Maintenance Dredging Environmental Management Plan

North Queensland Bulk Ports Corporation

Port of Hay Point

Maintenance Dredging Environmental Management Plan

March 2019

ADAPTIVE STRATEGIES

DOCUMENT TRACKING

PREPARED BY:	Tom Kaveney (Adaptive Strategies)
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APPROVED/DATE	Damian Snell
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1. Introduction

1.1. Purpose

The purpose of this Maintenance Dredging Environmental Management Plan (EMP) is to guide activities during dredging operations. It details the environmental management requirements to be followed by NQBP staff and contractors during maintenance dredging operations described in Section 4.

This EMP includes:

- the requirements for environmental management during the implementation of dredging[1] activities
- the responsibilities for implementing this EMP
- the project delivery standards (PDS) including environmental controls and limits to ensure that project objectives and targets are achieved.

This EMP should be read in conjunction with:

1. *Port of Hay Point Long-term Maintenance Dredging Management Plan* (LMDMP), dated March 2019 (Rev 6). The LMDMP has been developed to inform long term planning and management of all dredging activities at the Port over a 25-year period.
2. *Port of Hay Point Marine Environmental Monitoring Program*, dated March 2018 (Rev 0). The monitoring plan outlines the monitoring arrangements that will apply in relation to dredging operations.

The current approved versions of these plans will be maintained on the North Queensland Bulk Ports (NQBP) website – www.nqbp.com.au.

1.2. Changes to this EMP

This EMP will be reviewed and updated prior to each maintenance dredging operation/program at the Port of Hay Point.

It must be finalised and approved prior to initial dredging program commencing. It must not be finalised until all relevant permits and regulatory approvals have been granted.

1.3. Port Context

The Port of Hay Point (the Port) is a major bulk commodities port managed by the North Queensland Bulk Ports Corporation Pty Ltd (NQBP). The Port has two coal terminals - Dalrymple Bay Coal Terminal (DBCT) and Hay Point Coal Terminal (HPCT). It is a coastal port with offshore trestle jetties extending approximately 4km seaward. The port's navigational areas include seven ship loading berths, an apron area, departure path and tug harbour. An approved Dredged Material Placement Area (DMPA) is located 7 km from the berth areas.

Left unmanaged, natural sediment fills up navigational infrastructure, impacting the depth necessary for safe loading, manoeuvring and transit of ships. A reduced ability to effectively load ships can have a substantial economic impact on the region that the port supports.

NQBP has undertaken an extensive research project to investigate the most sustainable way to manage accumulated sediment in and around the Port of Hay Point. The project: the *Port of Hay Point Sustainable Sediment Management Assessment for Navigational Maintenance* (SSM), was to understand how the day to day operations at the Port of Hay Point are affected by marine sedimentation and to determine, if necessary, the best way to manage operations and sediments.

This innovative sediment management approach has been widely acknowledged and a similar framework is now applied in the Department of Transport and Main Road's *Maintenance Dredging Strategy for Great Barrier Reef World Heritage Area Ports*. This is applicable to all ports operating in the GBRWHA.

[1] For the purposes of this EMP the term "dredging" includes dredge material placement and other associated vessel activities.

The SSM project investigated where specifically the sediment at the Port of Hay Point comes from, what impact it has on Port operations, whether accumulation can be eliminated or reduced, and what alternatives are available to reuse or dispose of any sediment that might need to be dredged.

The project has determined what is the best short and long-term approach to managing sediments within the Port. A clear preferred 25-year maintenance dredging strategy is now established that involves:

1. Use of operational measures to extend periods between maintenance dredging programs.
2. Use of traditional dredging in the short term (12 months) to restore navigational areas to safe design depths.
3. Use of traditional dredging to maintain navigational areas at safe design depths – every 3-5 years in a volume of between 200,000 and 250,000 cubic metres.
4. Placement of dredged material at sea at the existing dredge material placement area.
5. Commitment to a detailed investigation into mangrove restoration in Sandringham Bay with the intention of executing, if feasible, a restoration program in the next 10 years.

All reports are available at www.nqbp.com.au.

1.4. Assessment, Monitoring and Management

In order to guide the implementation of this strategy NQBP has developed a series of reports, management plans and monitoring programs as shown in Figure 2. This EMP provides the dredging operational controls resulting from the extensive assessment and planning process.

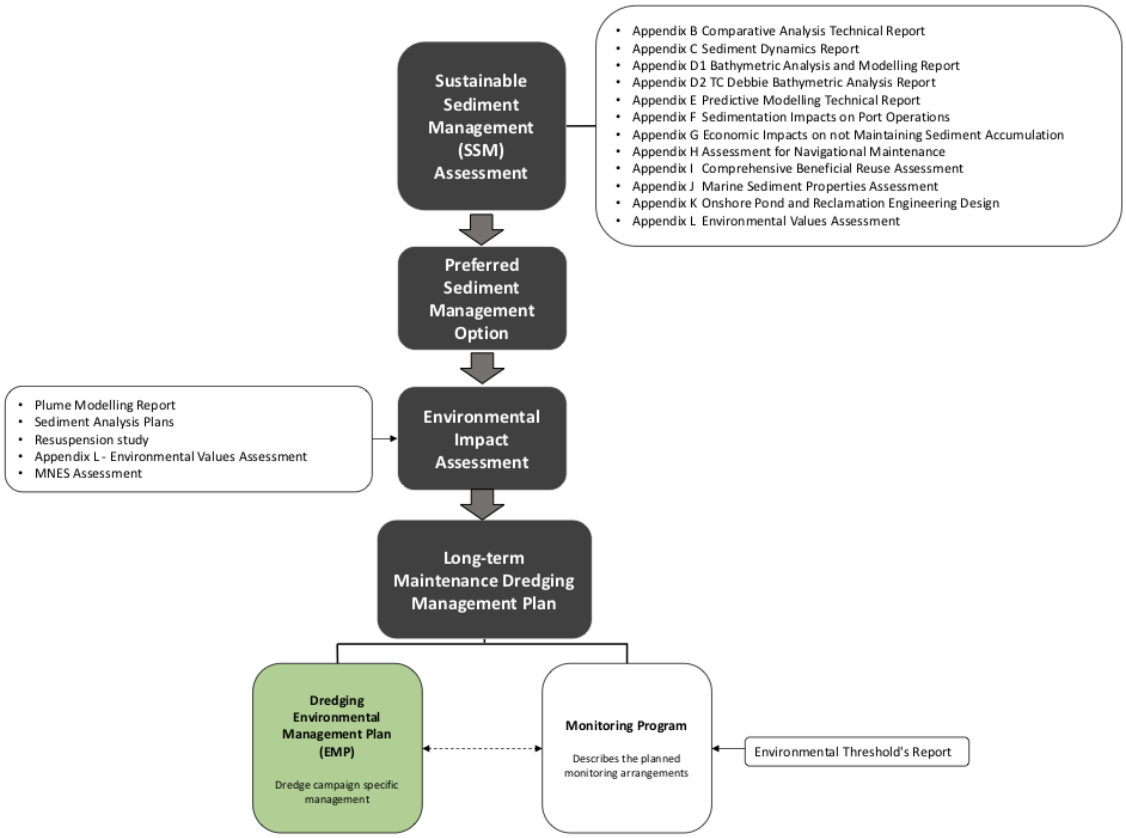


Figure 1: Port of Hay Point dredging assessment and management plan structure

2. Approvals

There are a number of State and Federal approvals necessary to conduct maintenance dredging and disposal at the Port of Hay Point. Table 1 provides a list of the current approvals that are relevant to this EMP.

Table 1: Current permit details

Permit	Permit No.	Activity
Environmental Authority (31 January 2014) - Environmentally relevant activity	EPPR01742813	Undertake maintenance dredging of navigational infrastructure
Development Approval (27 February 2006) - Operational Works (Tidal Works)	PDC00339006A12 IPDE00339106A22	Disposal of dredged material below high-water mark
Decision Notice (1 February 2019)	1805-5537 SPD	
Marine Park Permit	G19/40185.1	Dredging and placement inside Marine Park
Sea Dumping Permit	SD19/01	Loading and placement of material at sea.

Appendix A-D, provides copies of the current State and Federal permits, relevant for dredging operations to be undertaken in 2019.

NOTIFICATION AND OBLIGATIONS SCHEDULE

NQBP has developed a 'notifications and obligations schedule' (Appendix E) that clearly outlines relevant reporting requirements and obligations arising from all current permits. The schedule will separately show notification requirements and condition obligations for the periods:

1. Pre-maintenance dredging commencing.
2. During active maintenance dredging and disposal.
3. Post-maintenance dredging reporting and closeout.

The most current notifications and obligations schedule will be provided to respective regulators and the Technical Advisory Consultative Committee (TACC) prior to maintenance dredging occurring in any given year.

3. Roles and Responsibilities

NQBP as the Port Authority for the Port of Hay Point is responsible for the maintenance of:

- Departure Path and Apron Areas, and
- Half Tide Tug Harbour

NQBP also take on the responsibility of maintaining navigational infrastructure specific to Dalrymple Bay Coal Terminal (DBCT) and Hay Point Coal Terminal (HPCT), including:

- DBCT Berth Pockets x 4
- HPCT Berth Pockets x 3

As such, NQBP are the holder of all permits related to maintenance dredging at the Port of Hay Point.

The following personnel have responsibilities under this plan.

Table 2: Roles and responsibilities, 2019 dredging program

Position	Person	Contact details	Responsibility
NQBP Environment Manager	Kevin Kane	Kevin Kane 4969 0734 0409 898 022 kkane@nqbp.com.au	Compliance with all Permits and EMP requirements Adaptive management decisions
NQBP Principal Advisor - Environment	Damian Snell	Damian Snell 0409 282 110 dsnell@nqbp.com.au	Implementation of Monitoring Program Hourly review of adaptive monitoring and management data Notification of trigger level exceedances to Environment Manager and Vessel Master
NQBP Dredging Contract Manager	John Hinschen	John Hinschen 4955 8128 0437 541 673 jhinschen@nqbp.com.au	Operational and contractual matters relating to the operation of the dredge
NQBP Project Manager	Ben Woodman	Ben Woodman 3011 7901 0412 436 893 bwoodman@nqbp.com.au	NQBP contact for operational issues
Vessel Master		Vessel Master 0417 003 264	All matters related to the safety of vessel and crew. Compliance with maritime laws Implementation of management measures as detailed in this EMP
TSHD Brisbane Dredging Operations Manager	Michel Willemen	Michel Willemen 3258 4806 0476 800 593 Michel.willemen@portbris.com.au	Management of overall operations of dredger
Regional Harbour Master		07 4944 3700 mackaymarine@msq.qld.gov.au	Contact for hazardous spills and shipping safety issues

3.1. Technical Advisory and Consultative Committee

NQBP has established a Technical Advisory and Consultative Committee (TACC). The TACC's membership and role is outlined in the LMDMP.

During dredging operations, the TACC will be advised of any serious incidents or changes resulting from dredging.

Post the dredging program the TACC will be provided with information on the results of dredging operations, environmental monitoring and any instances where adaptive management measures were employed. Advice will be sought on improvements to the monitoring program and this EMP based on these results.

3.2. Management Reference Group

NQBP has established a Management Reference Group (MRG) consisting of qualified marine scientists and regulator representatives. The role of the MRG is to assist NQBP and the dredge operator in interpreting and applying the results of the real time monitoring program. Members of the MRG will be available at short notice to provide advice on the application of adaptive management measures, particular in the event that the live data is outside expected parameters.

3.3. Training and Awareness

All personnel involved in dredging operations shall be suitably qualified and experienced to undertake their roles. Personnel who have formal responsibilities under this plan will be briefed on the requirements of this EMP.

Briefing may include: pre-dredging all hands staff induction, tool box sessions, and ongoing awareness mentoring in the field. Records of training and inductions will be maintained.

All personnel involved will be required to complete a site induction which will incorporate key environmental aspects of the project. Induction topics will include the following:

- This EMPs provisions and requirements
- Legislative requirements and key environmental issues
- Emergency response
- Incident reporting
- Waste management
- Individual and organisational responsibilities
- Consequence of compliance failures, with particular emphasis on EMP undertakings.

3.4. Communication

Internal and external communication and consultation arrangements are described below.

INTERNAL COMMUNICATION

Internal communication methods include telephone, ship to shore radio, meeting and notices distributed by email.

Daily meetings are scheduled between NQBP and the TSHD contractor. Environmental matters will be included as a standing agenda item at all meetings.

EXTERNAL COMMUNICATION

A variety of methods will be used to enable information to be distributed to interested members of the community and stakeholders. These may include the following:

- NQBP website (www.nqbp.com.au)
- Email
- Media releases
- Notices to Mariners.

Key communication activities and content include the following:

- Scheduled activities to be included on the NQBP website covering planned operational activities.
- All complaints will receive a response within one (1) business day. Complaints will be managed following NQBP's standard complaints procedure.
- Communication and advice to the TACC during and post the dredging operations.

4. Dredging Operations

4.1. Description of Operations

In order to maintain navigable depths at the Port the SSM Project identified that NQBP must conduct maintenance dredging using hopper style dredging. Noting that drag bar activities will help to reduce the frequency of dredging, they will not be effective in removing all accumulated sediments.

Dredging during the 2019 program will be focussed on removing accumulated sediments from Apron, berths and tug harbour areas. The exact volumes and locations are outlined in section 4.2.

EQUIPMENT

The *TSHD Brisbane* will undertake the 2019 program.

A brief description of the *TSHD Brisbane* operations is provided below.

Material to be dredged is removed through two suction heads, which are lowered into position on either side of the vessel. As the vessel steams slowly at around 1 – 3 knots, large pumps draw water through the heads, which entrain the sediment and transport the water/sediment mixture aboard into a central collection hopper. The capacity of the hopper is dependent on the sediment type – with volumes (including both sediment and water) approximating 2,800 m3 for fine silts and 1,700 m3 for sands (of a maximum hopper capacity of 2,900m3). Each extraction run takes approximately 1 hour to complete. Whilst the suction heads are fitted with high-pressure water jets, which can be used to agitate consolidated sediment, they are rarely required for maintenance dredging.

The sediment/water ratio of material delivered to the central hopper of the *TSHD Brisbane* is typically quite low. Whilst it varies depending on the type of sediment being dredged, the sediment concentration is generally in the order of 10 – 30 % solids. To maximise dredge material capacity, these large volumes of water are managed using a central column weir, which is incorporated into the hopper. This arrangement allows excess water to decant from the sediment and overflow to discharge. Overflow occurs only toward the very end of the dredging run as the hopper nears capacity (typically the last ten minutes of a one hour dredging run).

Once the dredge has filled its hopper, the vessel will then relocate the material to the designated dredge material relocation ground. Dredged material is discharged below keel level to minimise turbidity generation. Each dredged material placement is manually logged using both satellite navigation and standard bridge equipment and is electronically fixed using a differentially corrected global positioning system (GPS). The time taken to place material over the dredge material relocation ground is typically about 15 minutes.

4.2. Volumes and Locations

VOLUMES

The 2019 dredging program will focus on removing accumulated sediment from Apron, Berths and the Half Tide Tug Harbour (HTTH). The volumes for each location are provided in Table 3.

Table 3: Volumes by area, 2019 dredging program

2019 Dredge Volumes (m^3)	
HTTH	24,598
HP Boat Ramp	6,710
DBCT Berth 1	62,784
DBCT Berth 2	68,555
DBCT Berth 3	51,949
DBCT Berth 4	59,237
Apron	62,576
Departure Path	11,509
HPCT Berth 1	409
HPCT Berth 2	309
HPCT Berth 3	7,917
TOTAL	**356,553**

PROGRAMLOCATIONS

The location of the dredging areas is shown in Figure 2 along with relevant geographical coordinates.

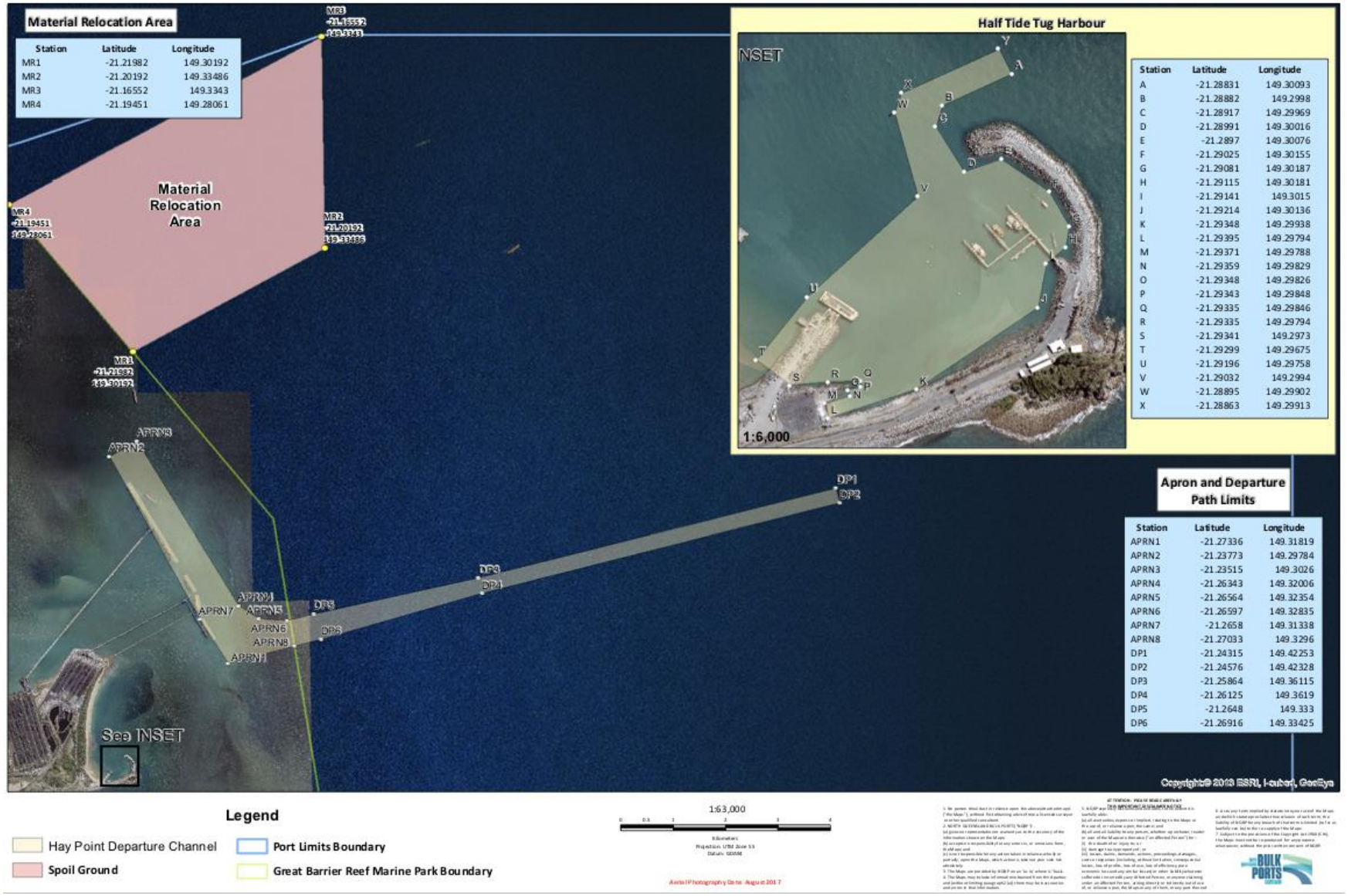


Figure 2: Dredging areas at the Port of Hay Point

5. Environmental Risks

To inform this EMP an environmental risk assessment has been undertaken of potential dredging scenarios and volumes (ELA 2018). Supporting this risk assessment were:

- a detailed plume modelling study looking at potential water quality changes across various dredging volumes (Royal HaskoningDHV 2018)
- an environmental thresholds study (Royal HaskoningDHV 2018)
- an environmental values report (Jacobs 2016).

There are a number of environmental values that occur in the vicinity of the Port of Hay Point. The plume modelling and risk assessment undertaken has indicated that these impacts are highly unlikely to be residual or significant from maintenance dredging.

A summary of the key findings of the impact assessment are:

- Resuspension of sediments from maintenance dredging is comparable to natural suspended sediment concentrations (SSC) during calm conditions
- Numerical modelling of sediment transport demonstrates that natural SSC levels are much higher than those generated by maintenance dredging
- Analysis against intensity and duration thresholds indicated that dredging would not drive conditions outside those experienced naturally at dredge volumes up to 800,000 m^3
- Impacts to sensitive habitats such as seagrass and coral communities are likely to be negligible to low. Seagrass communities are naturally low density and ephemeral and have been shown to recover post-dredging. Coral communities lie outside of area predicted to be impacted by turbidity and sedimentation, and ecologically relevant turbidity thresholds will be used during dredging to further prevent impacts
- Protected species are also unlikely to be significantly impacted by maintenance dredging. The Port of Hay Point does not provide critical habitat resources for any marine species and disturbance to habitats will be low. Indirect disturbances can be effectively managed via best practise dredging operations. The short timeframe of each program will also reduce impact
- Impacts to protected areas including the GBRWHA and GBR Marine Park will also be low to negligible.

The activities associated with maintenance dredging are well tested and understood. It is considered that there would be limited ongoing management and monitoring requirements once the placement of dredged material has been completed. Ambient monitoring, which has been in place since mid-2014, will continue as per the Marine Environmental Monitoring program

A summary of risks is provided in Table 4. This risk assessment is based on the application of standard mitigation measures as outlined in section 6.

Table 4: Summary of environmental risk findings

Risk activity (cause)	Consequence	Likelihood	Potential environmental receptors
Dredge material placement	Temporary loss of benthic habitat	Low	Transient seagrass beds and seagrass habitat Benthic macroinvertebrate communities
Dredge material placement and associated sediment plume	Changes to water quality	Low for volumes below 800,000m^3	Coral and rocky reef habitats at Round and Flat Top islands, and Slade Islet
Dredge material placement and associated sediment plume	Sediment deposition	Low for volumes below 800,000m^3	Coral and rocky reef habitats at Round and Flat Top islands, and Slade Islet
Movement of dredge vessel from the Port of Hay Point to the dredge material placement area	Potential for marine fauna vessel strike	Low	Transitory threatened and migratory marine animals
Dredging suction	Potential for marine fauna to be caught	Low	Foraging marine turtles

While impacts from proposed dredging programs under 800,000m^3 are expected to be minimal and temporary in nature, in accordance with good management practice a program of mitigation and adaptive management will be implemented during dredging programs. Management will be based on real time scientific data, observations and adaptive management responses to ensure dredging activities and associated changes in environmental conditions are monitored and controlled.

6. Environmental Management

6.1. Standard Measures

DREDGER SPECIFICATIONS

Mitigation of potential turbidity and suspended solids impacts from dredging and dredge material relocation is partly achieved through the use of suitable and specifically designed modern vessels. The following are considered the minimum standard of specification for TSHDs that will be selected to undertake maintenance dredging works in the Port of Hay Point.

The 2019 dredging program will be undertaken by the TSHD Brisbane, which meets these specifications.

Table 5: Environmental specifications for the dredger

Parameter	Trigger	Action
Management Controls	Continual	The dredger will operate under this and Port of Brisbane operational EMP at all times Permit conditions, dredge dumping procedures, any associated adaptive monitoring arrangements and corrective actions are incorporated into the EMP.
	Continual	TSHDs undertaking dredging works at the Port of Hay Point will include the following specifications: ○ Central weir discharge system ○ Below keel discharge point ○ Low wash hull design ○ Electronic positioning system (GPS) ○ Turtle exclusion devices on intake heads.
	Reporting	Electronic logs of each dredge material relocation event will be maintained
	Notification	Any exceptions to the EMP will be reported to NQBP Principal Advisor – Environment within 24 hours of the exception being identified. Emergency incidents must be reported immediately.
Responsibility	Primary	Vessel Master
	Secondary	NQBP Principal Advisor - Environment

DREDGE MATERIAL PLACEMENT

Impacts to the dredge material relocation ground and adjacent areas will be minimised through relocation of the dredge material in such a manner as to uniformly spread it over the relocation ground. This is achieved through deposition patterns that vary with the prevailing conditions. When currents are minimal, deposition will occur relatively uniformly over the dredge material relocation ground area in arc patterns (refer Figure 3 left). When currents are present, deposition will occur in tighter arcs in the up-current portion of the dredge material relocation ground to take into account drift of sediment as it settles (refer Figure 3 right).

- Dredge material will be spread in a manner that sediment mobilisation and turbidity plume generation is minimised (e.g. bottom / keel discharge)
- A DGPS will be used to ensure the material placement is within the designated area
- Each load of the TSHD will be placed in a manner that distributes the dredged sediments evenly across the designated area.

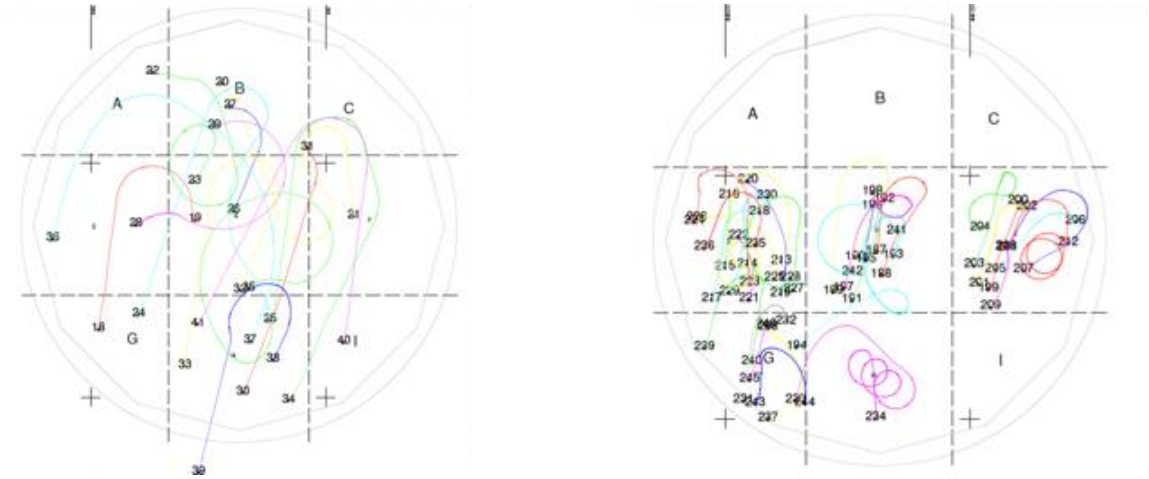


Figure 3: Example of dredge placement plot during periods of low current (left) and high current (right)

CULTURAL HERITAGE

Cultural heritage refers to both European and Indigenous heritage.

Table 6: Cultural heritage

Parameter	Trigger	Action
Heritage	Continual – during at-sea operations	Ensure dredging and material relocation is undertaken within the approved areas only Undertake opportunistic visual inspection of dredge load and dredge heads, reporting any items of suspected cultural significance. If items are found, retain and report to relevant authorities through Vessel Master and NQBP Observe all site-specific requirements which may influence dredge operations.
	Notification	If items are found, retain and report to relevant authorities through Vessel Master and NQBP
Responsibility	Primary	Vessel Master
	Secondary	NQBP Principal Advisor - Environment

WASTE MANAGEMENT

The following procedures will apply to the management of waste during dredging operations.

Table 7: Waste management

Parameter	Trigger	Action
General Waste	Continual - during at-sea operations	Supply of appropriate collection bins in areas such as galley, crew quarters and mess. Transfer of bins as required to large bins on-deck. Material placed in bin to be as compacted as possible to reduce space requirements. All on-deck bins secured in position to prevent movement whilst at sea. Where facilities exist to recycle material, appropriate separation of refuse. Bin lids to be chained down to prevent wind- blown material loss at all times. All collection points to be emptied to on-deck bin when 75% capacity. Visual check to ensure that on-deck bins have sufficient capacity to retain general waste until next scheduled on-shore transfer.
	Loss of general refuse over-board during collection, storage or transfer	If practicable, retrieve material that was lost. Review procedure causing material loss and rectify immediately.
	Notification	Reporting of material loss over-board to Vessel Master and NQBP in accordance with incident
Sewage	Continual – during at-sea operations	All sewage effluent (including greywaters and blackwater) generated onboard shall be directed to the onboard treatment system. Treated effluent shall be diverted to onboard holding tanks Effluent from the treatment system and holding tank is to be discharged in appropriate locations to ensure compliance with relevant legislation Pump-out of sludge tank to be managed as for untreated sewage discharges and, by way of appropriately licensed contractors where required.
	Accidental discharge or discharge in prohibited area	Review procedure resulting in sewerage discharge in prohibited location and rectify immediately. Review sewage storage system inputs and operation. Modify procedures, to improve discharge quality
	Notification	Reporting of sewerage discharge location in Sewage Log Book. Any exceptions reported to vessel master and NQBP All sewage spills to be reported to Maritime Safety Queensland.
Hazardous waste	Continual – during at-sea operations	All hazardous waste to be stored in appropriate manner (contained and bunded) and clearly marked in accordance with legislative requirements. All appropriate spill kit equipment will be on site and all personnel will be trained in the use of spill kits.

	During transfer	Hazardous waste to be collected by licensed contractor, for disposal at approved facility Bunkering of fuel to be undertaken by licensed contractor and levels shall be monitored at all times Spill response equipment shall be easily identifiable and conveniently located
	Spill	Vessel Master to assist with clean up of spill, review procedure breakdown and correct if required. This may include staff training
	Notification	Vessel Master must report any spills to the marine environment to NQBP's Principal Advisor - Environment on 0409 282 110 (24 hours); and notify Maritime Safety Queensland on 07 4052 7470 or 1300 551 899
Emissions *The TSHD Brisbane is fitted with modern and fully maintained emission reduction devices. The potential for disruptive noise, vibration, light or air quality to sensitive places is limited by distance***.**	Continual – during at-sea operations	**Noise** All noise reduction equipment to be maintained as per manufactures' specifications All noise from activities must not exceed the acoustic quality objectives specified in the Environmental Protection Noise Policy 2008 **Light** Where practicable, LED lighting will be used to provide more direct illumination of tasks and reduce light spill. Use of external vessel lighting will be minimised unless required for safety purposes **Air quality** All combustion plant particularly main and auxiliary engines to be maintained as per manufactures' specifications Appropriate adjustment of trim and ballast to ensure effective operation Exhaust stack to be visually monitored to ensure no visual dark emissions
	Evidence of inappropriate emissions or complaint	Vessel Master to investigate source of emissions or basis of complaint. If this relates to inappropriate work practices, inform crew of necessary changes and ensure these are undertaken. If complaints relate to plant, investigate effectiveness of emissions reduction equipment and review/replace as required.
	Notification	Any complaints to be reported to NQBP, Vessel Master, PBPL Environment Manager and PBPL Manager Dredging Operations.
Responsibility	Primary	Vessel Master
	Secondary	NQBP Principal Advisor - Environment

BALLAST WATER AND WASHDOWN

Ballast water from the TSHD Brisbane will be managed in accordance with the Biosecurity Act 2015.

Table 8: Ballast water and washdown procedures

Parameter	Trigger	Action
Ballast water	Before leaving Port of origin	Undertake a thorough hopper wash within the material relocation area If discharge pipes have been utilised during operations, undertake a thorough flush of these systems Inspect hopper and dredge gear (esp. heads) to ensure that no material which may transport organisms (such as sediments, organic material or waters) is retained
	During transit between areas of operation	Any ballast tanks holding seawaters will be exchanged prior to arrival with seawaters at a location as distant from the coastline or other shallow (<100m) areas as possible, but not less than 12nm Ballast tanks filled with freshwaters will be retained without treatment Waters held within the hopper during transit will be treated as for other ballast waters
	During dredging operations	Release of ballast waters will be minimised at all times
	Reporting	A record will be kept of volumes, location and times of ballasting and de-ballasting operations
Washdown	At all times	Sweep deck in preference to washing where possible Washdown of the deck and or dredge head shall only occur within the designated disposal areas Only dredged material to be release as a result of vessel washing activities (i.e. no release of oil or other contaminants)
	Notification	Reporting by crew to Vessel Master of any observations of contamination to the waterway whilst washing the deck/equipment Reporting in accordance with hazardous waste measures
Responsibility	Primary	Vessel Master

6.2. Adaptive Management Measures

WATER QUALITY

While impacts form temporary changes to water quality are not expected, the Port of Hay Point Marine Environmental Monitoring Program (NQBP 2018) establishes a framework for real time monitoring water quality changes at key sites to inform adaptive management measures to ensure unpredicted impacts to do not eventuate.

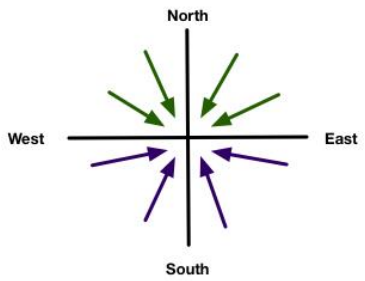
The adaptive monitoring program is based on detailed water quality thresholds based on intensity, duration and frequency analysis as outlined in the Port of Hay Point Marine Environmental Monitoring Program (NQBP 2018).

Monitoring Sites

Four sites will be monitored for adaptive management purposes:

- Round Top Island (Trigger Site) – prevailing southerly conditions
- Victor Island (Trigger Site) – prevailing northerly conditions
- Freshwater Point (Control Site) – prevailing southerly conditions.
- Slade Island (Control Site) – prevailing northerly conditions.

Respective trigger sites and control sites have been determined based on prevailing wind direction, as outlined in Figure 4.



Wind direction	Trigger Site	Control Site
Northerly	Victor Island	Slade Island
Southerly	Round Top Island	Freshwater Point

Figure 4: Wind directions and respective trigger and control sites

At these sites SSC/NTU intensity thresholds have been established, as detailed in Table 9.

Table 9: Wet and dry season intensity thresholds

Site	Intensity (mg/l)	Intensity (NTU)
Wet Season (92nd percentile data)		
Round Top Island	15	11
Freshwater Point	83	104
Victor Island	47	32
Slade Islet	52	43
Dry Season (95th percentile data)		
Round Top Island	15	11
Freshwater Point	38	48
Victor Island	49	34
Slade Islet	37	31

Additionally, duration thresholds have been developed to reflect either a 40 day or 20-day dredge duration.

Duration thresholds are developed from the full three-year dataset (excluding TC Debbie) and are represented as:

- **Average** – the average recorded cumulative time the intensity threshold is naturally exceeded over the given period
- **90th Percentile** – the cumulative time the intensity threshold is naturally exceeded
- **Maximum** – the highest recorded cumulative time the intensity threshold is naturally exceeded over the given time period.

Duration threshold values for the trigger sites are shown in Table 10. Adaptive monitoring will use NTU as this is more useful than SSC for real time loggers and management purposes.

Table 10: Intensity and duration thresholds - 40 day period (wet and dry seasons)

Trigger Sites	Intensity (mg/l)	Intensity (NTU)	Average Duration (hrs)	90th Percentile Duration (hrs)	Maximum Duration (hrs)
Wet Season (92nd percentile)					
Round Top Island (southerly)	15	11	77	164	300
Victor Island (northerly)	47	32	77	241	291
Dry Season (95th percentile)					
Round Top Island (southerly)	15	11	48	82	115
Victor Island (northerly)	49	34	48	94	150

Application of Triggers

At trigger sites the real time data is used to establish the cumulative duration (using real time 10-minute data) above the threshold value. If and when the cumulative duration increases and reaches either the: average duration; 90th percentile duration; or max duration, a series of management zones are triggered.

If the 10-minute real time data is above the NTU threshold then the duration of time above the intensity threshold is recorded on the relevant trigger site graph (see Figure 5 for an example). This will produce an ongoing cumulative count of time above the respective threshold (if the value is below the threshold, no increase in duration is recorded and the graph line will run horizontal). Once the cumulative duration exceeds the average, 90th or max durations then escalating management responses are required.

While the cumulative hourly plot remains under the average duration, that is within Management Zone A, no response is required and dredging can operate as normal.

If the cumulative hourly plot increases and exceeds the other management zone thresholds then the instantaneous logger readings from the respective control site is reviewed to determine if the threshold exceedance is being caused by dredging or natural conditions, as follows:

1. If the control site reading is also above that site's intensity threshold (92nd/95th% NTU) then the raised turbidity level will be assumed to be primarily being driven by natural conditions making management actions unnecessary and ineffective.
2. If the control site readings are below that site's intensity threshold (92nd/95th% NTU) it should be assumed that dredging is resulting in the raised turbidity level at the trigger site, corresponding management response should be implemented.

Once the 'Respond' (Management Zone C) is reached and where there is doubt or where readings are only marginally different or cannot be explained, the MRG will review the data, climate conditions and other factors, such as where and when the dredge was operating. Based on available information the MRG will provide advice on appropriate management response.

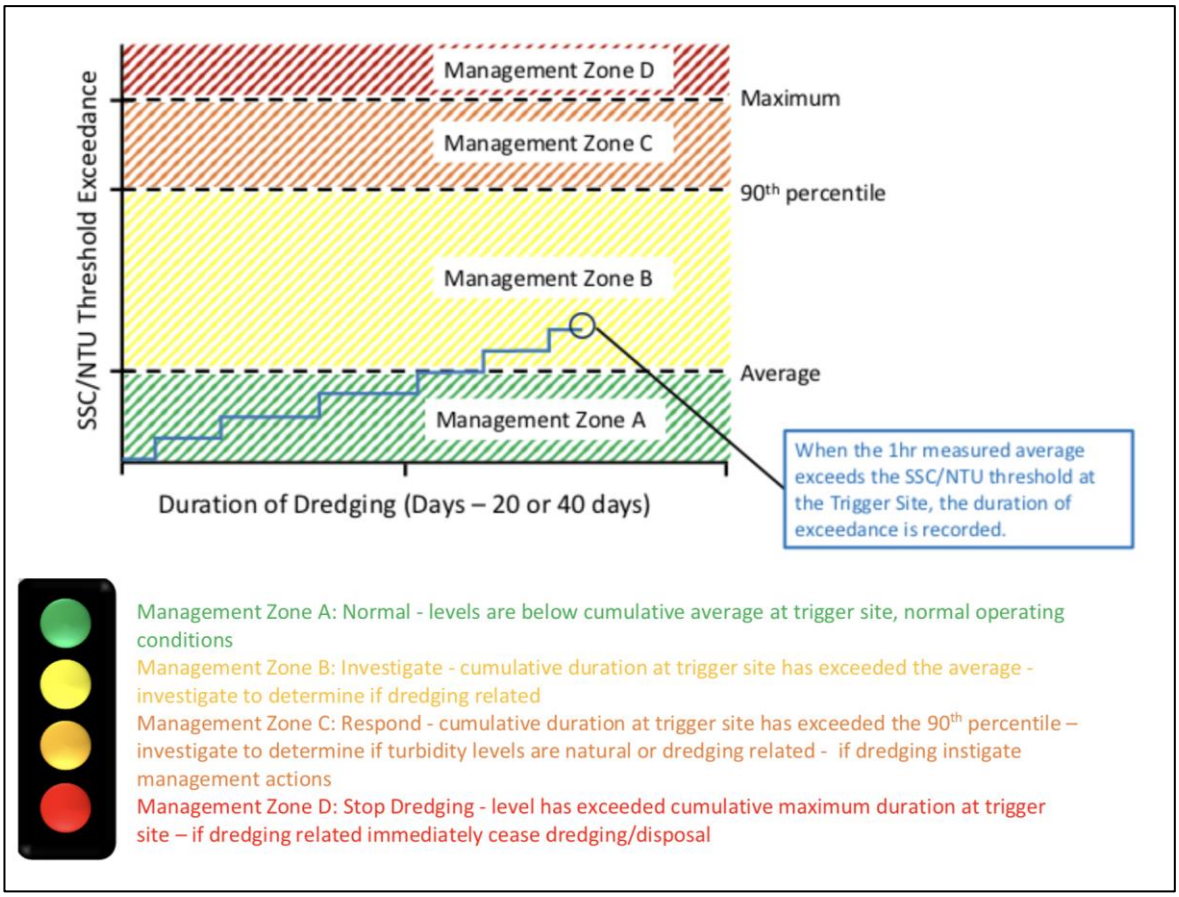


Figure 5: Hypothetical example plot showing duration trigger limits and management zones

The following tables indicate the combinations of trigger site and control site conditions and when management responses are or are not required.

Table 11: Wet season with northerly wind 92nd% trigger and control site scenarios

WET SEASON	NORTHERLY WIND				
Cumulative duration level	Trigger site	Control Site			
	VICTOR	SLADE			
Zone A		<43		>43	
Zone B		<43		>43	
Zone C		<43		>43	
Zone D		<43		>43	

Table 12: Dry season with northerly wind 95th% trigger and control site scenarios

DRY SEASON	NORTHERLY WIND				
Cumulative duration level	Trigger site	Control Site			
	VICTOR	SLADE			
Zone A	🟢	<31	🟢	>31	🟢
Zone B	🟡	<31	🟡	>31	🟢
Zone C	🟠	<31	🟠	>31	🟢
Zone D	🔴	<31	🔴	>31	🟢

Table 13: Wet season with southerly wind 92nd% trigger and control site scenarios

WET SEASON	SOUTHERLY WIND				
Cumulative duration level	Trigger site	Control Site			
	ROUND TOP	FRESHWATER			
Zone A	🟢	<104	🟢	>104	🟢
Zone B	🟡	<104	🟡	>104	🟢
Zone C	🟠	<104	🟠	>104	🟢
Zone D	🔴	<104	🔴	>104	🟢

Table 14: Dry season with southerly wind 95th% trigger and control site scenarios

DRY SEASON	SOUTHERLY WIND				
Cumulative duration level	Trigger site	Control Site			
	ROUND TOP	FRESHWATER			
Zone A	🟢	<48	🟢	>48	🟢
Zone B	🟡	<48	🟡	>48	🟢
Zone C	🟠	<48	🟠	>48	🟢
Zone D	🔴	<48	🔴	>48	🟢

Table 15: Management responses based on trigger and control site combinations

TRIGGER	CONTROL	MANAGEMENT RESPONSE
🟢	🟢	= NO ACTION (CONTINUE DREDGING OPERATIONS AS NORMAL
🟡	🟡	= INVESTIGATE
🟡	🟢	= NO ACTION
🟠	🟠	= RESPOND – TURBIDITY REDUCTION MEASURES
🟠	🟢	= NO ACTION
🔴	🔴	= STOP DREDGING (until instantaneous NTU falls below 92nd/95th% @trigger site)
🔴	🟢	= NO ACTION

Management Actions

Based on the Management Zones the following response actions apply (Table 16).

Table 16: Management responses actions

Status	Action	
NO ACTION	No response actions required. Apply standard measures to ongoing dredging program	
INVESTIGATE	This zone indicates that the cumulative duration has increased beyond the average. The NQBP Principal Advisor -Environmental should investigate to determine if the exceedance is potentially dredging related. Examine: 1. the monitoring equipment for any faults/defects that may have influenced data collection at both monitoring and control sites. 2. the dredge and disposal activity and locations in the 24 hours preceding exceedance. 3. the results against: o recent meteorological and current/wave/tide conditions (particularly due to any events or wind direction that may not also be affecting control site) o sediment transport patterns using MODIS or other aerials/satellite imagery. 4. where possible, examine the trigger site to ensure no natural processes or other human activity (e.g. vessel movements, fishing activity) are contributing to the elevated turbidity level. 5. whether any significant rainfall events resulting in increased surface runoff or river sedimentation outfall from Pioneer River or Bakers Creek are affecting the trigger site. If it is determined that dredging activities have contributed to the exceedance, the dredging operations should be placed on a warning status.	
RESPOND	If the trigger site cumulative duration and instantaneous control site reading indicate that dredging is causing an exceedance above the 90th percentile duration, the Vessel Master should be informed and the following management measures should be progressively applied. 1. Change the disposal location and vessel route within spoil grounds 2. Slow vessel speed during disposal 3. Alteration of overflow regime 4. Change the dredging location (e.g. move to Half Tide Tug Harbour) 5. Modification of disposal phase with respect to the tide (e.g. dispose on ebb tide only) 6. Reduce the dredge load The measures should be applied sequentially. One measure should be applied to each sequential disposal run and NTU monitored at the trigger site to determine if levels stabilise or fall. If they continue to increase or remain above the threshold then the next measure should be applied and so forth. Normal operations can resume once NTU falls below threshold or matches equivalent percentile reading at control site. Additionally, climate conditions should be used to inform expected turbidity responses.	
STOP DREDGING	If the trigger site cumulative duration and instantaneous control site reading indicate that dredging is causing an exceedance above the max duration, the Vessel Master should be informed dredging and disposal should cease until either: – NTU falls below threshold or trigger site matches equivalent percentile reading at control site – Weather conditions have stabilised to a point where continued raised NTU is unlikely.	
Responsibility	Primary	Vessel Master
	Primary	NQBP Principal Advisor - Environment

MARINE FAUNA

There is a low probability of impacts to marine mega fauna during operation of dredging plant and equipment, and during transit between dredge site and dredge material relocation ground.

Direct physical impact to marine fauna from collision with the TSHD is unlikely as the vessel will be moving at low speeds. Most fauna that may be encountered (turtles, dolphins and whales) are generally able to avoid slow moving vessels. Direct impacts to turtles through intake into the suction heads is possible, however, the drag heads will be fitted with turtle exclusion devices. Specific management actions to be implemented are detailed in Table 17.

Table 17: Triggers and adaptive management actions for marine fauna

Parameter	Trigger	Action
Megafauna (turtles, dolphins, whales and dugongs)	Continual – during at-sea operations	Bridge personnel to maintain watch for marine fauna during dredging, transit and dredge material placement
	Warning: Megafauna present outside 300m radius monitoring zone	Continue monitoring presence Prepare for response if animals move within 150m of the dredge
	Exceedance: Megafauna present within monitoring zone	Stop dredging Dredging to commence only when megafauna have exited monitoring zone or not observed for 20 mins or the dredge vessel moves to another area of the dredge/ placement sites to maintain a minimum distance of 300m. Record observations and actions in Master's log
Turtles	Continual	Drag head to be fitted with turtle exclusion device
Turtles	Lowering and raising of drag head	Stop suction of dredge as dredge head is lowered/ lifted
Reporting		
Responsibility	Primary	Vessel Master
	Secondary	NQBP Principal Advisor - Environment

6.3. Incident Management

All NQBP Hay Point staff, and any contractors involved, have the responsibility to report any significant incidents and emergencies. This requirement will be included in inductions and reinforced at operational meetings.

Environmental incidents and hazards, including pollution incidents will be managed in accordance with either the *TSHD Brisbane* on-board emergency procedures or the Port of Hay Point emergency response procedure (for in water incidents).

All incidents will be reported and recorded in accordance with NQBP's policies, procedures and permit conditions.

In the first instance, reporting should be to the operational works supervisor, but generally, the Environment Manager will have the responsibility to initiate corrective action for environmental incidents.

In the case of an environmental emergency, after first notifying the Environment Manager, the operational works supervisor may make contact with NQBP's nominated consultants, who would help co-ordinate and manage a response. Depending on the nature and magnitude of the incident, the Environment Manager may be required to notify government regulators.

7. Reporting

7.1. Record Keeping and Auditing Requirements

During dredging activities, NQBP (or their contractors) will keep records which detail:

- the times and dates of when each material disposal run is commenced and finished
- the position (by GPS) of the vessel at the beginning and end of each dumping run with the inclusion of the path of each dredge material relocation run
- the volume of dredge material (in cubic metres) dumped for the specific operational period. These records will be retained for audit purposes
- detail of any spill of oil, fuel or other potential contaminant, details of remedial action and monitoring instigated as result.
- details of any marine mega fauna observations during dredging activities
- time and duration of any alterations to the program, including stop work actions, as a result of any environmental mitigation measure.
- NQBP will undertake internal audits during each dredging program

Post the dredging program, NQBP will

- undertake a bathymetric survey of the dredged area and dredge material placement site within one month of the completion of all dumping activities
- within two months of the completion of the bathymetric survey provide a digital copy of the final survey results to the RAN Hydrographer, copied to relevant regulatory agencies
- continue monitoring as per the *Port of Hay Point Marine Environmental Monitoring Plan.*
- Provide a report on the bathymetry to the Managing agency within two months of the bathymetric survey being undertaken. This report will include a chart showing the change in sea floor bathymetry as a result of dumping and include written commentary on the volumes of dumped material that appear to have been retained within the disposal site.
- Provide a detailed report to DAF within 60-days of completion of dredging.
- Provide a monitoring report to DES within 3-months of the completion of each dredge program.
- Publish a report on NQBP website addressing compliance with all requirements of the Environmental Thresholds Report, Maintenance Dredging Environmental Management Plan and the Marine Environmental Monitoring Program, as verified by an independent audit.
- To facilitate annual reporting to the International Maritime Organisation, NQBP must report to the Department and the Managing Agency by 31 January each year, including on the day of expiry of the sea dumping permit or completion of all dredging under this permit.

7.2. Monitoring of environmental performance

Environmental performance will be monitored through adaptive monitoring, observations and surveys. The Port of Hay Point Marine Environmental Monitoring Program (ELA 2018) set out all monitoring requirements related to dredging.

Result of the monitoring program feed back into ongoing performance reviews of environmental management including future editions of this EMP.

The TACC is involved in the review of monitoring report and subsequent changes to management actions.

7.3. Incidents and contingency arrangements

Significant environmental incidents should be logged in writing, with all relevant details recorded, after corrective action has been completed.

Should an environmental incident occur during the course of dredging or dumping, NQBP will take measures to mitigate the risk or impact. NQBP would report the following information to DES/GBRMPA, within 24 hours:

- nature of incident and type of risk associated with the incident, including (where possible) volume, nature and chemical composition of substances released
- measures taken to mitigate the risk
- the success of the measures undertaken
- proposed future measures (if required) and monitoring.

8. References

Commonwealth of Australia (2009) *National Assessment Guidelines for Dredging* (NAGD), Commonwealth of Australia, Canberra. Available at http://www.environment.gov.au/marine/publications/national-assessment-guidelines-dredging-2009

Jacobs (2016) *Environmental Values* Assessment. September 2016

Kaveney T, Archinal L, Kane K, Tolley H, Hemphill P, Hulme J and Morton R. 2017. *Port of Hay Point: Sustainable Sediment Management Assessment for Navigational Maintenance Summary Report*, Report for North Queensland Bulk Ports, January 2017.

North Queensland Bulk Ports (NQBP), 2009, *Port of Hay Point Environmental Management Plan*, October 2009,

Ports Australia (2016) *Environmental code of practice for dredging and dredged material management*. August 2016. Available at http://www.portsaustralia.com.au/assets/Publications/Ports-Australia-Dredging-Code-of-Practice.pdf

Royal HaskoningDHV [RHDHV]. 2018a. *Hay Point Maintenance Dredging Dredge Plume Modelling Assessment*. Report for North Queensland Bulk Ports, February 2018.

Royal HaskoningDHV. 2018b. *Port of Hay Point: Environmental Thresholds*. Report for North Queensland Bulk Ports, March 2018.

SKM. 2013. *Improved dredged material management for the Great Barrier Reef Region*, Report prepared for the Great Barrier Reef Marine Park Authority, Townsville.

State of Queensland (Department of Transport and Main Roads) (2016) *Maintenance Dredging Strategy for Great Barrier Reef World Heritage Area Ports*. November 2016. Available at https://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Maintenance-dredging-strategy

CEDA. (2015). Integrating Adaptive Environmental Management into Dredging Projects. Position Paper. Retrieved from http://www.dredging.org/media/ceda/org/documents/resources/cedaonline/2015-02-ceda_informationpaper-environmental_monitoring_procedures.pdf

9. Appendices

APPENDIX A: ENVIRONMENTAL AUTHORITY (31 JANUARY 2014) - ENVIRONMENTALLY RELEVANT ACTIVITY

APPENDIX B: DEVELOPMENT APPROVAL (27 FEBRUARY 2006) - OPERATIONAL WORKS (TIDAL WORKS)

APPENDIX C: GBR MARINE PARK PERMIT

APPENDIX D: SEA DUMPING PERMIT

APPENDIX E: NOTIFICATIONS AND OBLIGATIONS SCHEDULE'

APPENDIX A:

ENVIRONMENTAL AUTHORITY (31 JANUARY 2014) - ENVIRONMENTALLY RELEVANT ACTIVITY

Permit

Environmental Protection Act 1994

Environmental authority EPPR01742813

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

Environmental authority number: EPPR01742813

Environmental authority takes effect on 25 June 2018

Environmental authority holder(s)

Name(s)	Registered address
North Queensland Bulk Ports Corporation Limited	Level 1 324 Queen St BRISBANE CITY QLD 4000 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (d) more than 1,000,000t	Lot 126/SP123776
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (d) more than 1,000,000t	Lot 143/SP121683
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (d) more than 1,000,000t	Lot 95/SP231132

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

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- 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.

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.

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

Date issued: 25 June 2018

Enquiries:
Coastal and Marine Assessment
Department of Environment and Science
Phone: 1300 130 372
Email: palm@des.qld.gov.au

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)

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Legislative requirements

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.

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation contact Mine Safety and Health at www.dnrm.qld.gov.au, or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

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. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of environmental authority

The environmentally relevant activitie(s) conducted at the location(s) as described above must be conducted in accordance with the following conditions of approval.

Agency interest: General	
Condition number	**Condition**
G1	The **administering authority** must be advised in writing of the date of commencement of a dredge campaign at least ten days prior to that date.
G2	**Limit of Dredging Approved** Dredging activities which constitute the environmentally relevant activity (ERA 16.1(d)) hereby approved, are limited to: a) The removal of maintenance dredge material dredged from the departure channel, apron area and berth pockets in the Port of Hay Point, and Half Tide Tug Harbour at locations shown in Drawing NQBP2013-018b Port of Hay Point - Maintenance Dredging Areas, attached herein as Attachment 1. b) Placement of dredge spoil at Material Relocation area, defined by the following coordinates (GDA94):

Longitude	**Latitude**
149.3019269	-21.21998327
149.3348576	-21.20192259
149.3342955	-21.1655219
149.2806085	-21.19450986

G3	Any dredging must be conducted using equipment that is in survey and registered and, in relation to environmental performance, is equal to or better than the following equipment: (a) Trailing Suction Hopper Dredge that is equipped, as a minimum, with: (i) below keel discharge of tail **waters** via an anti-turbidity control valve; (ii) on-board systems for determining solids to water ratio or density of dredged material; (iii) electronic positioning and depth control system for defining the location and depth of dredging activities; and (iv) dredge heads and depth control capable of, and where appropriate, fitted with fauna exclusion devices (e.g. turtle deflectors). (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; and (iv) systems for determining solids to water ratio or density of dredged material during operations. (c) Grab Dredge that is equipped, as a minimum, with: (i) electronic positioning systems for defining the location and depth of dredging activities.

G4	**External Audit** An appropriately qualified Third Party Environmental Auditor must be engaged, nominated by the approval holder independent of contractual arrangements for the design and construction of the project, for each dredge campaign covered by this environmental authority.
G5	The Environmental Auditor must audit key stages of the works subject to this approval against the: (a) Conditions of this Environmental Authority; (b) Integrated Environmental Management System (IEMS) as required by condition G10; and (c) **General Environmental Duty** (GED).
G6	At the completion of the project, the Environmental Auditor must finalise the audits and prepare a summary of the results in a form acceptable to the **administering authority**.
G7	A copy of each Audit Report must be provided to the **administering authority** within ten (10) business days of a written request being made or twenty-eight (28) business days of completion of a dredge campaign.
G8	The registered operator must ensure that a person or body possessing appropriate experience and qualifications determines the cross sections of the dredged area to confirm the works have been carried out in accordance with the plans referred to in condition (G2) and report the results of the survey determinations to the **administering authority** within six (6) weeks of the completion of the project.
G9	**Integrated Environmental Management System** NOTE: For the purposes of this environmental authority, an approved Dredge Management Plan, satisfies the requirements of an Integrated Environmental Management System, provide the following requirements are satisfied. From commencement of this environmental authority, an Integrated Environmental Management System (IEMS) must be implemented. The IEMS must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The IEMS must also provide for the review and 'continual improvement' in the overall environmental performance of all ERAs that are carried out.

G10	The approved IEMS must provide for at least the following functions: (a) Training of staff, contractors and visitors in the awareness of environmental issues related to carrying out the activities, which must include at least: (i) The environmental policy, so that all persons that carry out the activities are aware of all relevant commitments to environmental management; (ii) Any relevant environmental objectives and targets, so that all staff are aware of the relevant performance objectives and can work towards these; (iii) Control procedures to be implemented for routine operations for day to day activities to minimise likelihood of environmental harm, however occasioned or caused; (iv) 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 stabilisation and site rehabilitation); (v) Organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to manage environmental issues effectively; (vi) Effective communication to ensure two-way communication on environmental matters between operational staff and higher management; and (vii) Obligations in respect of monitoring, notification and record keeping under the DMP and relevant environmental authority. (b) Monitoring of the release of contaminants, methods, record keeping and notification of results; (c) Conducting assessment of the environmental impact of any release of contaminants; (d) Waste prevention, treatment and disposal; and (e) A program for continuous improvement.
G11	The IEMS must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this approval.
G12	The permit holder must provide any amendments to the IEMS to the **administering authority** at least 28 days prior to the implementation of the proposed amendments, except where amendments must be implemented to prevent environmental harm or to ensure compliance with this environmental authority.
G13	The IEMS must be reviewed every 5 years from commencement of the ERA and supplied to the **administering authority** for review.
G14	**Prevent and/or Minimise Likelihood of Environmental Harm** In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and/or to minimise the likelihood of environmental harm being caused. [Note: This environmental authority authorises the environmentally relevant activity. It does not authorise environmental harm unless a condition contained within this approval explicitly authorises that harm. Where there is no condition or the environmental approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.]

G15	**Maintenance of Measures, Plant and Equipment** The registered operator of an ERA to which this approval relates must: (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and (b) maintain such measures, plant and equipment in a proper and efficient condition; and operate such measures, plant and equipment in a proper and efficient manner.
G16	**Alterations** No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided for by this approval.
G17	**Display of Environmental Authority** A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activity.
G18	**Records** Record, compile and keep all monitoring results required by this environmental authority and present this information to the administering authority upon request.
G19	All records required by the environmental authority must be kept for at least five (5) years, except where stated otherwise in a condition of this approval.
G20	**Cease Activities in Event of Material or Serious Environmental Harm Occurring** If the registered operator of an ERA to which this approval relates becomes aware of **material environmental harm** or serious environmental harm as a result of carrying out the environmentally relevant activity (ERA) then the said activities must cease immediately.
G21	**Notification** Telephone the administering authorities Pollution Hotline (1300 130 372) as soon as becoming aware of any release of contaminants not in accordance with the conditions of this environmental authority or any event where environmental harm has been caused or may be threatened.

G22	**Information to Follow Notification** Written advice detailing the following information must be provided to the **administering authority** within fourteen (14) days following any notification in accordance with condition (G21): (a) the name of the registered operator, including the environmental authority number; (b) the name and telephone number of a designated contact person; (c) the location of the release / event; (d) the time of the release / event; (e) the time you became aware of the release / event; (f) the suspected cause of the release / event; (g) a description of the resulting effects of the release / event; (h) the results of any sampling performed in relation to the release / event; (i) actions taken to mitigate any environmental harm and or environmental nuisance caused by the release / event; and (j) proposed actions to prevent a recurrence of the release / event.
G23	**Incident Recording** A record must be maintained of at least the following events: (a) the time, date and duration of equipment malfunctions where the failure of the equipment resulted in the release of contaminants to the environment; and (b) the time, date, description, volume and duration of any uncontrolled release of contaminants to the environment. (c) the corrective actions implemented flowing an event (including photographic records).
G24	**Spill Kit(s)** 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.
G25	All relevant personnel operating under this approval must be trained in the use of the spill kit(s).
G26	**Equipment Calibration** All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this environmental authority must be calibrated and appropriately operated and maintained.
G27	**Trained/Experienced Operator(s)** All persons engaged in the conduct of the activity, including but not limited to employees and contract staff, must be: (a) trained in the procedures and practices necessary to: (i) comply with the conditions of this environmental authority, and (ii) prevent environmental harm during normal operation and emergencies; or (b) under the close supervision of such a trained person.

G28	**Sample Analysis** All analyses and tests required to be conducted under this environmental authority must be carried out by a laboratory that has NATA certification for such analyses and tests, except as otherwise authorised by the **administering authority**.
G29	**Monitoring** An experienced and suitably qualified person(s) must conduct any monitoring required by this approval.
G30	A monitoring report must be prepared every three (3) months and upon completion of dredging. This report shall include but not be limited to: (a) a summary of the previous three (3) months monitoring results obtained under the monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the previous three (3) months monitoring results to both this approvals limits and to relevant prior results; and (b) an evaluation and interpretation of the data from any monitoring programs; (c) a summary of any 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; (e) actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.
G31	The monitoring report required by condition (G30) must be submitted to the **administering authority** upon request or at the completion of each dredge campaign.
Agency interest: Air	
Condition number	**Condition – Dust Nuisance – Nil**
Agency interest: Water	
Condition number	**Condition**
W1	Coral and water quality monitoring must be carried out in accordance with the Port of Hay Point Dredging — Coral and Water Quality Monitoring Plan (dated 27 August 2007).
W2	The following performance indicators are to be employed, as defined in the Port of Hay Point Dredging — Coral and Water Quality Monitoring Plan (dated 27 August 2007): (a) Total Suspended Solids (TSS) does not exceed 100**mg/L** calculated on a six hour rolling mean at any of the water logger locations; (b) Coral mortality does not exceed 5% at Round Top Island and 5% at Victor Island in any one dredge campaign.
W3	Dredging activities shall not cause the dredge plume from the dredge head and the deposition site to elevate turbidity in the vicinity of reef communities located at Round Top Island or Victor Islet which is outside the turbidity trigger value identified in (W2).

W4	If the nominated turbidity trigger value identified in (W2) is exceeded, measures must be implemented to reduce the impact of the sediment plume of coral communities in accordance with correction action specified in the Port of Hay Point Dredging — Coral and Water Quality Monitoring Plan (dated 27 August 2007).
W5	**If** the nominated turbidity value identified in (W2) is exceeded, the **administering authority** must be advised, within 24 hours of the event, of the corrective action that has been or will be implemented.
W6	The level of dredge spoil within the spoil ground must not exceed a maximum height of 10 metres below Lowest Astronomical Tide.
W7	Where trailer suction dredging is carried out, an effective turtle deflector 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**.
W8	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.
W9	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 150 metres of the activities being undertaken.
W10	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 75 metres of the activities being undertaken.
W11	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.
W12	**Reporting** A monitoring report must be prepared and submitted to the **administering authority** within 3 months of the completion of each dredge campaign. This report shall include, but not be limited to: (a) results of the monitoring required by this environmental authority and the WQMP; (b) a daily summary of dredge movements and disposal activity (map based); (c) an evaluation or explanation of the data from these monitoring programs; (d) details of any turtle captures by the dredge and the species involved; (e) details of any complaints received including investigations undertaken, conclusions formed, and action taken; (f) a summary of significant equipment failures or events that have potential environmental management consequences; (g) an outline of corrective actions that will or have been taken to minimise or reduce environmental harm; and (h) the quantity (volume in cubic metres) and location of dredging material removed and disposed of.

Agency interest: Land	
Condition number	**Condition**
L1	**Preventing Contaminant Release to Land** Contaminants must not be released to **land,** except where otherwise stated in a condition of this approval.
L2	All chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm. (Note: All flammable and combustible liquids including petroleum products/fuels must be stored in accordance with AS 1940 - *Storage and Handling* of *Flammable and Combustible Liquids.* Storage for flammable and combustible liquids must be constructed and maintained in accordance with AS 1940.)
Agency interest: Noise	
Condition number	**Condition**
N1	Noise from the dredging activities must not cause environmental nuisance at a nuisance sensitive place.
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: (a) $L_{A\ 10,\ adj,\ 10\ mins}$ (b) $L_{A\ 1,\ adj,\ 10\ mins}$ (c) the level and frequency of occurrence of impulsive or tonal noise; (d) atmospheric conditions including wind speed and direction; (e) effects due to extraneous factors such as traffic noise; and (f) location, date and time of recording.
N3	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authorities Noise Measurement Manual.
Agency interest: Waste	
Condition number	**Condition**
WA1	**Waste Management** Waste generated in the carrying out of the activities must be stored, handled and transferred in a proper and efficient manner.
WA2	All **regulated waste** removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994.*
WA3	Where **regulated waste** is removed from the site (other than by a release as permitted under another condition of this environmental authority), the registered operator must monitor and keep records of the following:

	(a) the date, quantity and type of waste removed; (b) the name of the waste transporter and/or disposal operator that removed the waste; and (c) the intended treatment/disposal/destination of the waste. Note: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for **regulated waste** will be deemed to satisfy this condition.
WA4	**Notification of Improper Disposal of Regulated Waste** If a person removes **regulated waste** associated with activities at the site and disposes of such waste in a manner which is not authorised or is improper or unlawful, the registered operator must notify the **administering authority** of all relevant facts, matters and circumstances known concerning the disposal as soon as practicable.
Agency interest: Social	
Condition number	**Condition**
S1	**Complaint Response** The registered operator of an ERA to which this approval relates must record the following details for all complaints received and provide this information to the administering authority on request: (a) Time, date, name and contact details of the complainant; (b) for the complaint; (c) any investigations undertaken; (d) conclusions formed; and (e) any actions taken.

Definitions

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.

Administering authority means the Department of Environment and Science (DES) or its successor.

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

Dwelling means any of the following structures or vehicles that is principally used as a residence- a house, unit, motel, nursing home or other building or part of a building; a caravan, mobile home or other vehicle or structure on land; a water craft in a marina.

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

Intrusive noise - means noise that, because of its frequency, duration, level, tonal characteristics impulsiveness or vibration;

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

Note: In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 *Acoustics - Description and Measurement* of *Environmental Noise Part* 2 - *Application to Specific Situations.*

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

Material environmental harm means material environmental harm as defined in section16 of the *Environmental Protection Act* 1994.

mg/L means milligrams per litre.

Noise affected premises means a "noise sensitive place" or a "commercial place"

Noxious means harmful or injurious to health or physical wellbeing.

Nuisance sensitive place means-

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Protected area means-

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 2004*; or
- a World Heritage Area.

Regulated waste means non-domestic waste in Schedule 7 of the Environmental Protection Regulation 2008, and includes:

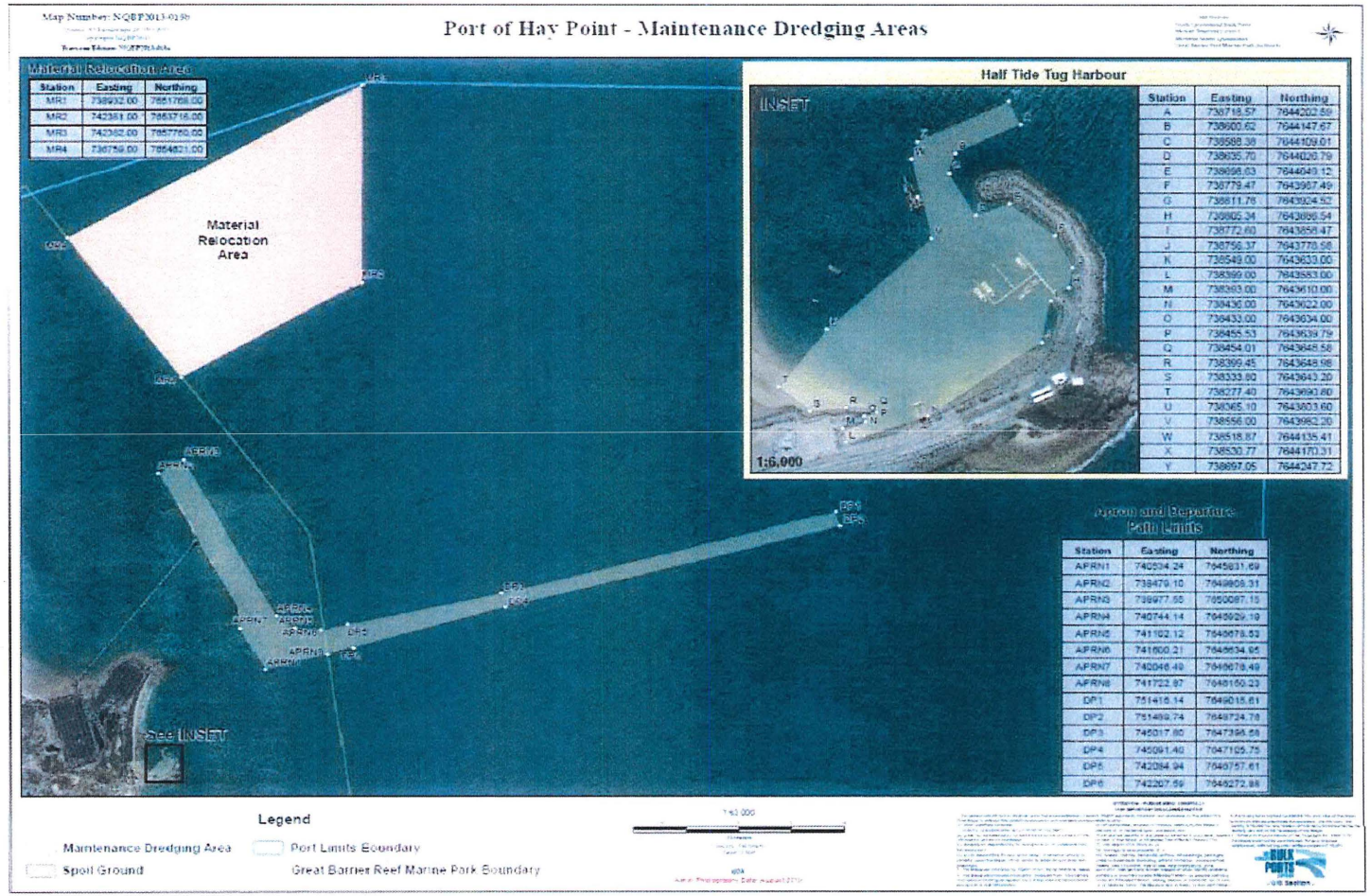
- for an element - any chemical compound containing the element; and
- anything that has contained a regulated waste; and
- regulated waste that has been treated or immobilised.

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

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

END OF PERMIT

Attachment 1 – Port of Hay Point – maintance Dredging Areas



Station	Easting	Northing
MR1	738932.00	7651768.00
MR2	742381.00	7653716.00
MR3	742362.00	7657760.00
MR4	738759.00	7654821.00

Station	Easting	Northing
A	738718.57	7644202.59
B	738600.62	7644147.67
C	738588.38	7644109.01
D	738635.70	7644026.79
E	738698.03	7644049.12
F	738779.47	7643967.49
G	738811.76	7643924.52
H	738805.34	7643896.54
I	738772.60	7643858.47
J	738756.37	7643778.58
K	738549.00	7643633.00
L	738399.00	7643583.00
M	738393.00	7643610.00
N	738430.00	7643622.00
O	738433.00	7643634.00
P	738455.53	7643639.79
Q	738454.01	7643648.58
R	738399.45	7643648.98
S	738333.80	7643643.20
T	738277.40	7643690.80
U	738065.10	7643603.60
V	738556.00	7643982.20
W	738518.87	7644135.41
X	738530.77	7644170.31
Y	738697.05	7644247.72

Station	Easting	Northing
APRN1	740534.24	7645831.69
APRN2	739479.10	7649909.31
APRN3	739977.55	7650087.15
APRN4	740744.14	7649929.19
APRN5	741102.12	7649878.53
APRN6	741600.21	7649634.95
APRN7	742046.49	7649678.49
APRN8	741722.87	7649160.23
DP1	751416.14	7649015.61
DP2	751499.74	7648724.78
DP3	745017.80	7647398.58
DP4	745091.40	7647105.75
DP5	742084.94	7646757.61
DP6	742207.59	7646272.98

APPENDIX B:

DEVELOPMENT APPROVAL (27 FEBRUARY 2006) - OPERATIONAL WORKS (TIDAL WORKS)

Queensland Government

Department of
State Development, Manufacturing, Infrastructure and Planning

Changed decision notice
Our reference: 1805-5537 SPD

Decision notice—approved with conditions
(Given under section 63 of the *Planning Act 2016*)

Original reference: IPDC000339006A12 and IPDE00339106A22

The development application described below was properly made to the former Environmental Protection Agency on 19 December 2005.

Applicant details

Applicant name:	Ports Corporation Queensland
Applicant contact details:	Level 24, 300 Queens Street BRISBANE QLD 4000

Location details

Street address:	Port of Hay Point
Real property description:	-
Local government area	Sarina Shire Council

Decision

Date of decision:	27 February 2006
Decision details:	Approved subject to conditions

Approval details

Development permit	Operational work – tidal work and disposal of dredge spoil. Material Change of Use involving Environmentally Relevant Activity 71 Port – operating a port (other than an airport). Operational work that is removal, destruction or damage of a marine plant.

Referral agencies

There were no referral agencies for this application.
Note: The Coordinator General's Report is taken to be a concurrence agency's response for the application under the *Integrated Planning Act 1997* pursuant to section 37 of the *State Development and Public Works Organisation Act 1971* (SDPWO).

Mackay Isaac Whitsunday regional office
Level 4, 44 Nelson Street, Mackay
PO Box 257, Mackay QLD 4740

Conditions

This approval is subject to:

- the assessment manager conditions in Attachment 1

The department has, for conditions of this approval, nominated an entity to be the enforcement authority for that condition under the *Planning Act 2016*.

Advice to the applicant

The department offers advice about the application to the applicant—see Attachment 2.

Further development permits

Please be advised that the following development permits are required to be obtained before the development can be carried out:

1. Not applicable

Properly made submissions

Not applicable—No part of the application required public notification.

Rights of appeal

The rights of applicants to appeal to a tribunal or the Planning and Environment Court against decisions about a development application are set out in chapter 6, part 1 of the *Planning Act 2016*. For particular applications, there may also be a right to make an application for a declaration from a tribunal (see chapter 6, part 2 of the *Planning Act 2016*).

Copies of the relevant appeal provisions are attached.

Currency period for the approval

This development approval will lapse if development is not started within the currency periods stated in section 85 of the *Planning Act 2016* and relevant sections of the *Integrated Planning Act 1997.*

Environmental authority

Associated Environmental Authority EPPR01742813.

Approved plans and specifications

Copies of the following approved plans and specifications are enclosed.

Drawing/report title	Prepared by	Date	Reference no.	Version/issue
Aspect of development: Operational Work				
Apron and Departure Path Plan	GHD	08/12/2005	41-14520-001	D
Apron and Departure Path Sections	GHD	06/12/2005	41-14520-002	D
(Figure 1: Port of Hay Point – Maintenance Dredging Areas)	**North Queensland Bulk Ports**	**28/11/2018**	**NQBP2018-029**	**-**

enc Attachment 1—Changed assessment manager conditions

Attachment 2 - Advice to the applicant
Appeal provisions
Approved plans and specifications

Attachment 1—Changed assessment manager conditions

[Note: additions are shown as bold and underlined text; deletions are shown as struck-through text]

No.	Conditions of development approval	Condition timing
<u>Appendix 1</u> **Conditions provided by the Coordinator-General to be attached to the development approval granted by the Assessment Manager under the *Integrated Planning Act 1997.***		
~~*Condition 1*~~	~~The provisions in Appendix 2 of this Report, which relate to the following aspects of development, must be attached to the development approval granted by the Assessment Manager:~~ • ~~Environmentally Relevant Activity 71 Port -operating a port (other than an airport) under the *Transport Infrastructure Act 1994.*~~ • ~~Operational work -tidal work and disposal of dredge spoil (Schedule 8, part 1, Table 4, Item 5 (a) and (b)(ii) of the *Integrated Planning Act 1997.*~~ ~~Pursuant to s.41 of the SDPWO Act, I nominate the Environmental Protection Agency as the concurrence agency for this condition.~~	
Condition 2	A research and monitoring program to determine the impact and mitigation of impacts shall be undertaken in accordance with the program design -"Deepwater seagrass and algae dynamics in Hay Point: measuring variability and monitoring impacts of capital dredging". This research and monitoring program shall commence prior to the disturbance of any marine plants associated with the capital dredging of the apron areas and departure path for the Port of Hay Point. Pursuant to s.41 of the SDPWO Act, I nominate the Department of Primary Industries and Fisheries **(now Department of Agriculture and Fisheries)** as the concurrence agency for this condition	
Condition 3	Written notification of the date of commencement of dredging works must be provided to the District Officer, Queensland Boating and Fisheries Patrol (Fax No 4951 3004) and the Manager, Fisheries and Aquaculture Development, Department of Primary Industries and Fisheries (Fax No 4035 4664) **(now Department of Agriculture and Fisheries)**, at least 15 days prior to the commencement of dredging works. Pursuant to s.41 of the SDPWO Act. I nominate the Department of Primary Industries and Fisheries **(now Department of Agriculture and Fisheries)** as the concurrence agency for this condition.	
Condition 4	A written report which details the completed development works must be provided to the District Officer, Queensland Boating and Fisheries Patrol (PO Box 668, Mackay Qld 4740), and the Manager, Fisheries and Aquaculture Development, Department of Primary Industries and Fisheries (PO Box 5396, Cairns Qld 4870) **(now Department of Agriculture and Fisheries)** within ~~15~~ **60** days of the completion of development works. Pursuant to s.41 of the SDPWO Act, I nominate the Department of Primary Industries and Fisheries **(now Department of Agriculture**	

	and Fisheries) as the concurrence agency for this condition.	
Condition 5	A strategy to reduce the risk of introduction and spread of marine pest species must be developed by the Ports Corporation of Queensland **(now North Queensland Bulk Ports)** in consultation with the Department of Primary Industries and Fisheries **(now Department of Agriculture and Fisheries)**. The strategy must include: (a) protocols to minimise the risk of introduction of marine pests from the spoil pathways and hopper of the dredge, and (b) pre-and post-dredging sampling surveys for known introduced marine pests within the apron area, departure path and spoil disposal site according to minimum standards agreed between DPI&F and PCQ, and achievable within the projected timeframes of the project.	
~~*Condition 6*~~	~~An Environmental Management Plan (EMP) must be prepared to address the construction and operational phases of the project. The EMP must be submitted to the EPA for comment at least 28 days prior to the commencement of construction activities. Any comments from the EPA received within 21 days of the EMP being received, should be considered when implementing the EMP. The EMP must be generally Consistent with the findings and conditions of the Coordinator-General's Report and the findings of the EIS and SEIS. Construction work must not commence until the EPA has given written acceptance of those elements of the EMP relevant to the conditions set out in Appendix 2 of this Report.~~ ~~Pursuant to s.41 of the SDPWO Act, I nominate the Environmental Protection Agency as the concurrence agency for this condition.~~	

Operational Work (Tidal Work and Disposal of Dredge Spoil) – IPDC00339006A12

Appendix 2

Conditions to which any development approvals given under the *Integrated Planning Act 1997* for the project which the Environmental Protection Agency is assessment manager, are to be subject.

Agency Interest: Coastal Management (IPDC00339006A12)

Tidal work and disposal of dredge spoil (Schedule 8, Part 1, Table 4, Item 5(a) and Item 5(b)(ij) of the *Integrated Planning Act 1997*),

Tidal work and disposal of dredge spoil (Schedule 8, Part 1, Table 4, Item 5(a) and Item 5(b)(ii) of the *Integrated Planning Act 1997*) —The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Environment and Science to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):

General

1.	All works are to be constructed in accordance with the attached approved drawings and the specifications as detailed on these drawings. **The 'approved drawings' that apply to this approval include:**	

Drawing Number	**Date**
41-14520-001 D	08/12/2005
41-14520-002 D	6/12/2005
NQBP2018-029 (Figure 1:	**28/11/2018**

	Port of Hay Point – Maintenance Dredging Areas)	
A1.	The administering authority must be advised in writing of the date of commencement of ~~capital~~ dredging, at least ten days prior to that date.	
A2.	All reasonable and practicable measures must be taken to prevent environmental harm being caused and to minimise environmental harm where impact on the marine environment is unavoidable.	
~~*Environmental Management Plan*~~ ***Long-term Maintenance Dredging Management Plan***		
A3.	Prior to the commencement of **maintenance dredging and disposal** works, the permit holder must ~~prepare, or have prepared, an Environmental Management Plan~~ **submit a Long-term Maintenance Dredging Management Plan** to the administering authority.	
A4.	The permit holder must not carry out any of the **maintenance dredging** works permitted herein unless the administering authority has advised the permit holder in writing that the relevant components of the ~~Environmental Management Plan~~ Long-term Maintenance Dredging Management Plan have been approved.	
A5.	The permit holder must provide any amendments to the ~~Environmental Management Plan~~ **Long-term Maintenance Dredging Management Plan** to the administering authority at least 28 days prior to the implementation of the proposed amendments, except where amendments must be implemented to prevent environmental harm or to ensure compliance with this development approval.	
A6.	If the administering authority provides the permit holder with any comment on the proposed amendments (referenced in condition A5) within 21 days of receiving the document, the permit holder must have due regard to those comments when implementing the proposed amendments.	
A7.	The permit holder, employees, officers, subcontractors and agents must comply with and ensure that all activities undertaken in connection with this development approval are undertaken in accordance with the development approval, and the ~~Environmental Management Plan~~ **Long Term Maintenance Dredging Management Plan** approved by the administering authority from time to time.	
Construction ***and maintenance*** *of the departure path and apron*		
A8.	The removal of material from the departure **channel, apron area and berth pockets is to be confined within the boundaries of the approved navigational infrastructure as shown in Figure 1 – Port of Hay Point Maintenance Dredge Areas or alternatively used for beach nourishment or beneficial use on land.** **Spoil is to be deposited in a mosaic pattern within the spoil disposal site to minimise impact on the regeneration of benthic flora and fauna, in accordance with the Environmental Management Plan (referenced in condition A3).** ~~path and apron is to be confined within the boundaries as detailed on Figure ES1 dated 27 April 2005 and Figure 2-1 dated 6 June 2005 (Port of Hay Point Apron Area and Departure Path Capital Dredging Draft Environmental Impact Statement. August 2005)~~.	
A9.	The maximum depth of the departure path and apron is to be limited to 15.6 metres below Lowest Astronomical Tide, including over dredging.	
A10.	If material has been removed from outside of the boundaries specified, or if the batters are steeper than those designated, those areas may	

	need to be repaired to the satisfaction of the administering authority.	
A11.	~~Capital~~ Dredging is to be carried out using a trailer suction hopper dredge only.	
A12.	No blasting is to be undertaken.	
~~A13.~~	~~No dredging is permitted for the period between November and March inclusive in order to minimise impacts on seagrass and coral communities. The period when dredging is permitted may be extended with the written agreement of the administering authority.~~	
Dredge spoil disposal		
A14.	Dredge spoil is to be disposed of within the ~~area marked as proposed spoil ground in Figure ES1 dated 27 April 2005 (Port of Hay Point Apron Area and Departure Path Capital Dredging Draft Environmental Impact Statement, August 2005).~~ **Material Relocation Area defined by the following coordinates (in GDA94) and shown in Figure 1: Port of Hay Point – Maintenance Dredging Areas.** Latitude / Longitude -21.21982 / 149.30192 -21.20192 / 149.33486 -21.16552 / 149.3343 -21.19451 / 149.28061	
A15.	The level of dredge spoil within the spoil ground must not exceed a maximum height of 10 metres below Lowest Astronomical Tide.	
A16.	Any material that is deposited outside of the boundaries of the proposed spoil ground may be required to be removed to the satisfaction of the administering authority.	
Protected species		
A17.	An effective turtle deflector 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.	
A18.	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, and implemented, to the satisfaction of the administering authority.	
A19.	Dredging and spoil disposal activities must cease, or relocate to another site, if dugongs, turtles, or other marine species of conservation significance, are either likely to be struck or captured, or are observed within 150 metres of the activities being undertaken.	
A20.	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.	
Water quality management		
A21.	Monitoring of coral communities for the effect of suspended sediment on coral health, must be undertaken ~~at the locations and frequency specified in the Environmental Management Plan (referenced in Condition A3).~~ **as per the requirements of the Long-term Maintenance Dredging Management Plan.**	

A22.	Sediment plume validation monitoring must be undertaken over a range of sea state conditions during the first four (4) weeks of commencement of dredging activities in accordance with methodology defined in consultation with the administering authority.	
A23.	Dredge track records that are time stamped and indicate the draught of the dredge are to be retained.	
A24.	A report detailing the extent to which modelled data correlates with recorded data, and the implications of any significant variation for biodiversity values within areas affected by the sediment plume, must be submitted to the administering authority within 1 month of completion of the sediment plume validation monitoring.	
A25.	**If water quality thresholds, as a measure of** ~~If the~~ coral health impact, ~~limits~~ specified in the ~~Environmental Management Plan~~ **Long-term Maintenance Dredging Management Plan** are exceeded, measures must be implemented to reduce ~~the impact of the sediment plume on coral communities in accordance with the corrective action specified in the Environmental Management Plan~~ **the impact of water quality as per requirements of the Long-term Maintenance Dredging Management Plan.**	
A26.	If the turbidity ~~and/or coral health~~ impact limits specified in the ~~Environmental Management Plan~~ **Long-term Maintenance Dredging Management Plan** are exceeded, the administering authority must be advised, within 24 hours of the event, of the corrective action that has been or will be implemented.	
Reporting		
A27a.	**Prior to the commencement of maintenance dredging, a report shall be provided to the administering authority containing information on the rate of siltation within areas to be dredged, the quantity of material to be removed, and the extent of migration of dredge spoil within and outside of the spoil ground.**	
A27.	~~A monthly~~ **M**onitoring report**s** must be prepared and submitted to the administering authority ~~throughout the period that~~ **upon completion of** the dredging and spoil disposal works ~~are being undertaken~~. This report shall include: • results of the monitoring required by this development approval and the ~~Environmental Management Plan~~ **Long-term Maintenance Dredging Management Plan**; • a daily summary of dredge movements and disposal activity (map based); • an evaluation or explanation of the data from these monitoring programs; • details of any turtle captures by the dredge and the species involved; • details of any complaints received including investigations undertaken, conclusions formed, and action taken; • a summary of significant equipment failures or events that have potential environmental management consequences; • an outline of corrective actions that will or have been taken to minimise or reduce environmental harm; and • the quantity (volume in cubic metres) and location of dredging material removed and disposed of.	
A28.	Within three (3) months of completion of ~~both the capital dredging and~~	

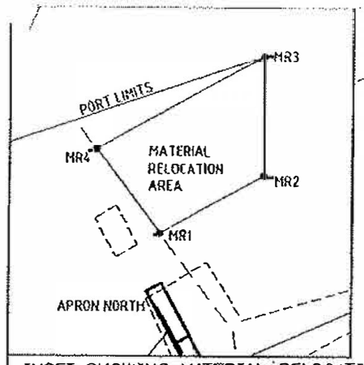
	~~the~~ maintenance dredging and associated spoil disposal, submit a report from a Registered Professional Engineer of Queensland to the administering authority certifying that the works (including any other associated works) have been constructed in accordance with the approved drawings and these conditions,	
Hydrographic survey requirements		
A29.	Prior to the commencement of ~~the capital or~~ maintenance dredging and associated spoil disposal, and within three (3) months of completion of these works, hydrographic surveys of the bed levels of the area dredged and spoil disposal site must be completed.	
A30.	The hydrographic surveys must be carried out in accordance with the following requirements: • Sounding lines shall be spaced at not more than 20 metre centres along the entire survey area (or over a lesser area or density if supported by the administering authority); • Soundings shall include all areas where dredged material was removed and deposited, and shall continue 100 metres beyond those areas; • Soundings shall be taken at every change in grade so as to accurately define the profile of the bed along the line; • Soundings shall be plotted on a plan to a suitable scale; • The datum for levels shall be Port Datum (Lowest Astronomical Tide); • The plans of the surveys shall clearly identify the location of the batters, departure path, apron, adjacent berths, and other features; • The report shall include representative cross sections from the hydrographic survey, detailing the previous and current bed levels, and design depth; and • The plans of the surveys and cross sections shall be forwarded in duplicate to the administering authority, within one month of completion of each survey.	
~~**Material Change of Use involving an Environmentally Relevant Activity**~~		
~~Agency Interest: Environmental Protection (IPDE00339106A22)~~ ~~Environmentally Relevant Activity 71 Port operating a port (other than an airport) under the *Transport Infrastructure Act 1994.*~~		
~~*General*~~		
~~B1~~	~~The administering authority must be advised in writing of the date of commencement of dredging, at least ten days prior to that date.~~	
~~B2.~~	~~All reasonable and practicable measures must be taken to prevent environmental harm being caused, and to minimise environmental harm where impact on the marine environment is unavoidable.~~	
~~B3.~~	~~A competent person(s) must conduct any monitoring required by this approval.~~	
~~B4.~~	~~All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated, and appropriately operated and maintained.~~	
~~*Environmental Management Plan*~~		
~~B5.~~	~~Prior to the initial commencement of maintenance dredging, an Environmental Management Plan (current revision) must be submitted to the administering authority for review and finalised by the permit~~	

	~~holder, having due regard to the comments provided by the administering authority.~~	
~~B6.~~	~~The Environmental Management Plan (current revision) must be implemented, except where the Environmental Management Plan is inconsistent with this development approval.~~	
~~B7.~~	~~The permit holder must provide any amendment to the Environmental Management Plan to the administering authority at least 28 days prior to the implementation of the proposed amendments, except where amendments must be implemented to prevent environmental harm or to ensure compliance with this development approval.~~	
~~B8.~~	~~If the administering authority provides the permit holder with any comment on the proposed amendments (referenced in condition B7) within 21 days of receiving the document, the permit holder must have due regard to those comments when implementing the proposed amendments.~~	
~~*Dredge spoil disposal*~~		
~~B9.~~	~~Dredge spoil from maintenance dredging is to be disposed of within the boundaries detailed on Figure ES1 dated 27 April 2005 (Port of Hay Point Apron Area and Departure Path Capital Dredging Draft Environmental Impact Statement, August 2005), or alternatively used for beach nourishment or beneficial use on land, Spoil is to be deposited in a mosaic pattern within the spoil disposal site to minimise impact on the regeneration of benthic flora and fauna, in accordance with the Environmental Management Plan (referenced in condition B5).~~	
~~B10.~~	~~Prior to the commencement of maintenance dredging, a report shall be provided to the administering authority containing information on the rate of siltation within areas to be dredged, the quantity of material to be removed, and the extent of migration of dredge spoil within and outside of the spoil ground.~~	
Noise		
~~B11.~~	~~Noise from activities must not cause an environmental nuisance at any noise affected premises.~~	
~~B12.~~	~~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:~~ • ~~LA10, adj, 10 mins~~ • ~~LA1, 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.~~	
~~B13.~~	~~The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.~~	
~~*Complaints*~~		
~~B14.~~	~~All complaints received must be recorded including investigations undertaken, conclusions formed, and action taken. This information must be made available to the administering authority on request.~~	
~~B15.~~	~~Record, compile and keep all monitoring results required by this development approval and present this information to the~~	

	~~administering authority when requested, in a specified format.~~	

Attachment 2—Advice to the applicant

General advice	
Marine Plant Disturbance	
1.	**If the maintenance dredging disturbs marine plants, the works will need to be undertaken in accordance with the accepted development requirements for operational work that is the removal, destruction or damage of marine plants (ADR). If the works cannot meet the ADR, a development approval will be required.**
Environmental Authority	
2.	**It is advisable to amend the current Environmental Authority EPPR01742813 to reflect the updated plan.**



INSET SHOWING MATERIAL RELOCATION AREA

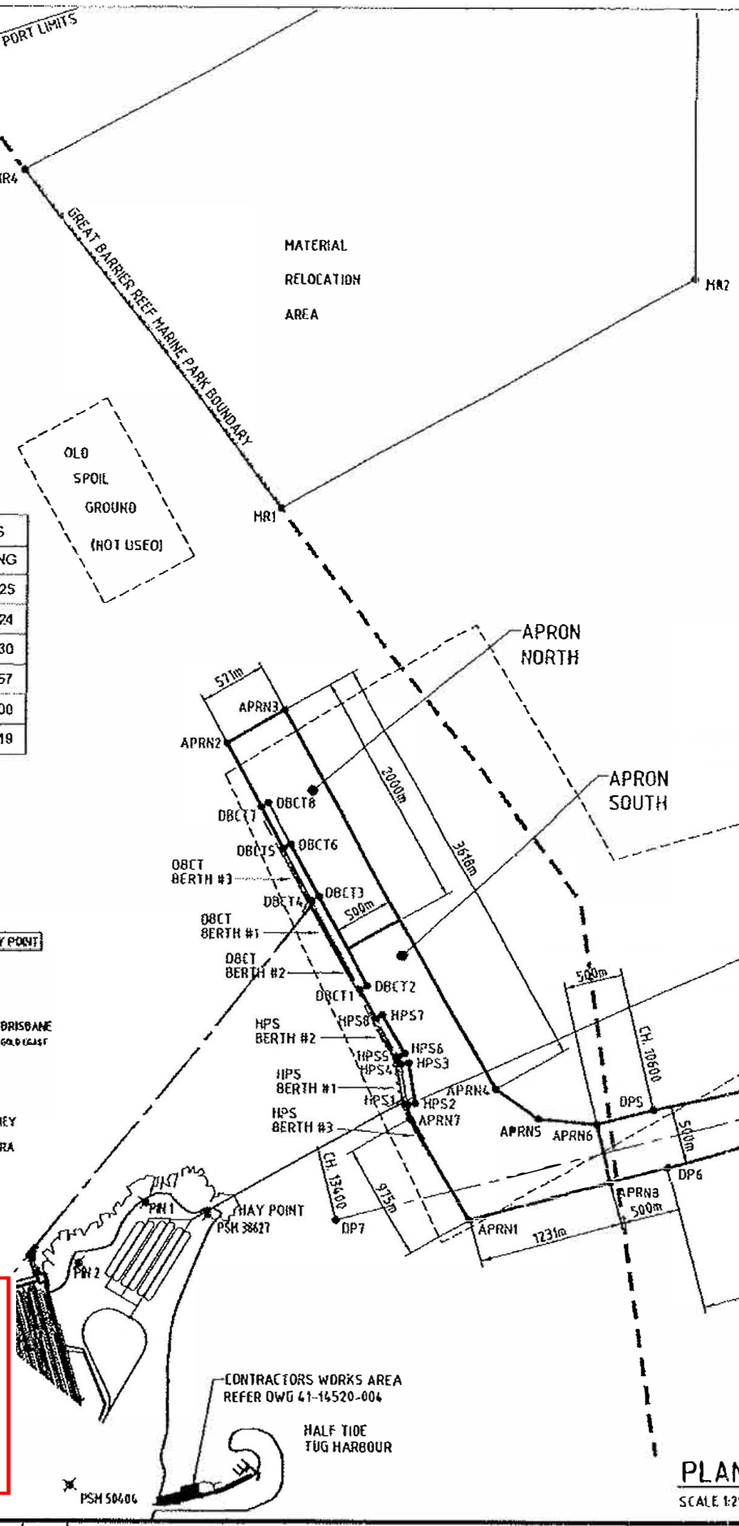
NOT TO SCALE

SURVEY CONTROL NETWORK

STATION	GDA94 CO-ORDINATES		AGD84 CO-ORDINATES	
	EASTING	NORTHING	EASTING	NORTHING
PSM 38627	738336.34	7645872.34	738222.25	7645692.25
PIN 1	737821.66	7645969.33	737707.57	7645789.24
PIN 2	737279.86	7645457.39	737165.77	7645277.30
PSM 50404	737217.57	7643608.66	737103.46	7643428.57
PSM 50408	736306.99	7645180.09	736192.90	7645000.00
PSM 50411	737004.57	7643722.28	736890.48	7643542.19

LOCALITY PLAN

NOT TO SCALE



PLAN

SCALE 1:25,000

HAT	7.14
MHWS	5.78
MHWN	4.46
MSL	3.34
MLWN	2.22
MLWS	0.90
LAT	0.00

TIDAL PLANES

TIDE TABLES & BOATING SAFETY GUIDE 2005
MARITIME SAFETY QUEENSLAND

BEACON LOCATIONS

BEACON	EASTING	NORTHING
No 1	743392.2	7647078.4
No 2	743510.5	7646611.0
No 4	747632.3	7647710.8
No 6	750395.9	7648410.1

DEPARTURE PATH LIMITS

STATION	EASTING	NORTHING
DP0	752170.82	7649170.49
DP1	751416.14	7649015.61
DP2	751489.74	7648724.78
DP3	745017.80	7647396.58
DP4	745091.40	7647105.75
DP5	742084.94	7646757.61
DP6	742207.59	7646272.88
DP7	739430.86	7645828.14

APRON LIMITS

STATION	EASTING	NORTHING
APRN1	740534.24	7645831.69
APRN2	738479.10	7649808.31
APRN3	738977.55	7650087.15
APRN4	740744.14	7646929.19
APRN5	741102.12	7646678.53
APRN6	741600.21	7646634.95
APRN7	740046.49	7646676.49
APRN8	741722.87	7646150.23

BERTH LIMITS

STATION	EASTING	NORTHING
DBCT1	739627.87	7647754.57
DBCT2	739689.59	7647768.99
DBCT3	739273.41	7648533.75
DBCT4	739211.72	7648499.10
DBCT5	738967.41	7648935.69
DBCT6	739029.40	7648970.34
DBCT7	738776.96	7649276.03
DBCT8	738838.92	7649310.70
HPS1	740026.96	7646796.74
HPS2	740087.13	7646806.53
HPS3	740032.98	7647145.40
HPS4	739972.08	7647135.24
HPS5	739946.94	7647197.48
HPS6	740000.14	7647227.23
HPS7	739821.66	7647546.48
HPS8	739768.45	7647516.73

MATERIAL RELOCATION AREA

STATION	EASTING	NORTHING
MR1	738932	7651786
MR2	742381	7653718
MR3	742382	7657750
MR4	736759	7654621

APPROVED

Approved by:
Sarath Opatha Vithana
RPEQ No. 6381

NOTES:

1. ALL DIMENSIONS AND COORDINATES ARE IN METRES U.N.O.
2. HORIZONTAL DATUM SHOWN ON THIS DRAWING AND APPLICABLE FOR THIS CONTRACT IS GDA94
3. VERTICAL DATUM FOR LEVELS IS ESTABLISHED FROM PSM 38627 (RL 18.04 LAT)
4. ALL LEVELS AND SOUNDINGS ARE IN METRES, AND ARE REDUCED TO L.A.T.
5. SITE OF WORKS INCLUDES THE DREDGE AREA, MATERIAL RELOCATION AREA AND THE AREA BETWEEN MATERIAL RELOCATION AREA, THE DREDGE AREA AND THE CONTRACTORS WORK AREA.

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Queensland Government

SARA ref: 1805-5537 SPD

Date: 1 February 2019

FOR IPA APPROVAL

No	Revision	Drawn	Checked	Approved	Date
D	ISSUED FOR IPA APPROVAL	NW			03-12-05
C	REVISED FOR TENDER	NW	*SSV	*SSV	24.10.05
B	FOR TENDER	NW	*SSV	*SSV	29.7.05
A	FOR REVIEW	NW			

Note: * Indicates signatures on original issue of drawing or last revision of drawing

0 250 500 750 1000 1250m
SCALE IN METRES 1:25000 BEFORE REDUCTION

PCQ Ports Corporation of Queensland

GHD MANAGEMENT ENGINEERING ENVIRONMENT

GHD Pty Ltd ABN 99 139 393 291
Level 4 201 Charlotte St Brisbane QLD 4000
GPO Box 668 Brisbane QLD 4001
T 61 7 3316 3000 F 61 7 3316 3333
E brsmail@ghd.com.au www.ghd.com.au

Scale: AS SHOWN — DO NOT SCALE
Drawn: N. WATTS — Designed: S. VIVIAN
Drafting Check — Design Check
Approved
Date: 03-12-2005
This Drawing must not be used for Construction unless signed as Approved

Client: PORTS CORPORATION QUEENSLAND
Project: HAY POINT DEPARTURE CHANNEL
Title: APRON & DEPARTURE PATH PLAN

Original Size: A1 — Drawing No: 41-14520-001 — Rev: D

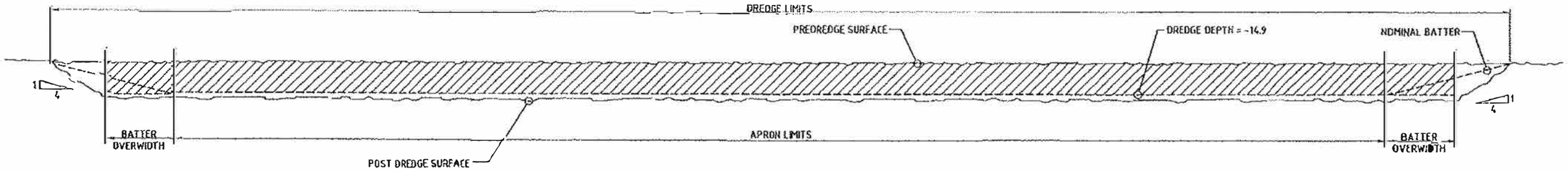
Cad File No: G:\41\14520\Cad\41-14520-001.dwg — Plot Date: 08 December 2005 - 1:36 PM

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

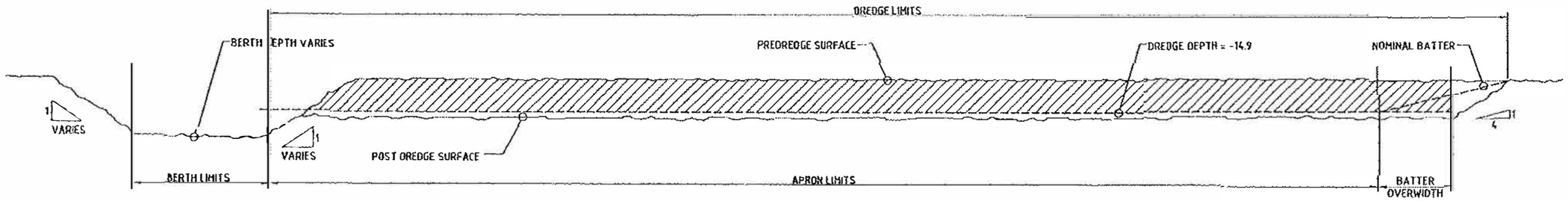
Queensland Government

SARA ref: 1805-5537 SPD

Date: 1 February 2019



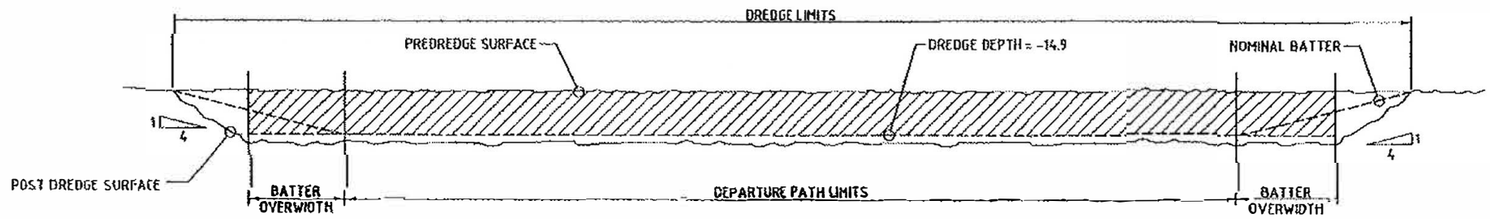
APRON SECTION



APRON SECTION AT BERTH LOCATION

APPROVED

DREDGE VOLUME FOR PAYMENT



DEPARTURE PATH SECTION

SECTION OF THE WORKS	BATTER OVERWIDTH (m)
APRON NORTH	4m
APRON SOUTH	4m
DEPARTURE PATH INNER	4m
DEPARTURE PATH MIDDLE	1m
DEPARTURE PATH OUTER	2m

Approved by:
Sarath Opatha Vithana
RPEQ No. 6381

FOR IPA APPROVAL

No	Revision	Drawn	Checked	Approved	Date
D	ISSUED FOR IPA APPROVAL	NW			06.12.05
C	REVISED FOR TENDER	NW	*SSV	*SSV	24.10.05
B	FOR TENDER	NW	*SSV	*SSV	29.7.05
A	FOR REVIEW	CAP			

Note: * Indicates signatures on original issue of drawing or last revision of drawing

0 10 20 30 40 50m
SCALE 1:500 AT ORIGINAL SIZE

PCQ Ports Corporation of Queensland

GHD MANAGEMENT ENGINEERING ENVIRONMENT
GHD Pty Ltd ACN 054 448 877
Level 4 201 Charlotte St Brisbane QLD 4000
GPO Box 668 Brisbane QLD 4001
T 61 7 3316 3000 F 61 7 3316 3333
E brsmail@ghd.com.au www.ghd.com.au

Scale: AS SHOWN — DO NOT SCALE
Drawn: C. PETERSEN — Designed: S. VIVIAN
Drafting Check — Design Check
Approved
Date: 06.12.2005
This Drawing must not be used for Construction unless signed as Approved

Client: PORTS CORPORATION QUEENSLAND
Project: HAY POINT DEPARTURE CHANNEL
Title: APRON & DEPARTURE PATH SECTIONS
Original Size: A1
Drawing No: 41-14520-002
Rev: D

Cad File No. G:\41\14520\Develop\41-14520-002.dwg
Plot Date: 06 December, 2005 - 1:57 PM

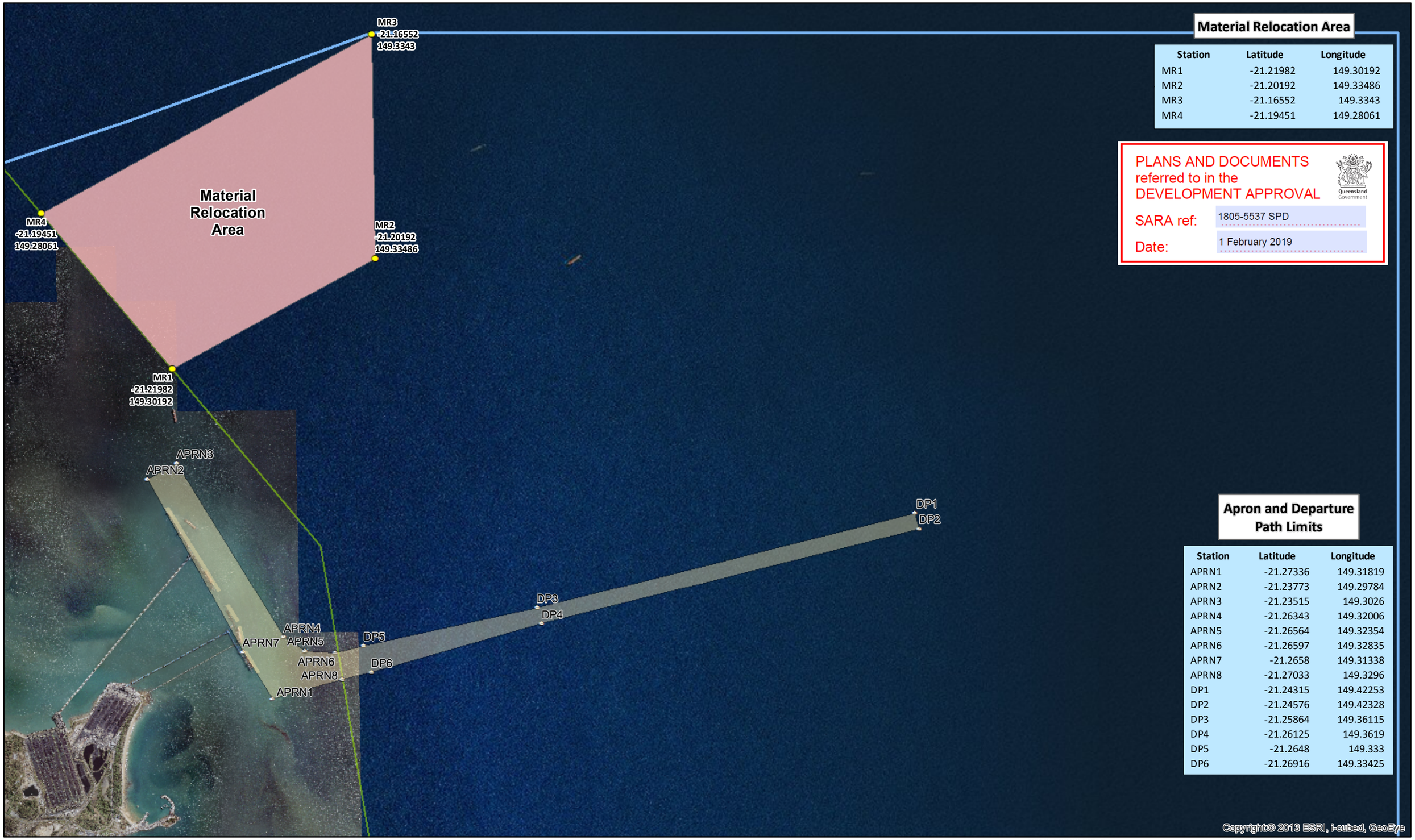
Map Number: NQBP2018-029

Printed A3 Landscape 28/11/2018

Previous Edition: NQBP2013-018b

Figure 1
Port of Hay Point - Maintenance Dredging Areas

Data Sources
North Queensland Bulk Ports
Mackay Regional Council
Maritime Safety Queensland
Great Barrier Reef Marine Park Authority



Material Relocation Area

Station	Latitude	Longitude
MR1	-21.21982	149.30192
MR2	-21.20192	149.33486
MR3	-21.16552	149.3343
MR4	-21.19451	149.28061

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Queensland Government

SARA ref: 1805-5537 SPD

Date: 1 February 2019

Apron and Departure Path Limits

Station	Latitude	Longitude
APRN1	-21.27336	149.31819
APRN2	-21.23773	149.29784
APRN3	-21.23515	149.3026
APRN4	-21.26343	149.32006
APRN5	-21.26564	149.32354
APRN6	-21.26597	149.32835
APRN7	-21.2658	149.31338
APRN8	-21.27033	149.3296
DP1	-21.24315	149.42253
DP2	-21.24576	149.42328
DP3	-21.25864	149.36115
DP4	-21.26125	149.3619
DP5	-21.2648	149.333
DP6	-21.26916	149.33425

Legend

- Hay Point Departure Channel
- Spoil Ground
- Port Limits Boundary
- Great Barrier Reef Marine Park Boundary

1:63,000

0 0.5 1 2 3 4

Kilometers

Projection: UTM Zone 55

Datum: GDA94

Aerial Photography Date: August 2017

NORTH QUEENSLAND BULK PORTS CORPORATION

APPENDIX C:

GBR MARINE PARK PERMIT

Marine Park

Australian Government
Great Barrier Reef
Marine Park Authority

PERMIT

Great Barrier Reef Marine Park Regulations 1983 (Commonwealth)

G19/40185.1

These permissions remain in force, unless sooner surrendered or revoked, for the following period:

23-JAN-2019 TO **31-JAN-2029**

Permission is granted to:

PERMIT HOLDER: **NORTH QUEENSLAND BULK PORTS CORPORATION LIMITED (ACN 136 880 218)**

ADDRESS: **PO Box 3340**
NORTH MACKAY QLD 4740

for use of and entry to zones in the **Amalgamated Great Barrier Reef Marine Park Section** (as established by the *Great Barrier Reef Marine Park Act 1975* (Cth)) in accordance with the details set out herein.

..... Date 23/01/2019
Delegate of the
Great Barrier Reef Marine Park Authority

THE PURPOSE/S OF USE AND ENTRY MAY ONLY BE UNDERTAKEN IN THE ZONE/S DESCRIBED BELOW

ZONE/S TO WHICH THE PERMISSION APPLIES:

GENERAL USE ZONE – within the Approved Dredge Area.

GENERAL USE ZONE and HABITAT PROTECTION ZONE – within the Approved Dredge Spoil Disposal Area.

PURPOSE/S OF USE AND ENTRY AUTHORISED BY THE PERMISSION:

CARRYING OUT WORKS – being the maintenance dredging of up to a maximum of 33,509 cubic metres of dredge spoil material from the Approved Dredge Area and bed levelling within the Approved Dredge Area; and

CARRYING OUT WORKS – being the dumping of up to a maximum of 756,553 cubic metres of maintenance dredge spoil material and a maximum of 200,000 cubic metres of contingency maintenance dredge spoil material within the Approved Dredge Spoil Disposal Area.

CONDITIONS OF PERMISSION

COMLIANCE WITH ALL LAWS

1 All works conducted under this permission must be undertaken in accordance with the provisions of the laws in force from time to time in the State of Queensland and the Commonwealth of Australia.

2 The Permit Holder must ensure that when operations are conducted in the Marine Park under this permit, this permit or a copy, and any relevant documents including any approved Management Plans are held at the site or sites of operation.

3 The Permit Holder must inform its officers, employees, contractors, agents and/or nominees in the program of relevant restrictions applying under any zoning plans, plans of management, Marine Park regulations and this permit.

DEED CONDITIONS

4 Within 30 business days of the date of commencement of this permit or prior to commencement of works under this permit, whichever is sooner, the Permit Holder must execute, seal and deliver a Deed to the Managing Agency in the form annexed to this permit, identified with the permit number, and marked 'Deed of Agreement'.

5 The Permit Holder must observe and perform its obligations under and pursuant to the Deed. Any breach of the Deed shall be a breach of this condition.

6 The Permit Holder must provide to the Managing Agency copies of certificates of currency or the insurance policy documents required under the Deed of Agreement within 20 business days of being called upon to do so.

ENVIRONMENTAL HARM CONDITIONS

7 The Permit Holder must take all reasonable steps to ensure that activities carried out under this permit do not cause harm to the environment.

8 The Permit Holder must notify the Managing Agency, within 24 hours after becoming aware, of all incidents. The notification must include:
- (i) details of the incident including date, time, location, cause and nature of the incident;
- (ii) the name and contact details of the person(s) witnessing, reporting and/or responsible for the incident;
- (iii) the type, estimated volume and concentration of any pollutants involved;
- (iv) the type and number of any pests transported;
- (v) the type and estimated scale of any physical damage caused to the environment; and
- (vi) measures taken or proposed to be taken to mitigate the impact or risk and the success of those measures in addressing the incident or risk.

9 The Permit Holder must then provide written details of the notification as specified in condition 8 to the Managing Agency within three (3) days of the time the Permit Holder became aware of the incident. This written notification must include details specified in condition 8 as well as the following:
- (i) measures taken or proposed to prevent or mitigate against the recurrence of such an incident; and
- (ii) any other relevant matters.

MAINTENANCE DREDGING CONDITIONS

10 This permit allows for maintenance dredging of up to a maximum of 22,509 cubic metres in total from within the Approved Dredge Area, with no more than 12,000 cubic metres dredged in any one calendar year.

11 This permit allows for contingency maintenance dredging of up to a maximum of 11,000 cubic metres in total from within the Approved Dredge Area.

SPOIL DUMPING CONDITIONS

12 Subject to condition s 14 and 15, this permit allows for the dumping of up to a maximum of 756,553 cubic metres in total of maintenance dredging spoil material to the Approved Dredge Spoil Disposal Area.

13 Subject to prior written approval from the Managing Agency, this permit allows for the dumping of up to a maximum of 200,000 cubic metres in total of contingency maintenance dredging spoil material to the Approved Dredge Spoil Disposal Area.

14 This permit allows for the dumping of up to a maximum of 356,553 cubic metres of maintenance dredge spoil material to the Approved Dredge Spoil Disposal Area within 18 months of the commencement date of the first dredge campaign authorised under this permit.

15 Except in accordance with condition 14, the Permit Holder must not dispose of more than 200,000 cubic metres in total of maintenance dredge spoil material to the Approved Dredge Spoil Disposal Area in any one calendar year.

16 The Permit Holder must not carry out any of the works permitted herein for seven (7) days before and after all predicted mass coral spawning events for the region. The relevant dates for each campaign must be approved in writing by the Managing Agency prior to works commencing.

17 The Permit Holder must not carry out any works within the Marine Park unless the Managing Agency has advised the Permit Holder in writing that the relevant components of the Sampling and Analysis Plan and Sampling and Analysis Plan Report have been approved and the sediments are demonstrated to be suitable for unconfined ocean disposal in accordance with the National Assessment Guidelines for Dredging, unless otherwise advised in writing by the Managing Agency.

18 The Permit Holder must not carry out any of the works permitted herein unless the Permit Holder has provided a bathymetric survey to the Managing Agency, conducted immediately prior to the commencement of works, of the Approved Dredge Area and the Approved Dredge Spoil Disposal Area to the Managing Agency.

19 A bathymetric survey of the Approved Dredge Area and the Approved Dredge Spoil Disposal Area must be undertaken by the Permit Holder within one (1) month of the completion of each dredge campaign authorised under this permit.

20 The Permit Holder must provide to the Managing Agency *in-situ* calculations in cubic metres of spoil material dredged from the Approved Dredge Area and disposed at the Approved Dredge Spoil Disposal Area within two (2) months of the completion of each post-dredge campaign bathymetric survey authorised under this permit. The volume calculations must be based on bathymetric surveys undertaken prior to work commencing and following the completion of each dredge campaign.

ENVIRONMENTAL SITE SUPERVISOR CONDITIONS

21 Where the Permit Holder is advised by the Managing Agency that environmental site supervision of works is required, the Permit Holder must:
   (i) provide the 24-hour contact details of an on-site liaison officer whom the Environmental Site Supervisor can contact; and
   (ii) provide the Environmental Site Supervisor with access to the works as and when they require; and
   (iii) Only conduct works in the presence of the Environmental Site Supervisor, unless otherwise advised by the Managing Agency.

22 The Environmental Site Supervisor is authorised to stop, suspend or modify works, which in their opinion have caused or are likely to cause harm.

23 Where the Environmental Site Supervisor has directed the Permit Holder to cease works, the Permit Holder must not recommence works unless authorised by the Environmental Site Supervisor.

24 Where the Environmental Site Supervisor directs the Permit Holder to cease or modify works, the conduct of the Permit Holder when complying with the direction must be in accordance with:
   (i) Any further directions given by the Environmental Site Supervisor; or
   (ii) an approved Management Plan.

25 The Permit Holder must ensure that its officers, employees, contractors, agents and/or nominees comply with any direction given by the Environmental Site Supervisor for the purpose of ensuring compliance with this permit, and any direction considered necessary by the Environmental Site Supervisor for the conservation, protection and preservation of the Marine Park and property in the Marine Park.

MITIGATION MEASURES FOR PROTECTION OF MARINE SPECIES

26 Before commencing each dredging or dumping run, the Permit Holder must check, using binoculars from the dredge vessel, for Marine Mammals and/or turtles within the Monitoring Zone.

27 If any Marine Mammals and/or turtles are sighted in the Monitoring Zone pursuant to Condition 27, works must not commence in the Monitoring Zone until 20 minutes after the last Marine Mammal and/or turtle is observed to leave the Monitoring Zone or the vessel is to move to another area of the Approved Dredge Area or Approved Dredge Spoil Disposal Area to maintain a minimum distance of 300 metres between the vessel and any of the Marine Mammals and/or turtles identified in condition 27.

ENVIRONMENTAL MONITORING AND MANAGEMENT PLAN CONDITIONS

28 The Permit Holder must implement the following Management Plans (Plans) in the manner stated in the Plan:
   (i) a Long Term Monitoring and Management Plan that addresses the management of dredging at the Port of Hay Point over a 25 year period;
   (ii) Environmental Thresholds Report;
   (iii) Maintenance Dredging Environmental Management Plan; and
   (iv) Marine Environmental Monitoring Plan.

29 If Managing Agency believes that it is necessary or desirable for the better protection of the environment to do so, the Managing Agency may request the Permit Holder to make specified revisions to any of the Plans as specified in Condition 28 and submit the revised Plan for the Managing Agency's approval. If the Managing Agency approves a revised Plan pursuant to this condition, the Permit Holder must implement that Plan in place of the original Plan specified at Condition 28.

30 The Permit Holder must review and update the Plans required under conditions 28(ii-iv) prior to each dredge campaign. Any modifications to the Plans must be approved in writing by the Managing Agency prior to implementation.

31 The Permit Holder must, within 30 days of receiving approval of each Plan from the Managing Agency, make available on the Permit Holder's website, the approved Plans.

32 The Permit Holder must, prior to 31 January each year, provide to the Managing Agency an annual report on the results of all field work, monitoring results and management requirements that form part of the approved Plans, as specified at condition 28.

33 The Permit Holder must, prior to 1 March each year make available on the Permit Holder's website all monitoring reports in accordance with the approved Marine Environmental Monitoring Plan specified in Condition 28(iv).

34 Within six (6) months of completion of each dredge campaign permitted herein, the Permit Holder must publish a report on their website addressing compliance with the requirements of the Environmental Thresholds Report, Maintenance Dredging Environmental Management Plan and the Marine Environmental Monitoring Plan, as verified by an independent audit. That audit report must include but not be limited to the following:
   (i) deviations from the Environmental Thresholds Report; and
   (ii) identification of any changes that would be required to the Maintenance Dredging Environmental Management Plan, the Marine Environmental Monitoring Plan or the Environmental Thresholds Report before the next dredge campaign.

35 The Managing Agency must approve the auditor in writing prior to commencement of each independent audit referred to in condition 34.

36 The Permit Holder must ensure that all notifications, plans and reports that require approval under this permit are submitted to the Managing Agency no less than 40 business days before the relevant works are proposed to commence.

INTERPRETATION AND DEFINITIONS

INTERPRETATION

This permit extends to all employees of the Permit Holder, or other persons, who are acting on behalf of, or at the direction of, the Permit Holder for the purposes specified in this permit.

This permit is not intended to extinguish any native title.

A law shall be taken to be a law in force in the State of Queensland notwithstanding that it applies to only part of the State.

A word or phrase in this permit has the same meaning as the word or phrase has in the *Great Barrier Reef Marine Park Act 1975*, the *Great Barrier Reef Marine Park Regulations 1983* (Cth), Zoning Plans or Plans of Management, unless the contrary intention appears.

A note or heading may be used to give assistance in interpreting conditions in case of ambiguity.

A reference to a date includes that date.

DEFINITIONS

'Approved Dredge Area' is within the area bound by the following coordinates (GDA94 datum):

SITE ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
DP1	-21.24315	149.42253
DP2	-21.24576	149.42328
DP3	-21.25864	149.36115
DP4	-21.26125	149.3619
DP5	-21.2648	149.333
DP6	-21.26916	149.33425
APRN6	-21.26597	149.32835
APRN8	-21.27033	149.3296

'Approved Dredge Spoil Disposal Area' is defined by an area bounded the following coordinates (GDA94 datum):

SITE ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
MR1	-21.21982	149.30192
MR2	-21.20192	149.33486
MR3	-21.16552	149.3343
MR4	-21.19451	149.28061

'contingency maintenance dredging' means additional dredging other than regular maintenance dredging required to maintain navigable depths as a result of severe weather events.

'Dredge Campaign' means a single event (consecutive days or weeks, excluding stand down or stop works days) encompassing the extraction, transportation and dumping of dredge spoil material to maintain navigable depths.

'Dumping Activities' means: all activities associated with the dumping permitted under this permit, including:
(a) the loading and carriage of dredged spoil material for the purpose of dumping within the Marine Park; and
(b) the dumping of the spoil material at the Approved Dredge Spoil Disposal Area.

'environment' includes:
(a) ecosystems and their constituent parts;
(b) natural and physical resources; and
(c) the qualities and characteristics of locations, places and areas, that contribute to their:
  (i) biodiversity and ecological integrity; or
  (ii) intrinsic or attributed aesthetic, cultural, mitigation measures for protection of marine species heritage, ecological, economic, recreational, social, scientific value or interest or amenity.

'Environmental Site Supervisor' means the person from time to time nominated in writing by the Managing Agency to the Permit Holder.

'harm' includes any direct or indirect alteration to the environment that has the effect of degrading the environment and, without limiting the generality of the foregoing, includes any act or omission that results in pollution of the Marine Park.

'harm' to the environment is material if:
(a) it involves actual or potential harm to the health or safety the environment that is not trivial and any act or omission that results in the pollution of the Marine Park.
(b) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations). Loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment, that is not trivial or otherwise not authorised by this permit.

'incident' means an event involving actual or potential harm to the ecosystem, including but not limited to:
(a) coral damage; or
(b) injury or death to any marine mammals and/or turtles; or
(c) a cyclone; or
(d) any shipping event that requires notification to a relevant authority under the Queensland Marine Act 1958 or the Navigation Act 2012; or
(e) any aircraft event that requires notification to the relevant Authority under the Civil Aviation Act 1988; or
(f) any discharge of untreated sewage effluent; or
(g) any discharge of hazardous chemicals, fuel or biotoxic products.

'Managing Agency' means the Great Barrier Reef Marine Park Authority, a member of the staff of that Authority or a person referred to in Section 48A of the Great Barrier Reef Marine Park Act 1975 (Cth) performing functions or exercising powers under that Act in accordance with an agreement referred to in that section.

'Management Plans' means documents development by the Permit Holder and submitted with the permit application dated 8 December 2017, and any subsequent versions as approved by the Managing Agency.

'Marine Mammals' mean: dolphins, cetaceans and dugongs.

'Marine Park' means: the Great Barrier Reef Marine Park established by the *Great Barrier Reef Marine Park Act 1975* (Cth).

'Marine Park regulations' means the *Great Barrier Reef Marine Park Regulations 1983* (Cth).

'Monitoring Zone' means the area within 300 metres of the vessel in all directions at any point on the dredging or dumping run.

'National Assessment Guidelines for Dredging' as published by Commonwealth of Australia (2009) or subsequent published revisions.

'operations' means and includes all activities, works and all plant and materials comprising or used in connection with activities authorised by the permit and the use (authorised or unauthorised) of the Marine Park in connection with the permit other than installation.

'permit' means the permissions the subject of Permit Number G19/40185.1 granted to the Permit Holder pursuant to the *Great Barrier Reef Marine Park Regulations 1983* (Cth).

'Permit Holder' means NORTH QUEENSLAND BULK PORTS CORPORATION LIMITED (ACN 136 880 218).

'reasonable steps' - In determining whether all reasonable steps have been taken, regard shall be given to the following:
(a) the nature of the harm to the environment that might or will result from the person's use or entry;
(b) the risk of harm from the person's use or entry;
(c) the sensitivity of the environment that might or will be affected by the person's use or entry;
(d) if the person is using or entering a zone - any objectives specified for the zone in its zoning plan;
(e) the practicalities, including cost, of steps that will prevent or minimise the harm;

(f) whether or not the person's use or entry complies with the laws applying in the Marine Park in relation to the environment or natural resources;
(g) whether or not the person's use or entry complies with any relevant code of practice, standard or guideline; and
(h) whether or not the person's use or entry is in accordance with any conditions of a permission granted under the regulations for the purposes of a zoning plan or a provision of the Great Barrier Reef Marine Park Act 1975 (Cth).

'Sample and Analysis Plan' means a plan detailing the required sampling and analyses of sediments proposed to be dredged to determine the suitability of the dredged sediment for unconfined ocean disposal in accordance with the *National Assessment Guidelines for Dredging 2009.*

'Sample and Analysis Plan Report' means a report detailing the methodology and results of the sampling and analysis undertaken to determine the suitability of the proposed dredge sediment for unconfined ocean disposal in accordance with the *National Assessment Guidelines for Dredging 2009.*

'works' means all activities associated with installation, construction, maintenance and/or removal of all plant and materials comprising or used in connection with the permitted activities (including dredging, installations, structures, facilities, moorings, vessels or aircraft of any kind associated directly or indirectly with the permission) and the use (authorised or unauthorised) of the Marine Park in connection with the permit.

'Zoning Plan' means: in relation to the Great Barrier Reef Marine Park, the *Great Barrier Reef Marine Park Zoning Plan 2003* (Cth).

APPENDIX D:

SEA DUMPING PERMIT

ENVIRONMENT PROTECTION (SEA DUMPING) ACT 1981

SEA DUMPING PERMIT 19/01

for

North Queensland Bulk Ports Corporation Limited (ACN 136 880 218)

I, SIMON BANKS, a delegate of the Minister for the Environment acting under Section 19 of the *Environment Protection (Sea Dumping) Act 1981*, hereby grant a sea dumping permit to North Queensland Bulk Ports Corporation Limited, Mackay, Queensland, to load for the purposes of dumping, and to dump up to 956,553 cubic metres of seabed material, derived from maintenance dredging of the Port of Hay Point, commencing on the date of signature of this permit until 31 January 2029, subject to conditions which are specified in Appendices 1 and 2.

DATE….....23.....day of….....January.....2019

…….

Simon Banks
Delegate of the Minister

This permit comprises seven (7) pages, including Appendices 1 and 2.

Appendix 1

CONDITIONS FOR DUMPING AT SEA OF SEABED MATERIAL DERIVED FROM MAINTENANCE DREDGING OF THE PORT OF HAY POINT, QUEENSLAND

Definitions

In this permit:

"the Act"	means the *Environment Protection (Sea Dumping) Act 1981*;
"contingency maintenance dredging"	means additional dredging other than regular maintenance dredging required to maintain navigable depths as a result of unexpected severe weather events;
"dredge campaign"	means a single event (consecutive days or weeks, excluding stand down or stop works days) encompassing the extraction, transportation and disposal of dredge material to maintain navigable depths;
"Application"	means the Application for a permit under the *Environment Protection (Sea Dumping) Act 1981* submitted by North Queensland Bulk Ports Corporation Limited on 25 October 2018;
"Marine mammals"	means dolphins, cetaceans and dugongs;
"Department"	means the Department of the Environment and Energy;
"Dumping activities"	means all activities associated with the dumping permitted under this permit, including: (i) the loading and carriage of dredged material for the purpose of dumping at sea; and (ii) the dumping of the material at the prescribed approved dredge spoil disposal area;
National Assessment Guidelines for Dredging	as published by Commonwealth of Australia (2009) or subsequent published revisions
"Environmental incident"	means any unplanned event which has the potential to, or does impact, on the environment. This does not include any permitted activities that are undertaken in accordance with this permit;
"Environmental risk"	means any risk, additional to those risks previously identified in the Application, which has the potential to, or does impact, on the environment;
"GPS"	Global Positioning System;
"Management Plans"	means documents development by North Queensland Bulk Ports Corporation Limited and submitted with the permit application dated 25 October 2018 and any subsequent versions as approved by the Managing Agency.

"Managing Agency"	means: a) the Great Barrier Reef Marine Park Authority; and b) a member of the staff of that Authority or a person referred to in s.43 of the *Great Barrier Reef Marine Park Act 1975* performing functions or exercising powers under that Act, in accordance with an agreement referred to in that section;
"Marine Park"	means the Great Barrier Reef Marine Park established by the *Great Barrier Reef Marine Park Act 1975*;
"the Minister"	means the Australian Government Minister, who administers the *Environment Protection (Sea Dumping) Act 1981*;
"Monitoring zone"	means the area within 300 metres of the vessel in all directions at any point on the dredging or dumping run;
"Vessel"	means any vessel or vessels used for or in connection with the loading and/or dumping activities.

1. Except so far as the contrary intention appears, terms used in these conditions to this permit have the same meaning as such terms in **the Act**.

Material to be dumped

2. North Queensland Bulk Ports Corporation Limited must ensure only up to 756,553 cubic metres in total of seabed material, derived from **maintenance dredging** of the Port of Hay Point is dumped at the Approved Dredge Spoil Disposal Area, specified at Condition 7.

3. North Queensland Bulk Ports Corporation Limited must ensure only up to 200,000 cubic metres in total of seabed material, derived from **contingency maintenance dredging** of the Port of Hay Point is dumped at the Approved Dredge Spoil Disposal Area, specified at Condition 7.

4. North Queensland Bulk Ports Corporation Limited must not dispose of more than 356,553 cubic metres of maintenance dredge material, derived from **maintenance dredging** at Port of Hay Point, to the Approved Dredge Spoil Disposal Area, specified at Condition 7, within 18 months of the commencement of the first **dredge campaign** authorised under this permit.

5. Except in accordance with Condition 4, North Queensland Bulk Ports Corporation Limited must not dispose of more than 200,000 cubic metres of maintenance dredge spoil material to the Approved Dredge Spoil Disposal Area, specified at Condition 7 in any one calendar year.

6. North Queensland Bulk Ports Corporation Limited will only undertake **dumping activities** of sediments after the Managing Agency has advised the Permittee in writing that the relevant components of the Sampling and Analysis Plan and Sampling and Analysis Plan Report have been approved and the sediments are demonstrated to be suitable for unconfined ocean disposal in accordance with the **National Assessment Guidelines for Dredging**.

Approved Dredge Spoil Disposal Area

7. North Queensland Bulk Ports Corporation Limited must only dispose maintenance dredge material within the area bound by the following coordinates (GDA94 datum):

SITE ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
MR1	-21.21982	149.30192
MR2	-21.20192	149.33486
MR3	-21.16552	149.3343
MR4	-21.19451	149.28061

8. North Queensland Bulk Ports Corporation Limited must ensure that dredged material is disposed so that the material is distributed generally in an even manner over the Approved Dredge Spoil Disposal Area specified in Condition 7.

9. North Queensland Bulk Ports Corporation Limited must establish by **GPS** that, prior to dumping, the **vessel** is within the Approved Dredge Spoil Disposal Area specified in Condition 7.

Environmental Monitoring and Management Plans for Dredging

10. North Queensland Bulk Ports Corporation Limited must implement the following **Management Plans** (Plans) in the manner stated in the Plan:

    a. A Long Term Monitoring and Management Plan that addresses the management of dredging at the Port of Hay Point over a 25 year period;

    b. Environmental Thresholds Report;

    c. Maintenance Dredging Environmental Management Plan; and

    d. Marine Environmental Monitoring Plan.

11. North Queensland Bulk Ports Corporation Limited must review and update the Plans required under conditions 10(b-d) prior to each dredge campaign. Any modifications to the Plans must be approved in writing by the **Managing Agency** prior to implementation.

12. The approved Plans must be made available for the term of this permit (electronically) on North Queensland Bulk Ports Corporation Limited website within 30 days of being approved by the **Managing Agency**.

13. If **the Minister** believes that it is necessary or desirable for the better protection of the environment to do so, **the Minister** may request North Queensland Bulk Ports Corporation Limited to make specified revisions to any of the Plans as specified in Condition 10 and submit the revised Plan for **the Minister's** approval. If **the Minister** approves a revised Plan pursuant to this condition, North Queensland Bulk Ports Corporation Limited must implement that Plan in place of the original Plan specified at Condition 10.

14. North Queensland Bulk Ports Corporation Limited must ensure that all **dumping activities** are undertaken in accordance with this permit and the Plans as approved by the **Managing Agency** from time to time.

Access for Observers

15. At least two nominees of the **Managing Agency** are to be afforded access to witness, inspect, examine or audit any part of the operations, including any dumping or monitoring activity, the vessel or any other equipment, or any documented records, and are to be provided with any necessary assistance in carrying out their duties.

Mitigation Measures for Protection of Marine Species

16. Before beginning dredging and **dumping activities**, North Queensland Bulk Ports Corporation Limited must check, using binoculars from the vessel, for **marine mammals** and/or turtles within the **monitoring zone**.

17. If any **marine mammals** and/or turtles are sighted in the **monitoring zone** pursuant to Condition 16, **dumping activities** must not commence in the monitoring zone until 20 minutes after the last marine mammal and/or turtle is observed to leave the monitoring zone or the vessel is to move to another area of the Approved Dredge Spoil Disposal Area to maintain a minimum distance of 300 metres between the vessel and any for **marine mammals** and/or turtles identified in Condition 16.

Environmental Risk and Incidents

18. If, at any time during the course of the dumping activities, an **environmental incident** occurs or **environmental risk** is identified, all measures must be taken immediately by North Queensland Bulk Ports Corporation Limited to mitigate the environmental risk or the environmental impact. The environmental risk or environmental impact is to be reported as soon as practicable and followed by a written report within three days, to the **Managing Agency**, with details of the environmental incident or environmental risk, the measures taken, the success of those measures in addressing the environmental incident or environmental risk and any additional measures proposed to be taken.

19. North Queensland Bulk Ports Corporation Limited must ensure that all persons engaged in the **dumping activities** under this permit, including the owner(s) and/or person(s) in charge of the vessel, comply with this permit and the requirements of the Act.

Monitoring and reporting

20. North Queensland Bulk Ports Corporation Limited must keep records comprising either weekly plotting sheets or a certified extract of the ship's log which detail:
    a. the times and dates of when each dumping run is commenced and finished;
    b. the position (as determined by GPS) of the vessel at the beginning and end of each dumping run, with the inclusion of the path of each dumping run; and
    c. the volume of dredge material (in-situ cubic metres) dumped and quantity in dry tonnes for the specified operational period and a comparison of these quantities with the total amount permitted under the permit on a daily basis.

    These records are to be retained by North Queensland Bulk Ports Corporation Limited for verification and audit purposes.

21. Prior to the commencement of each **dredge campaign** and **dumping activities** under this permit, North Queensland Bulk Ports Corporation Limited must provide a bathymetric survey of the spoil ground, conducted immediately prior to the commencement of works, to the **Managing Agency**.

22. A bathymetric survey of the Approved Dredge Spoil Disposal Area defined in Condition 7 must be undertaken by North Queensland Bulk Ports Corporation Limited within one (1) month of the completion of each dredge campaign dumping activities authorised under this permit.

23. Within two (2) months of a bathymetric survey being undertaken as specified in Condition 22, North Queensland Bulk Ports Corporation Limited must provide a digital copy of each of the bathymetric surveys to the Australian Hydrographic Office, Locked Bag 8801, Wollongong, NSW 2500.

24. North Queensland Bulk Ports Corporation Limited must provide a report on the bathymetry to the Managing Agency within two (2) months of the bathymetric survey being undertaken. The report must include a chart showing the change in sea floor bathymetry as a result of dumping and include written commentary on the volumes of dumped material in cubic metres that appear to have been retained within the Approved Dredge Spoil Disposal Area.

25. The North Queensland Bulk Ports Corporation Limited must, prior to 31 January each year, provide an annual report on the results of all field work, monitoring results and management requirements that form part of the Plans, as approved under Condition 10.

26. North Queensland Bulk Ports Corporation Limited must, prior to 1 March each year make available on the Permit Holder's website all monitoring reports in accordance with the approved Marine Environmental Monitoring Plan.

27. Within six (6) months of completion of each dredge campaign permitted herein, the Permit Holder must publish a report on their website addressing compliance with the requirements of the Environmental Thresholds Report, Maintenance Dredging Environmental Management Plan and the Marine Environmental Monitoring Plan, as verified by an independent audit. That audit report must include but not be limited to the following:

    a. deviations from the Environmental Thresholds Report; and

    b. identification of any changes that would be required to the Maintenance Dredging Environmental Management Plan, the Marine Environmental Monitoring Plan or the Environmental Thresholds Report before the next dredge campaign.

28. The Managing Agency must approve the auditor in writing prior to commencement of each independent audit referred to in Condition 27.

29. To facilitate annual reporting to the International Maritime Organization, North Queensland Bulk Ports Corporation Limited must report to the **Department** and the **Managing Agency** by 31 January each year, including on the day of the expiry of the permit or completion of all dredging under this permit, information at Appendix 2 to this permit, or in a format as approved by the Department from time to time.

30. The Permit Holder must ensure that all notifications, plans and reports that require approval under this permit are submitted to the **Managing Agency** no less than 40 business days before the relevant works are proposed to commence.

Appendix 2: Sea Dumping Permit International Reporting Requirements

Please fill in this form and return it by **email only** to the Department of the Environment and Energy and the Great Barrier Reef Marine Park Authority by 31 January each year. This information is required for Australia's International reporting obligations under the London Protocol. Email: portsandmarine@environment.gov.au and assessments@gbrmpa.gov.au.

Permit Holder: North Queensland Bulk Ports Corporation Limited

Address: Level 1, 324 Queen Street, Brisbane, Queensland, 4000
Submitted by:
Phone:
Email: Date:

Sea Dumping Permit number: SD19/01

Permit start date: 23 January 2019 **Permit end date**: 31 January 2029

Approved Dredge Spoil Disposal Area:

Geographical position

SITE ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
MR1	-21.21982	149.30192
MR2	-21.20192	149.33486
MR3	-21.16552	149.3343
MR4	-21.19451	149.28061

Permit quantity: 956,553m^3

Quantity dumped (cubic metres/number) in the preceding calendar year:

Description of material Please tick relevant box or boxes

Capital Dredged Material☐, Maintenance Dredged Material☐, Fish Waste☐,

Vessels☐, Platforms☐, Sewage Sludge☐, Organic Material of Natural Origin☐,

Bulky Waste☐, CO_2☐, Inert-Inorganic Geological Material☐,

Comments:

APPENDIX E:

NOTIFICATIONS AND OBLIGATIONS SCHEDULE

PRE-DREDGING NOTIFICATIONS AND OBLIGATIONS					
Permit	**Condition no.**	**Activity**	**Description**	**Dredging Phase**	**Responsible Person**
SDP19/01	6	Sampling Analysis Plan	Managing Agency must advise in writing of approved **Sampling and Analysis Plan** and Sampling and Analysis Plan Report have been **approved** and the sediments are demonstrated to be suitable for unconfined ocean disposal	Pre-dredging	NQBP Environment
SDP19/01	10,11	Plans	Review and update LTMDMP, Environmental Thresholds Report, MDEMP, MEMP	Pre-dredging	NQBP Environment
SDP19/01	12	Website	Within **30 days** of receiving approval of each **Plan** from the Managing Agency, make available on the Permit Holder's website	Pre-dredging	NQBP Environment
SDP19/01	21	Bathymetric Surveys	**Bathymetric Survey** of **Spoil Ground** provided to Managing Authroity **prior to commencement**	Pre-dredging	NQBP Engineering
SDP19/01	25	Reporting	**Prior to 31 January each year**, provide an **annual report** on the results of all field work, monitoring results and management requirements that form part of the Plans	Pre-dredging	NQBP Environment
SDP19/01	26	Reporting	**Prior to 1 March each year** make available on NQBP's **website** all **monitoring reports**	Pre-dredging	NQBP Environment
SDP19/01	28	Auditing	**Independent auditor** must be **approved** by **Managing Agency in writing** prior to commencement of audit	Pre-dredging	NQBP Environment
SDP19/01	30	Plans	All required **plans** and **reports** that **require approval** submiteed to GBRMPA **40 days prior** to commencement	Pre-dredging	NQBP Environment
MPP 40185.1	3	Contractors	**Prestart meeting** - NQBP must inform its officers, employees, contractors, agents and/or nominees in the program of relevant restrictions applying under any zoning plans, plans of management, Marine Park regulations and this permit.	Pre-dredging	NQBP Engineering/ NQBP Environment
MPP 40185.1	4	Deed	Execute, seal and deliver signed **Deed of Agreement** to GBRMPA (30 days after permit issue or before dredging -which ever is sooner)	Pre-dredging	NQBP Environment
MPP 40185.1	6	Insurance	NQBP to provide GBRMPA copies of certificates of currency or the **insurance policy** documents required under the Deed of Agreement within 20 business days of being called upon to do so.	Pre-dredging	NQBP Environment
MPP 40185.1	17	Sampling Analysis Plan	Managing Agency must advise in writing of approved **Sampling and Analysis Plan** and Sampling and Analysis Plan Report have been **approved** and the sediments are demonstrated to be suitable for unconfined ocean disposal	Pre-dredging	NQBP Environment
MPP 40185.1	18	Reporting	Provide a **bathymetric survey** to the Managing Agency, conducted **immediately prior to the commencement** of works, of the **Approved Dredge Area** and the **Approved Dredge Spoil Disposal Area**	Pre-dredging	NQBP Engineering
MPP 40185.1	28	Monitoring	**Implement**: * Long Term Monitoring and Management Plan * Environmental Thresholds Report * Maintenance Dredging Environmental Management Plan * Marine Environmental Monitoring Plan	Pre-dredging	NQBP Environment
MPP 40185.1	30	Plans	**Review plans** prior to each dredge campaign. Any modifications to the Plans must be approved in writing by the Managing Agency prior to implementation.	Pre-dredging	NQBP Environment
MPP 40185.1	31	Plans	Within **30 days** of receiving approval of each **Plan** from the Managing Agency, make available on the Permit Holder's website	Pre-dredging	NQBP Environment
MPP 40185.1	36	Approval	All **notifications, plans and reports** that **require approval** under this permit are submitted to the Managing Agency no less than **40 business days before** commencement	Pre-dredging	NQBP Environment
ERA	G1	Notification	**Notify** administering authority in writing at least **10 days prior** to commencement	Pre-dredging	NQBP Environment
ERA	G10	Plans	**IEMS** to contain **relevant information**	Pre-dredging	NQBP Environment
ERA	G12	Plans	Ammended **EIMS to adminstering authoring 28 days prior** to commencement	Pre-dredging	NQBP Environment
ERA	G13	Plans	The **IEMS** must be **reviewed every 5 years** from commencement of the ERA and **supplied** to the **administering authority for review.**	Pre-dredging	NQBP Environment
ERA	G29	Monitoring	Conducted by **experienced of qualified** persons	Pre-dredging	Vision Environment
ERA	W8	Dredger	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 the commencement** of dredging activities	Pre-dredging	PoBL
IPCC	AM 3	Notification	Written **notification** of the date of commencement to the District Officer **QBFP** and **Manager DAF** within **15 days prior** to the commencement	Pre-dredging	NQBP Environment

PRE-DREDGING NOTIFICATIONS AND OBLIGATIONS					
Permit	**Condition no.**	**Activity**	**Description**	**Dredging Phase**	**Responsible Person**
IPCC	AM 5	Monitoring	Develop protocols to minimise the risk of introduction of marine pests and pre-and post dredging sampling	Pre-dredging	NQBP Environment
IPCC	A1	Notification	The **administering authority** must be advised in writing of the date of commencement at least **ten days prior** to that date.	Pre-dredging	NQBP Environment
IPCC	A3,A4	Approval	Submit **LMDMP** to administering authority **prior to commencement** for **approval in writing**	Pre-dredging	NQBP Environment
IPCC	A5	Plans	**Amendments** to approved **LMDMP** provided to administering authority **28 days prior** to commencement	Pre-dredging	NQBP Environment
IPCC	A18	Dredger	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 the commencement** of dredging activities	Pre-dredging	PoBL
IPCC	A21	Monitoring	**Coral monitoring** must be undertaken as per **LMDMP**	Pre-dredging	NQBP Environment
IPCC	A27a	Reporting	**Prior to the commencement** , a report shall be provided to the **administering authority** containing information on the **rate of siltation** within areas to be dredged, the **quantity of material** to be removed, and the **extent of migration of dredge spoil** within and outside of the DMPA	Pre-dredging	NQBP Environment
IPCC	A29	Bathymetric Surveys	**Hydrographic surveys** of dredge areas and DMPA **prior to commencement**	Pre-dredging	NQBP Engineering
IPCC	A30	Bathymetric Surveys	**Hydrographic surveys** to carried out in accordance with **specific requirements** (see condition for details)	Pre-dredging	NQBP Engineering
DEMP	s1.2	EMP	EMP will be reviewed and updated prior to each maintenance dredging operation at the Port of Hay Point.	Pre-dredging	NQBP Environment
DEMP	s2	TACC	The most current Notifications (Reporting Requirements) and Obligations schedule will be provided to respective regulators and the TACC prior to maintenance dredging occurring in any given year.	Pre-dredging	NQBP Environment
DEMP	s3.3	Training	Personnel who have formal responsibilities under this plan will be briefed on the requirements of this EMP. Records of training and inductions will be maintained.	Pre-dredging	NQBP Environment

DURING DREDGING NOTIFICATIONS AND OBLIGATIONS					
Permit	**Condition no.**	**Activity**	**Description**	**Dredging Phase**	**Responsible Person**
SDP19/01	2,3,4,5,	Volumes	**Permitted volume** 356,553m^3. Regular **cumulative total** dredged material relocated to DMPA (m3) to ensure within permitted volume	During dredging	NQBP Engineering
SDP19/01	7,8,9	Dredge Plots	**Daily plots** of TSHD Brisbane track **in DMPA** to ensure footprint and even spread	During dredging	PoBL
SDP19/01	16	Monitoring	Before beginning **dredging** and **disposal**, check with binoculars for **marine mammals** or **turtles** within **300m**	During dredging	PoBL
SDP19/01	17	Monitoring	If **marine mammals** or **turtles** are within **300m**, wait **20min before commencing** or **move** to **maintain 300m** distance	During dredging	PoBL
SDP19/01	18	Incidents	If, at any time during the course of the **disposal** activities, an environmental **incident** occurs or environmental **risk** is identified, all measures must be taken **immediately** to **mitigate** the environmental risk or the environmental impact.	During dredging	PoBL
SDP19/01	18	Incidents	The environmental risk or environmental impact is to be **reported** as soon as practicable and followed by a written report **within three days**, to the **Managing Agency**, with details of the environmental incident or environmental risk, the measures taken, the success of those measures in addressing the environmental incident or environmental risk and any additional measures proposed to be taken.	During dredging	NQBP Environment
SDP19/01	20	Dredge Plots	**weekly plotting sheets** or a c**ertified extract of the ship's log** must be kept, detailing * the **times and dates** of when each dumping run is commenced and finished * the **position** (as determined by GPS) of the vessel at the beginning and end of each dumping run, with the inclusion of the path of each dumping run * the **volume** of dredge material (**in-situ cubic metres**) dumped and quantity in dry tonnes for the specified operational period and a comparison of these quantities with the total amount permitted under the permit on a daily basis	During dredging	PoBL
MPP 40185.1	2	Plans	Copy of **permit** and any relevant documents including any approved **Management Plans** are held **at** the **site** or sites of operation.	During dredging	PoBL
MPP 40185.1	8	Incidents	**Notification** to **GBRMPA** within **24 hours** of becoming aware on **incident**	During dredging	NQBP Environment
MPP 40185.1	9	Incidents	**Incident Report** to **GBRMPA** withing **3 days** of becoming aware of **incident**	During dredging	NQBP Environment
MPP 40185.1	16	Windows	**No works** for seven (7) days before and after predicted mass **coral spawning** events for the region	During dredging	NQBP Environment
MPP 40185.1	21	Site Supervisor	Where a **GBRMPA environmental site supervisor** of works is required, * provide 24r contact of on-site liaison officer * provide access as required * Only conduct works in presence of site supervisor, unless otherwise adviosed by Managing Agency	During dredging	NQBP Environment
MPP 40185.1	22-25	Site Supervisor	**Authorised** to stop, suspend or modify works, which in their opinion have caused or are likely to cause harm.	During dredging	NQBP Environment
MPP 40185.1	26	Monitoring	Before beginning **dredging** and **disposal**, check with binoculars for **marine mammals** or **turtles** within **300m**	During dredging	PoBL
MPP 40185.1	27	Monitoring	If **marine mammals** or **turtles** are within **300m**, wait **20min before commencing** or **move** to **maintain 300m** distance	During dredging	PoBL
ERA	G2	Footprint	**Approved** dredging **footprint** as defined in drawing **NQBP2013-018b**, disposal only in approved **DMPA**	During dredging	PoBL
ERA	G3	Dredger	TSHD to have **anti-turbidity control valve**, system for determinging **solid to water ratio or density**, **electronic positioning** and **depth control system** and **turtle deflector** devices	During dredging	PoBL
ERA	G4,G5	Auditing	**Independent auditor** to audit conditions of EA, IEMS, and GED	During dredging	NQBP Environment
ERA	G9	Plans	**IEMS** must be **implemented** (or approved Dredge Management Plan)	During dredging	NQBP Environment
ERA	G17	Plans	A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activity.	During dredging	PoBL
ERA	G20	Incidents	If the registered operator of an ERA to which this approval relates becomes aware of **material environmental harm** or **serious environmental harm** as a result of carrying out the environmentally relevant activity (ERA) then the said activities must **cease immediately**.	During dredging	PoBL
ERA	G21	Incidents	Notify **Polution Hotline** (1300 130 372) of release of contaminants ot in accordance with EA	During dredging	NQBP Environment
ERA	G22	Incidents	Written advice with specified details to be provided to the administering authority **within fourteen (14) days** following any pollution **notification**	During dredging	NQBP Environment
ERA	G24	Incidents	Appropriate **spill kits onboard TSHD** to manage waste and chemical spills	During dredging	PoBL
ERA	G25	Auditing	All **relevant personnel** operating under this approval must be **trained** in the use of the spill kit(s).	During dredging	PoBL
ERA	G26	Auditing	Monitoring equipment to be **calibrated** and maintained	During dredging	Vision Environment
ERA	G27	Auditing	**All persons** engaged in the conduct of the activity **trained or experienced** as necessary to **comply** with approval conditions of prevent harm	During dredging	PoBL
ERA	W1	Monitoring	**Coral and water quality monitoring** must be carried out in accordance with the Port of Hay Point Dredging - **Coral and Water Quality Monitoring Plan** (dated **27 August 2007**).	During dredging	NQBP Environment
ERA	W2	Monitoring	**TSS** does not **exceeed 100mg/L** calculated on a 6hr rolling average at **any logger** location	During dredging	NQBP Environment
ERA	W4	Monitoring	If **>100mg/L/6hr** implement **corrective actions** as per **Coral and Water Quality Monitoring Plan (dated 27 August 2007).**	During dredging	NQBP Environment
ERA	W5	Monitoring	If **>100mg/L/6hr notify** administering authority within **24hrs**	During dredging	NQBP Environment
ERA	W6	Bathymetric Surveys	The level of **dredge spoil** within the spoil ground must not exceed a **maximum height of 10 metres** below LAT	During dredging	NQBP Engineering
ERA	W7	Dredger	TSHD to have **turtle deflector device fitted** and **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**	During dredging	NQBP Environment

DURING DREDGING NOTIFICATIONS AND OBLIGATIONS					
Permit	**Condition no.**	**Activity**	**Description**	**Dredging Phase**	**Responsible Person**
ERA	W9	Dredger	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 **150m** of the activities being undertaken	During dredging	PoBL
ERA	W11	Dredger	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.	During dredging	NQBP Environment
ERA	L2	Dredger	**All chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.**	During dredging	PoBL
ERA	WA2	Dredger	All **regulated waste** removed from the site must be removed by a person who holds a current **approval to transport** such waste	During dredging	PoBL
ERA	S1	Incidents	**Record** specific details of **complaints** and provide to administering authority on request	During dredging	NQBP Environment
IPCC	G1	Footprint	In accordance with **drawing NQBP2018-029**	During dredging	PoBL
IPCC	A8	Footprint	as shown in **Figure 1** – Port of Hay Point Maintenance Dredge Areas	During dredging	PoBL
IPCC	A8	Dredger	Material **deposited** in a **mosaic pattern** in accordance with LMDMP	During dredging	PoBL
IPCC	A9	Dredger	The **maximum depth** of the **departure path** and **apron** is to be limited to **15.6 metres** below LAT, including over dredging	During dredging	NQBP Engineering
IPCC	A10	Incidents	If material has been removed from o**utside of the boundaries** specified, or if the batters are steeper than those designated, those areas **may need to be repaired** to the satisfaction of the administering authority	During dredging	NQBP Engineering
IPCC	A11	Dredger	Dredging is to be carried out using a **TSHD only**	During dredging	NQBP Engineering
IPCC	A14	Footprint	**DMPA** defined location Figure 1	During dredging	NQBP Environment
IPCC	A15	Bathymetric Surveys	The level of **dredge spoil** within the spoil ground must not exceed a **maximum height of 10 metres** below LAT	During dredging	NQBP Engineering
IPCC	A16	Dredger	Any material that is **deposited outside** of the boundaries of the proposed **DMPA** may be required to be removed to the satisfaction of the administering authority	During dredging	NQBP Engineering
IPCC	A17	Dredger	TSHD to have **turtle deflector device fitted** and **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**	During dredging	NQBP Environment
IPCC	A19	Dredger	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 **150m** of the activities being undertaken	During dredging	PoBL
IPCC	A20	Incidents	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.	During dredging	NQBP Environment
IPCC	A22	Monitoring	Sediment **plume validation monitoring** must be undertaken over a range of sea state conditions during the f**irst four (4) weeks of commencement** of dredging activities in accordance with methodology defined in **consultation with the administering authority**	During dredging	NQBP Environment
IPCC	A23	Dredger	**Dredge track record**s that are **time stamped** and indicate the **draught** of the dredge are to be retained	During dredging	PoBL
IPCC	A25	Monitoring	If water quality **thresholds** are **exceeded** implement **management measure** as per **LMDMP** to reduce impacts	During dredging	NQBP Environment
IPCC	A26	Monitoring	If **turbidity impact limits** are **exceeded notify** administering authority within **24 hrs**.	During dredging	NQBP Environment
DEMP	s3.1	TACC	During dredging operations the TACC will be advised of any serious incidents or changes resulting from dredging	During dredging	NQBP Environment
DEMP	s3.4	Communication	Communication may include NQBP website, email, media releases and NTM. All complaints will receive a response within 1 business day.	During dredging	NQBP External Affairs
DEMP	s7.1	Auditing	NQBP will undertake internal audits during each dredging program	During dredging	NQBP Environment

POST-DREDGING NOTIFICATIONS AND OBLIGATIONS					
Permit	**Condition no.**	**Activity**	**Description**	**Dredging Phase**	**Responsible Person**
SDP19/01	22	Reporting	**Bathymetric Survey** of **Spoil Ground** provided to Managing Authority within **1 month of completion**	Post-dredging	NQBP Environment
SDP19/01	23	Bathymetric Surveys	**Bathymetric Survey** of **Spoil Ground** provided to Australian Hydrographic Office within **3 month of completion**	Post-dredging	NQBP Environment
SDP19/01	24	Reporting	Provide a **report** on the **bathymetry** to the **Managing Agency** within **2 months** of the bathymetric survey	Post-dredging	NQBP Environment
SDP19/01	27	Reporting	Within **6 months** of completion **publish** report on **website** adressing **compliance** with Environmental Thresholds Report, Maintenance Dredging Environmental Management Plan and the Marine Environmental Monitoring Plan, as verified by an **independent audit**.	Post-dredging	NQBP Environment
SDP19/01	29	Reporting	**IMO** Report to **GBRMPA** and **DoEE**	Post-dredging	NQBP Environment
MPP 40185.1	19	Reporting	**Bathymetric survey** of the **Approved Dredge Area** and the **Approved Dredge Spoil Disposal Area** witin **1 month** of completion of dredging	Post-dredging	NQBP Engineering
MPP 40185.1	20	Reporting	Provide to the Managing Agency **in-situ calculations in cubic metres** of spoil material dredged from the **Approved Dredge Area** and disposed at the **Approved Dredge Spoil Disposal Area** within two (2) months of the completion of each post-dredge campaign bathymetric survey	Post-dredging	NQBP Engineering
MPP 40185.1	32	Reporting	Provide to the Managing Agency an **annual report** on the results of all field work, monitoring results and management requirements by 31 Jan each year	Post-dredging	NQBP Environment
MPP 40185.1	33	Reporting	All **monitoring reports** made available on website by **1 March** each year	Post-dredging	NQBP Environment
MPP 40185.1	34	Reporting	**Compliance report** verified with **independent auditor** with the requirements of the Environmental Thresholds Report, Maintenance Dredging Environmental Management Plan and the Marine Environmental Monitoring Plan (**within 6 mths of completion** of campaign)	Post-dredging	NQBP Environment
MPP 40185.1	35	Auditing	**Independent auditor** to be approved by **Managing Agency**	Post-dredging	NQBP Environment
ERA	G7	Auditing	**Audit report** to administerning authority **within 28 days** of campaign completion	Post-dredging	NQBP Environment
ERA	G8	Bathymetric Surveys	**Survey Report** to administering authority within **6 weeks** of completion	Post-dredging	NQBP Engineering
ERA	G30,G31	Reporting	**Monitoring Report** to include specific details and provided to administering authority **at completion**	Post-dredging	NQBP Environment
ERA	W12	Reporting	A **monitoring report** must be prepared and submitted to the **administering authority** within **3 months of the completion**	Post-dredging	NQBP Environment
IPCC	AM 4	Reporting	Written report which details the completed works to the District Officer **QBFP** and **Manager DAF** within **60 days** of **completion**	Post-dredging	NQBP Environment
IPCC	A24	Reporting	A **correlation report** between modelled data and recorded data, and the implications of any significant variation for biodiversity values within areas affected by the sediment plume, must be submitted to the administering authority within **1 month** of completion of the sediment plume validation monitoring	Post-dredging	NQBP Environment
IPCC	A27a	Reporting	A **monitoring report** must be prepared and submitted to the **administering authority**	Post-dredging	NQBP Environment
IPCC	A28	Reporting	**RPEQ Report** confirming works constructed in accordance with **approved drawings** within **3 months**	Post-dredging	NQBP Environment
IPCC	A29	Bathymetric Surveys	**Hydrographic surveys** of dredge areas and DMPA **within 3 months** of **completion**	Post-dredging	NQBP Engineering
IPCC	A30	Bathymetric Surveys	**Hydrographic surveys** to carried out in accordance with **specific requirements** (see condition for details)	Post-dredging	NQBP Engineering
DEMP	s3.1	TACC	Post the dredging program, the TACC will be provided with the information on the results of dredging operations, environmental monitoring and any instances where adaptive management measures were employed.	Post-dredging	NQBP Environment