPF5</td><td>The waters from Release Point 1 must comply with each of the quality characteristics and monitoring frequencies specified in Table 1.
Table 1 – Surface water release limits
<table>
<tr><th rowspan="2">Parameter</th><th colspan="2">Release limit</th><th rowspan="2">Monitoring frequency</th></tr>
<tr><th>Minimum</th><th>maximum</th></tr>
<tr><td>Turbidity</td><td></td><td></td><td>Daily[1]</td></tr>
<tr><td>pH</td><td>6.0</td><td>8.5</td><td>Daily[1]</td></tr>
<tr><td>Dissolved Oxygen</td><td></td><td></td><td>Daily[1]</td></tr>
<tr><td>Total Suspended Solids</td><td></td><td>20mg/L</td><td>Daily[1]</td></tr>
<tr><td>Electrical Conductivity</td><td></td><td></td><td>Daily[1]</td></tr>
</table></td></tr>
</table>

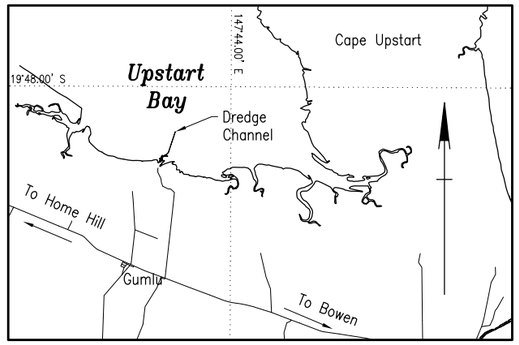
	[1]Samples only required on days when a discharge occurs. **Associated monitoring requirements** a. Monitoring must be in accordance with the methods prescribed in the latest version of the **administrative authority's** Monitoring and Sampling Manual. b. Water quality samples must be representative of water being tested. c. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristic. d. Monitoring must be undertaken during a release and at the frequency stated. e. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.
P28-MCDPF6	Monitoring of contaminant releases to waters must be undertaken in accordance with condition MCDPF5 and records of the results must be kept.
P28-MCDPF7	In addition to MCDPF5, the release to **waters** must not: 1. have any other properties at a concentration that is capable of causing **environmental harm.** 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
P28-MCDPF8	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the Queensland Acid Sulfate Soil Technical Manual.
P28-MCDPF9	Contaminants must not be released to **groundwater** or at a location where they are likely to release to **groundwater**.
P28-MCDPF10	Measures must be taken to ensure no contaminants are released to groundwater as a result of seepage from treatment ponds.
P28-MCDPF11	Noise generated at the **MCDPF** during sediment treatment must not cause environmental nuisance to any **sensitive place** or **commercial place.**
P28-MCDPF12	All waste generated in carrying out the **activity** at the **MCDPF** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Part 28 - Appendix 1

Plan, Locality Plan, Section and Notes prepared by Queensland Government dated 12/04/21, Drawing Number 724574 version D.

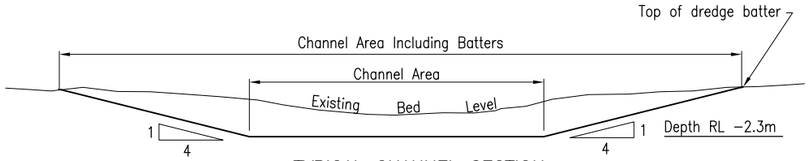


SITE PLAN
Scale A



LOCALITY PLAN
NTS

CHANNEL AREA CO-ORDINATES		
STATION	EASTING	NORTHING
A	573233.44	7806673.57
B	573285.66	7806808.26
C	573409.29	7806951.39
D	573550.73	7807025.01
E	573620.80	7807107.05
F	573955.98	7808108.81
G	573967.36	7808105.00
H	573632.18	7807103.24
J	573556.27	7807014.37
K	573414.83	7806940.74
L	573297.59	7806806.01
M	573293.00	7806732.00
N	573299.10	7806720.37
P	573274.50	7806711.42
Q	573239.33	7806668.17



TYPICAL CHANNEL SECTION
NTS

NOTES

1. Proposed channel is structurely adequate for the anticipated usage.
2. Works comply with all relevant codes including DEHP's Operational Policy – Building and Engineering Standards for Tidal Works.
3. All dimensions are in metres.
4. All levels are in metres and have been reduced to lowest astronomical tide (L.A.T).
5. All co-ordinates are in metres and are to the MGA. Horizontal datum is GDA94 zone 55.
6. Top of dredge batter determined from Queensland Government Hydrographic Services plan H130-006. Date of survey February 2015.

	Revisions/Descriptions	Certification	Date	Microfiled
G				
F				
E				
D	Lot 642 added	E.M	12/4/21	
C	Top of dredge batter line added	K.S.S	12/8/20	
B	GBRMP zones added	K.S.S	7/9/17	
A	Issued For Approvals			

Last Modified :- Apr 12, 2021 - 1:25pm XREFS :-

CAD FILES | I:\Projects\TMR12 – Dredging\0167 – Molongle Creek Bowen 2017\2.Drafting 467-00299\UB-1-3-1D.dwg

Associated Job Nos

Auxiliary Drg Nos

Survey Data	
Datum	GDA94
Horiz. Grid	MGA Zone 55
Height Origin	L.A.T
Survey Books	

Scales
A 0 50 100m
Dimensions shown in metres except where shown otherwise

UPSTART BAY
MOLONGLE CREEK
ACCESS CHANNEL

Drawn	E.MURPHY
Checked	J.W.RICHARDS
Designed	T.CARTER
Design Review	
Date. / /	

SITE PLAN, LOCALITY PLAN, SECTION AND NOTES

ENGINEERING CERTIFICATION (RPEQ)

ENG. AREA	NAME	SIGNATURE	NO.	DATE
CIVIL	TONY GIUFRE	TONY GIUFRE	6572	22/6/17

Queensland Government

File No.	467/00298
Contract. No.	
Drawing No.	724574 D
Project No.	TMR12-167
MRM_Detail (05/14)	UB-1-3-1D

Part 29 – Mooloolaba – (Former EA0001823)

Environmentally Relevant Activity	Locations
ERA 16 - Extraction and Screening 1: Dredging, in a year, the following quantity of material (c) more than 1000,000t but not more than 1,000,000t	Lot 1 on Plan SP143293

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

AGENCY INTEREST: GENERAL	
Condition reference	**Condition**
P29-G1	Activities under this environmental authority must be conducted in accordance with the following limitations: 1. dredging is only to occur within the bounds of the Mooloolah River as shown on the approved drawing titled **Site Plan, Locality Plan and Notes prepared by Queensland Governmen**t, dated **29/06/2018**, reference **724653** and revision A in Appendix 1; 2. all dredged material must only be placed at Mooloolah Beach or La Balsa Cove for the purpose of beach nourishment. Where dredged material cannot be reused for beach nourishment it must be disposed of at a facility that can lawfully accept the material; and 3. the amount of **dredged material** in a year must not exceed 175,000t.
P29-G2	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the **activities**.
P29-G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
P29-G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
P29-G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority**, or **nominated delegate** upon request, within the required timeframe and in the specified format
P29-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P29-G7	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint of environmental nuisance arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request
P29-G8	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency

	2. establish and maintain control **measures** that minimise the potential for environmental harm 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition 4. ensure plant, equipment and **measures** are operated in a proper and effective manner 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994* 6. ensure that reviews of environmental performance are undertaken at least annually.
P29-G9	The characterisation of sediments and suitability for: unconfined disposal to waters - based disposal of **dredged material** must be submitted to the **administering authority** in accordance with methodology provided in the latest edition of the: - National Assessment Guidelines for Dredging - Queensland Acid Sulfate Soil Technical Manual …and any other relevant guideline specified by the **administering authority**, at least 20 business days prior to the commencement of the dredging **activity**. Note: It is the responsibility of the operator to determine whether previous characterisation of sediments are suitable for assessing risks to **environmental values** associated with the **dredging** campaign to which this environmental authority relates.
P29-G10	The dredging **activity** must not commence unless the lawful disposal of the **dredged material** has been authorised under an authority, licence or other permit issued by the Commonwealth or Queensland governments. Evidence of all necessary approvals must be provided to the **administering authority** upon request.
P29-G11	Prior to the commencement of the dredging **activity**, a **Dredge Management Plan** (DMP)[4] for the activity must be developed and implemented, and the **DMP** must contain the following: 1. Clearly stated aims and objectives. 2. Description of dredging operation including: a. type of equipment to be used in **dredging**; b. volume of **dredged material** to be removed, and duration and timing of the dredging campaign; c. methods to be utilised for transporting **dredged material**; and d. **dredged material** disposal methods. 3. Maps or plans showing: a. legend, north arrow and scale; b. boundaries of **dredging** operation; c. estimated or modelled **zone of influence** of sediment plumes; d. location of designated disposal sites; e. location of **sensitive receptors**; and f. all monitoring locations. 4. A detailed description of **sediment plume-associated monitoring** program including: a. a. sampling regime and methods; and b. b. monitoring sites. 5. A detailed description of the assessment methodology to provide data in relation to **trigger values** that will define **alert levels.** 6. Clearly set out data handling and evaluation procedures that demonstrate how exceedance of **alert levels** will be determined.

	7. Management actions to be initiated if alert levels are exceeded. [4] Note: The **Dredge Management Plan** is subject to review and amendment as required by changing regulation, monitoring results, **Technical Advisory Group** or **administering authority** recommendations.
P29-G12	The **Dredge Management Plan** must be submitted to the **administering authority** at least 30 business days prior to the commencement of a **new dredging activity** and, amended in accordance with any comments made by the **administering authority** prior to the commencement of a **new dredging activity**.
P29-G13	The **Dredge Management Plan** must be provided to the **administering authority** at either of the addresses below: palm@des.qld.gov.au; or Permit and Licence Management Implementation and Support Unit Department of Environment and Science GPO Box 2454 BRISBANE QLD 4001.
P29-G14	Condition G13 applies each time the **Dredge Management Plan** is amended
P29-G15	The **dredging activity** must be undertaken in accordance with the Dredge Management Plan required in condition G11.
P29-G16	The **Dredge Management Plan** must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
P29-G17	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Air	
Condition number	**Condition**
P29-A1	Odours or airborne contaminants must not cause **environmental nuisance** to any **sensitive place** or **commercial place.**
Agency interest: Noise	
Condition number	**Condition**
P29-N1	Noise generated by the activity must not cause **environmental nuisance** to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
P29-WT1	The only contaminants to be released to surface **waters** are bed sediments necessarily disturbed during dredging at locations identified in G1 to **waters** described as Mooloolah River in accordance with Table 1 - Surface water release limits and the associated monitoring requirements. Table 1 – Surface water release limits

Monitoring location(s)	Water quality characteristic	Triger limit		Minimum monitoring frequency
		Minimum	Maximum	

	A background sampling point*	Turbidity (NTU)	N/A	N/A	Concurrently with down-current sampling frequency
		pH	N/A	N/A	
	A down-current sampling point**	Visual sediment plume monitoring	No visible sediment plume beyond 350m down current of the dredging activity		**Continuous visual monitoring[2]**
		Petroleum products, scum or litter from the works	None visible		Daily
		pH	7.0	8.5	Daily for the first week[3] and event based[4] thereafter
		Turbidity[1] (NTU)	≤10 NTU above daily average background value when background is <100 NTU OR ≤10% above the daily average background value when background is >100 NTU		

Associated monitoring requirements

1. Monitoring must be in accordance with the methods prescribed in the current edition of the Department of Environment and Science's Water Quality Sampling Manual.
2. Samples must be taken using representative samples.
3. All monitoring devices must be correctly calibrated and maintained.

* A background value for a water quality characteristic is the value of the quality characteristics measured at a background sampling point in receiving waters situated between 50 and 100 metres up-current from the release point at times when tidal flows are occurring, and must not be determined within the period of one hour either side of the slack tide.

** A down-current sampling point that is between the dredge apparatus and the nearest **sensitive receptor** when the dredge apparatus is up-current of the **sensitive receptor.**

[1] Non-logger-based turbidity monitoring must be conducted by completing profile readings at -0.2m, - 2m and every whole 2m depth interval thereafter. All turbidity profile depths should be represented when calculating average values.

[2] The **default sediment plume-associated monitoring** program may be amended at the discretion of the **administering authority** to a more intensive or less-intensive monitoring approach depending on the amount and quality of supporting information available at the time the dredging application is made, the management intent of waters under the Environmental Protection (Water) Policy 2009, and the level of perceived risk and protection status of each potentially-affected **environmental value**.

[3] Should the monitoring results comply with the release quality limits for seven (7) consecutive monitoring events from the commencement of the environmental authority (EA), monitoring shall become event based. The results of the monitoring must be submitted to the administering authority. Monitoring may be required to recommence at the request of the administering authority.

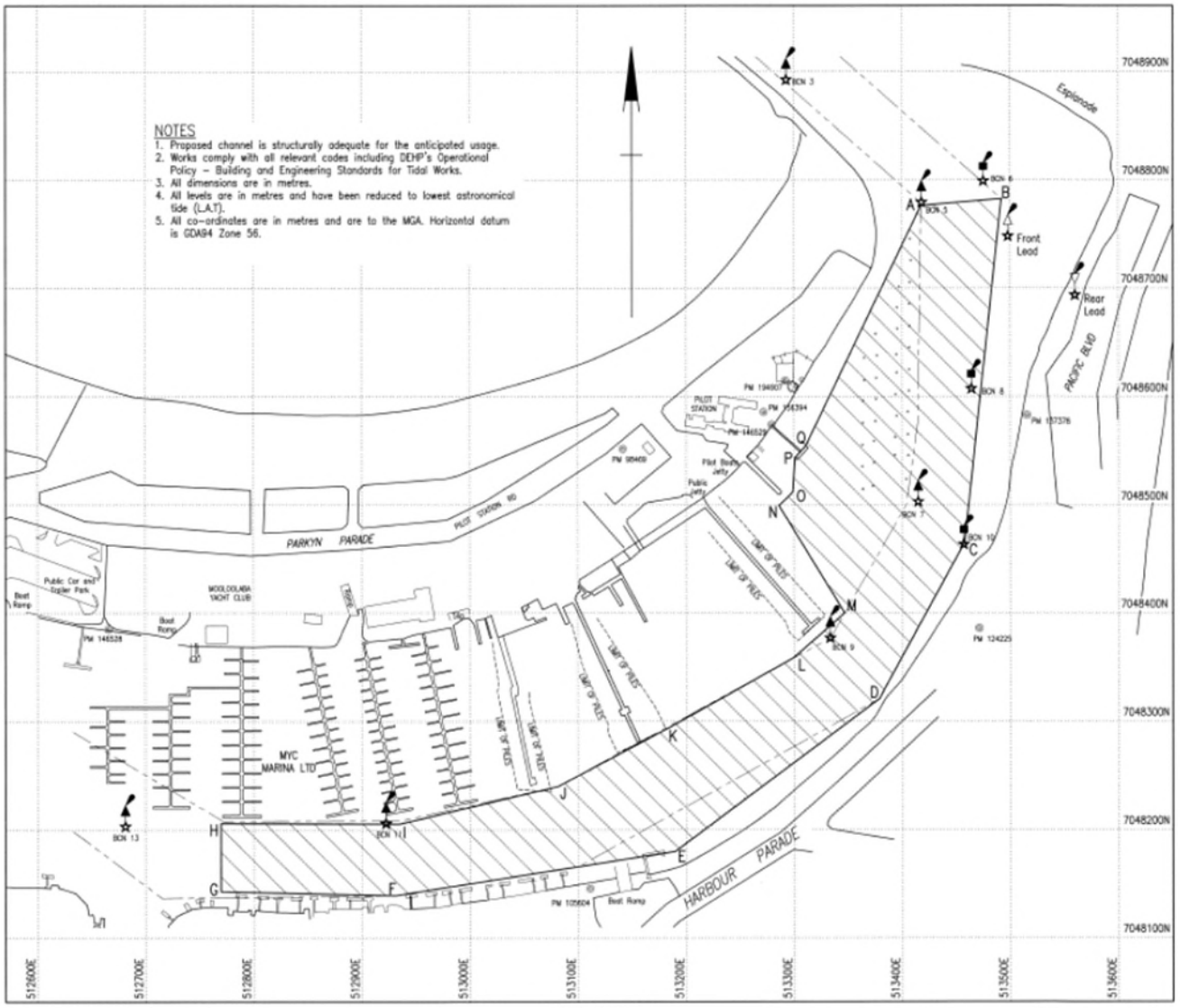
[4] An "Event" is defined as being the occurrence of a visible sediment plume observed beyond 350m of the dredging activity, the extent and intensity of the plume must be investigated for the purposes of reporting in accordance with condition G3

P29-WT2	Monitoring of contaminant releases to waters must be undertaken in accordance with condition WT1 and records of the results must be kept.
Agency interest: Waste	

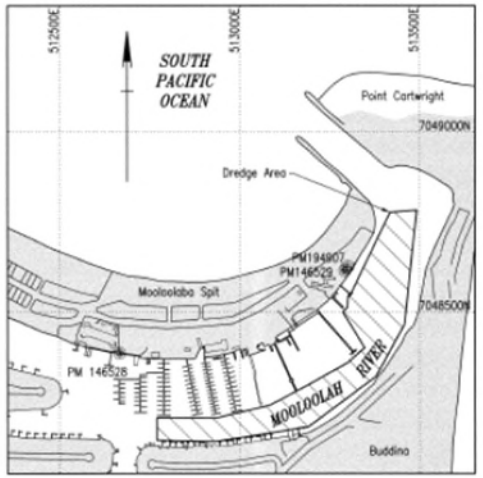
Condition number	Condition
P29-WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.
Agency interest: Land	
Condition number	**Condition**
P29-L1	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual*.

Part 29 - Appendix 1

Site Plan, Locality Plan and Notes prepared by Queensland Government, dated 29/06/2018, reference 724653 and revision A in Appendix



SITE PLAN
Scale A



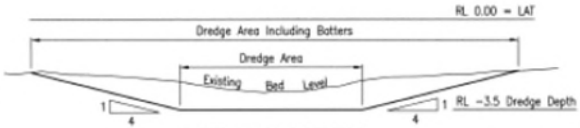
LOCALITY PLAN
NTS

CHANNEL CO-ORDINATES

STATION	EASTING	NORTHING
A	513417.557	7048776.330
B	513491.828	7048782.532
C	513457.884	7048465.092
D	513378.813	7048320.729
E	513190.000	7048180.000
F	512930.954	7048139.338
G	512769.890	7048143.000
H	512769.890	7048205.904
I	512934.877	7048205.384
J	513081.802	7048240.073
K	513181.415	7048292.639
L	513299.380	7048358.628
M	513346.786	7048400.082
N	513286.142	7048499.079
O	513298.838	7048511.828
P	513300.901	7048543.426
Q	513310.825	7048554.562

LEGEND

Dredge Area



TYPICAL DREDGE SECTION
NTS

Associated Job Nos	
Auxiliary Org Nos	
Survey Data	
Datum	GDA94
Horiz. Grid	MGA Zone 56
Height Origin	
Survey Checks	

Scales: A 0 50 100m
Dimensions shown in metres except where shown otherwise

A Issued For Construction

Revisions/Descriptions	Certification	Date	Mun/Reg

CAD FILES: I:\Projects\TMR12 – Dredging\3172 – Mooloolaba BH Approval Drawings 2018\3 Drafting 467-09999\1 Working CAD Files\BH-15-54-1A.dwg

MOOLOOLABA HARBOUR
MOOLOOLAH RIVER
INTERNAL CHANNEL

Drawn	C.NAGEL
Checked	E.MURPHY
Designed	T.CARTER
Design Review	
Date	/ /

SITE PLAN, LOCALITY PLAN AND NOTES

ENGINEERING CERTIFICATION (RPEQ)

ENG. AREA	NAME	SIGNATURE	NO.	DATE
CIVIL	KURT SUNDHOLM		7632	29/06/18

Queensland Government

File No.	
Contract. No.	
Drawing No.	724653 A
Project No.	TMR12-172
MRM Detail (05/7141)	BH-15-54-1A

Definitions (Part 24, 25, 26, 27, 28 and 29)

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Science or its successor or predecessors.

Alert level represents tiers in a hierarchy of increasing environmental risk and are defined by **trigger values**. Three alert levels (low, moderate, and high) are typically used in a management action framework to indicate adverse conditions and guide management responses that aim to prevent and minimise environmental harm.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Commercial place means 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.

Completion of dredging means dredged material has been removed from the dredged basin in accordance with the plans outlined in Part 28 – Molongle Creek (Former EA0002906) condition G1.

Concern site means a site where a sensitive receptor occurs within the zone of influence of a sediment plume.

Continuous visual monitoring means visual appraisal of the sediment plume extent and intensity as performed by the dredge crew throughout the day on an ad hoc basis (i.e. whenever it is safe and non-disruptive to do so). The **continuous visual monitoring** requirement is intended to facilitate an early response feature in the dredge management plan, so that the dredge operator remains cognisant of the extent and intensity of the sediment plume being generated and reacts according to the **dredge management plan** accordingly. This requirement must be supplemented with empirical data (e.g. photography, when water quality instruments are not in use) taken at key indicative points in the tidal cycle (where applicable) to demonstrate the extent and intensity of the sediment plume

Control site refers to a monitoring site located beyond the anticipated **zone of influence** of sediment plumes and has **site pairing** with one or more **test sites** or **sentinel sites**. In monitoring programs, **control sites** serve the same role as do **reference sites** but only for a defined subset of parameters.

Disturbed areas includes areas:

1. that are susceptible to erosion;
2. that are contaminated by the activity; and/or
3. upon which stockpiles of soil or other materials are located.

Dredge footprint is the area being dredged including batters.

Dredged material means mud, sand, coral, shingle, gravel, clay, earth and other material removed by dredging. Dredged material includes dredge spoil and extracted quarry material.

Dredge footprint is the area being dredged including batters.

Dredge management plan (DMP) is an environmental management plan for the dredging activity. It defines and describes the:

- scope, timing and duration of the dredging operation
- sediment plume-associated monitoring programs
- assessment of data, trigger values and alert levels, and
- management actions that may be required in response to adverse monitoring results.

The **DMP** includes an aim to prevent and minimise environmental harm to sensitive receptors as a result of the dredging activity.

Dredging includes extraction of mud, sand, coral, ballast, shingle, gravel, clay, earth and other material from the bed of Queensland tidal and non-tidal **waters**. **Dredging** does not include the banks of a waterway.

Environmental harm as defined in Chapter 1 of the Environmental Protection Act 1994

Environmental management plan (**EMP**) is plan for the dredging **activity**. It includes information that defines and describes the:

- scope, timing and duration of the **dredging** operation
- **sediment plume-associated monitoring programs**
- assessment of data, **trigger values** and **alert levels**, and
- management actions that may be required in response to adverse monitoring results.

The EMP includes an aim to prevent and minimise environmental harm to **sensitive receptors** as a result of the dredging activity.

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994*.

Environmental value means

- a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
- another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Event-based actions refers to management responses (e.g. an increased level of monitoring) initiated in following ‘an event’, with the event being defined in the dredge management plan (e.g. ‘an event’ can occur when monitoring results indicate an exceedance of an adopted **trigger value**, or a non-compliance with the environmental authority condition).

Financial year means a period of one year beginning on 1 July.

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer

High Ecological Value (HEV) is the ‘management intent’ for the ‘ecosystem condition’ as defined in Schedule 1 of the Environmental Protection Policy (Water) 2009 for scheduled waters, or the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (ANZECC & ARMCANZ 2000) for non-scheduled waters. HEV ecosystems are intact and typically exhibit relatively insignificant levels of anthropogenic impacts.

Land means any land, whether above or below the ordinary high-water mark at spring tides (i.e. includes tidal land.).

Lawful beach nourishment means beach nourishment conducted in accordance with a Development Approval or in accordance with a code prepared under section 167 (5)(b) of the *Coastal Protection and Management Act 1995*.

Measures has the broadest interpretation and includes:

(a) procedural **measures** such as standard operating procedures for **dredging** operations, environmental risk assessment, management actions, departmental direction and competency expectations under relevant guidelines;

(b) physical measures such as plant, equipment, physical objects (such as bunding, containment systems etc.), ecosystem monitoring and bathymetric surveys.

Monitoring event means single sample taken for the purpose of determining compliance with a condition.

NATA means National Association of Testing Authorities.

New dredging activity means a dredging **activity** that is currently not underway, the next stage of a **dredging** campaign that is currently underway, or a discretely separate area in a larger dredge campaign that is currently underway.

Nominated delegate means another government agency that provides services to the **administering authority**.

Noxious means harmful or injurious to health or physical well-being

Offensive means causing offence or displeasure; is unreasonably disagreeable to the senses; disgusting, nauseous or repulsive.

Port Douglas Boat Harbour Rehandling Facility means the facility on Lot 3 on Plan SP183025 authorised by EA EPPR02005514.

Port facility means a facility or land used in the operation or strategic management of a port authority's port. Port facility does not include a small-scale port facility to be used for a tourism or recreation purpose. Examples of a small-scale port facility- boat ramp, boat harbour, marina.

Prescribed water contaminants means contaminants listed within Schedule 9 of the *Environmental Protection Regulations 2008.*

Priority Ports means each of the following ports is a priority port as per the Sustainable Ports Development Act 2015 –

1. Port of Abbot Point;
2. Port of Gladstone;
3. The ports of Hay Point and Mackay;
4. Port of Townsville.

Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed

- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Reference site refers to a monitoring site located not only beyond the anticipated **zone of influence** of a sediment plume, but also beyond other sources of environmental impacts, and has **site pairing** with one or more **test sites** or **sentinel sites**. In monitoring programs, reference sites serve the same role as do control sites but can generally be suitable for a broader set of parameters.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant;
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed;
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed;
- allow the contaminant to escape;
- fail to prevent the contaminant from escaping.

Restricted area means an area that is within the Great Barrier Reef World Heritage Area but outside the Commonwealth marine park. *Note- See the Commonwealth Marine Park Act for prohibitions relating to the Commonwealth marine park and Great Barrier Reef Region under that Act.*

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, **groundwater**, or surface waters.

Sediment plume-associated monitoring (SPAM) means environmental monitoring associated with risk management of **sediment plume-associated impacts.**

Sediment plume-associated impacts are impacts associated with sediment plumes including turbidity and suspended solids concentrations, light attenuation or sedimentation rates elevated above either **control site** or **reference site** readings or baseline conditions for an equivalent time of year. Where **dredge material** possesses acid sulfate soil-related properties, sediment plume-associated impacts may also include pH, dissolved oxygen and metal and metalloid-related toxicity impacts.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- 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 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or

  for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

Sensitive receptor includes biological sensitive receptors together with other **environmental values** sensitive to the effects of dredge-generated **sediment plume-associated impacts**.

(a) river, creek or stream in which water flows permanently or intermittently—

(i) in a natural channel, whether artificially improved or not; or

(ii) in an artificial channel that has changed the course of the **watercourse.**

(b) **watercourse** includes the bed and banks and any other element of a river, creek or stream confining or containing water**.**

Sentinel site is a **test site** that is situated between the disturbance source and the **sensitive receptor** and serves to provide earlier warning of developing adverse conditions than does a **test site**.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or o 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 2004 or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

Sensitive receptor includes biological sensitive receptors together with other environmental values sensitive to the effects of dredge-generated sediment plume-associated impacts.

Site pairing refers to monitoring sites that have a functional control-impact relationship, for example, Control site A is referenced to assess monitoring data collected from Concern Sites AA and AB, thus, Concern Sites AA and AB share site pairing with Control Site A.

Slightly disturbed is the 'management intent' for the 'ecosystem condition' as defined in Schedule 1 of the Environmental Protection Policy (Water) 2009. Slightly disturbed ecosystems should generally be regarded as **high ecological value** ecosystems in all respects except for some relatively minor disturbances (usually water-quality related e.g. nutrient concentrations exceeding the water quality objective).

Spot-checking refers to a non-continuous monitoring approach performed at a fixed distance and direction from a mobile impact source (in the context of this guidance, dredging vessels) or at other key points of interest. Spot-checking may be routine or **event-based**, and may also include monitoring at fixed monitoring sites, such as **reference sites** or **control sites** and **test sites** or **sentinel sites***,* although the same sites need not necessarily be monitored on every sampling event.

Technical Advisory Group means an assembly of appropriately qualified persons representing experts in various scientific fields, formed to be capable of assessing sediment plume-associated monitoring data and presenting advice relevant to conducting the dredging campaign and protecting sensitive receptors as directed under this authority and the dredge management plan.

Test site is a **concern site** that functions as a test point for compliance, is a monitoring site situated within the area where a **sensitive receptor** occurs and where environmental monitoring-related assessment criteria (e.g. **trigger values**) apply.

Testing Parameters for Disposal to Land means testing that is conducted in accordance with the following:

1. Samples are collected in accordance with the methodology set out in the latest edition of the National Assessment Guidelines for Dredging; and

2. Tested against the limits outlined in the latest version of the National Environment Protection (Assessment of Site Contamination) Measure.

Tidal land means land that is submerged at any time by tidal water.

Trigger values are physicochemical, parameter-specific measurement values used to indicate a condition where an **environmental value** or **sensitive receptor** may be at low, moderate or high risk, or some other risk-related indicator.

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 groundwater and any part thereof.

You means the holder of the Environmental authority.

Zone of influence of a sediment plume is, in its broadest application, defined by the **dredge footprint** and the area beyond the **dredge footprint** where at least some level of **sediment plume-associated impacts** are expected to occur. The overall **zone of influence** may be broken down into more risk-relevant sub-categories, such as the Zone of Unavoidable Loss (the **dredge footprint** and immediately adjacent areas), the Zone of Moderate Impact, or the Zone of Marginal Impact, with each zone being defined according to its purpose or role in environmental management.

END OF PERMIT