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Published on: 15 March 2011

Statement No. 859

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

South West Creek Dredging and Reclamation Project

Proposal: The proposal involves the dredging of not more than 14.2 million cubic metres (Mm³) of material for eight new berth pockets, a turning circle and a link to the existing shipping channel. The proposal also involves the construction of two new land based dredge management areas (DMMAs). Dredged material will be disposed offshore at an existing disposal ground in Commonwealth waters and the new and existing DMMAs, as documented in schedule 1 of this statement.

The proposal is further documented in schedule 1 of this statement.

Proponent: Port Hedland Port Authority

Proponent address: PO Box 2
Port Hedland WA 6271

Assessment number: 1856

Report of the Environmental Protection Authority: Report 1380

The proposal referred to in the above report of the Environmental Protection Authority may be implemented. The implementation of that proposal is subject to the following conditions and procedures:

1 Proposal implementation

1-1 The proponent shall implement the proposal as documented and described in schedule 1 of this statement subject to the conditions and procedures of this statement.

2 Proponent nomination and contact details

- 2-1 The proponent for the time being nominated by the Minister for Environment under sections 38(6) or 38(7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal.
- 2-2 The proponent shall notify the Chief Executive Officer of the Office of the Environmental Protection Authority of any change of the name and address of the proponent for the serving of notices or other correspondence within 30 days of such change.

3 Time limit of authorisation

- 3-1 The authorisation to implement the proposal provided for in this statement shall lapse and be void five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.
- 3-2 The proponent shall provide the Chief Executive Officer of the Office of the Environmental Protection Authority with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.

4 Compliance reporting

- 4-1 The proponent shall prepare and maintain a compliance assessment plan to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority.
- 4-2 The proponent shall submit to the Chief Executive Officer of the Office of the Environmental Protection Authority the compliance assessment plan required by condition 4-1 at least six months prior to the first compliance report required by condition 4-6, or prior to implementation, whichever is sooner.

The compliance assessment plan shall indicate:

- 1 the frequency of compliance reporting;
- 2 the approach and timing of compliance assessments;
- 3 the retention of compliance assessments;
- 4 the method of reporting of potential non-compliances and corrective actions taken;
- 5 the table of contents of compliance assessment reports; and
- 6 public availability of compliance assessment reports.

- 4-3 The proponent shall assess compliance with conditions in accordance with the compliance assessment plan required by condition 4-1.
- 4-4 The proponent shall retain reports of all compliance assessments described in the compliance assessment plan required by condition 4-1 and shall make those reports available when requested by the Chief Executive Officer of the Office of the Environmental Protection Authority.
- 4-5 The proponent shall advise the Chief Executive Officer of the Office of the Environmental Protection Authority of any potential non-compliance within seven days of that non-compliance being known.
- 4-6 The proponent shall submit to the Chief Executive Officer of the Office of the Environmental Protection Authority the first compliance assessment report fifteen months from the date of issue of this Statement addressing the twelve month period from the date of issue of this Statement and then annually from the date of submission of the first compliance assessment report.

The compliance assessment report shall:

- 1 be endorsed by the proponent's Managing Director or a person approved in writing by the Chief Executive Officer of the Office of the Environmental Protection Authority, delegated to sign on the Managing Director's behalf;
- 2 include a statement as to whether the proponent has complied with the conditions;
- 3 identify all potential non-compliances and describe corrective and preventative actions taken;
- 4 be made publicly available in accordance with the approved compliance assessment plan; and
- 5 indicate any proposed changes to the compliance assessment plan required by condition 4-1.

5 Benthic primary producer habitat

Mangroves

- 5-1 The proponent shall ensure that the implementation of the proposal does not cause the permanent loss of mangroves, either through direct or indirect impacts, other than the mangroves located within the zone of permanent loss in Figure 2 in Schedule 1 of this statement.

Note: 'Permanent loss' is defined as the mortality of, or long term serious damage to, mangrove communities.

- 5-2 The total area of mangroves within the zone of permanent loss shall not exceed 40 hectares.
- 5-3 To verify that the requirements of conditions 5-1 and 5-2 have been met, the proponent shall prepare a monitoring plan for mangrove health and sedimentation to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority prior to the commencement of construction.

The monitoring plan shall include:

1. mangrove health and net sedimentation monitoring locations at:
 - a) Potential impact monitoring sites – at locations where mangrove communities are found and which are outside and as close as practicable to the zone of permanent loss in Figure 2. There shall be at least eight potential monitoring sites comprising at least two monitoring sites in South West Creek, two monitoring sites in West Creek, one site at the confluence of South West Creek and West Creek, two sites in South Creek and one site at Stanley Point; and
 - b) Reference monitoring sites – at locations which are similar to each impact monitoring site in all respects including mangrove associations and which do not have the potential to be affected by the implementation of the proposal or any other activities that may affect mangrove health,
 2. the use of permanent relocatable quadrats for repeat measures of mangrove health;
 3. the methodology for baseline and subsequent surveys for mangrove health and net sedimentation at the impact and reference monitoring sites referred to in item 1 above;
 4. the frequency for monitoring mangrove health and net sedimentation;
 5. indicators of mangrove health, and management trigger levels for indicators of mangrove health; and
 6. management trigger level for sedimentation.
- 5-4 The proponent shall implement the monitoring plan required by condition 5-3 prior to the commencement of construction until such time as the Chief Executive Officer of the Office of the Environmental Protection Authority determines that monitoring actions may cease.

- 5-5 Prior to the commencement of dredging, the proponent shall submit a report on the results of baseline surveys of mangrove health and net sedimentation from the potential impact and reference monitoring sites required by conditions 5-3.
- 5-6 In the event that monitoring required by condition 5-4 indicates a trigger level has been reached:
1. the proponent shall report such findings to Chief Executive Officer of the Office of the Environmental Protection Authority within seven days of the trigger level being reached being identified;
 2. the proponent shall provide evidence which allows determination of the circumstance which caused the trigger levels to be reached;
 3. if determined by the Chief Executive Officer of the Office of the Environmental Protection Authority to be project attributable, the proponent shall submit any actions to be taken to address the net increase in sedimentation or decline in mangrove health within 7 days of the determination being made to the Chief Executive Officer of the Office of the Environmental Protection Authority; and
 4. the proponent shall implement actions to address the net increase in sedimentation or decline in mangrove health upon approval of the Chief Executive Officer of the Office of the Environmental Protection Authority and shall continue implementing the approved actions until such time as the Chief Executive Officer of the Office of the Environmental Protection Authority determines that the approved actions may cease.
- 5-7 The proponent shall submit bi-annually, or at a frequency defined to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority, the results of monitoring required by condition 5-4 to the Chief Executive Officer of the Office of the Environmental Protection Authority, until such time as the Chief Executive Officer of the Office of the Environmental Protection Authority determines that reporting may cease.
- 5-8 The proponent shall make the monitoring reports required by condition 5-7 publicly available in a manner approved by the Chief Executive Officer of the Office of the Environmental Protection Authority.
- 5-9 The proponent shall undertake mangrove health surveys and report to the CEO of the Office of the Environmental Protection Authority the total permanent loss of mangrove communities caused by the proposal:
1. 2 months;
 2. 12 months; and
 3. 24 months, or
- at a frequency defined to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority,

following the completion of dredging to verify the requirements of conditions 5-1 and 5-2 have been met.

The reports shall include coordinates and a map confirming the areas of mangrove losses caused by the proposal.

Coral communities

- 5-10 The proponent shall ensure that the implementation of the proposal does not cause the mortality of, or long-term serious damage to, the coral communities in South East Creek and Stingray Creek.
- 5-11 To verify that the requirements of condition 5-10 are met the proponent shall:
1. submit a monitoring plan for water quality and coral health to the requirements of the Chief Executive Officer of the Office of the Environmental Protection Authority. The monitoring plan shall include water quality trigger levels for coral health to apply during dredging;
 2. undertake appropriate management actions should water quality trigger levels be reached during dredging;
 3. undertake baseline surveys of the health of coral communities prior to the commencement of dredging;
 4. undertake coral health surveys following the completion of dredging; and
 5. implement the monitoring plan prior to, during and following the completion of dredging.
- 5-12 The proponent shall submit a report of management actions undertaken if trigger levels are reached as required by condition 5-11-2 with results of the coral health surveys required by conditions 5-11-3 and 5-11-4 to demonstrate that the requirements of condition 5-10 have been met.

Cumulative loss of benthic primary producer habitats

- 5-13 Prior to the commencement of dredging and reclamation, the proponent shall undertake surveys to determine the location and spatial extent of the following intertidal and subtidal benthic primary producer habitats to be impacted by the proposal:
1. cyanobacterial algal mats;
 2. saltmarsh communities;
 3. coral communities;
 4. macroalgae communities; and
 5. sandy (benthic microalgal) habitat.
- 5-14 Within 12 months following the commencement of construction of the proposal, the proponent shall submit a report to the Chief Executive Officer of the Environmental Protection Authority which determines the cumulative loss of each benthic primary producer habitat referred to in condition 5-13 resulting

from human activities and developments in the Port Hedland Industrial Area Local Assessment Unit.

The report shall:

1. estimate the historical distribution and extent of the benthic primary producer habitats referred to in condition 5-13 in the Port Hedland Industrial Area Local Assessment Unit, prior to European impact;
2. estimate the historical and cumulative losses of the benthic primary producer habitats resulting from the human activities and developments in the Port Hedland Industrial Area Local Assessment Unit. Provide best, most probable and worst-case estimates of benthic primary producer habitat loss and assumptions used for each estimate; and
3. determine the cumulative loss of the benthic primary producer habitat loss as a result of the proposal based on the survey required by condition 5-13.

Note: The Port Hedland Industrial Area Local Assessment Unit is shown in Figure 6-10 of the *Environmental Referral Document: South West Creek Dredging and Reclamation, December 2010*.

6 Water quality (dredge material management areas)

- 6-1 The proponent shall ensure that the quality of the return water discharge from the dredge material management areas shown in Figure 1 of schedule 1 does not reach the following water quality management trigger levels in order to meet a 'high' level of ecological protection in South West Creek and South Creek:

Water quality parameter	Management trigger levels (High Protection Level Area)
Turbidity (NTU)	Median > 80 th percentile of baseline or reference site data
Temperature	Median < 20 th or > 80 th percentile of baseline or reference site data
pH	Median < 20 th or > 80 th percentile of baseline or reference site data
Dissolved Oxygen	< 60% saturation
Conductivity	Median < 20 th or > 80 th percentile of baseline or reference site data
Metals (Nickel)	> or = 7 micrograms per litre

- 6-2 To ensure that the requirements of condition 6-1 have been met the proponent shall monitor water quality at the discharge outlets into South West Creek and South Creek as shown in Figure 1, in accordance with a water quality monitoring plan prepared by the proponent prior to the commencement of construction to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority.

The monitoring plan shall include:

1. procedures for daily monitoring of all parameters in condition 6-1 except nickel in South West Creek and South Creek, during discharge activities under a range of tidal conditions;
 2. procedures for fortnightly monitoring of nickel at the discharge outlets during discharge activities; and
 3. appropriate management actions should trigger levels be reached.
- 6-3 The proponent shall implement the monitoring plan required by condition 6-2 prior to commencement of any discharge from the dredge material management areas until such time as the Chief Executive Officer of the Environmental Protection Authority determines that monitoring actions may cease.
- 6-4 In the event that monitoring required by condition 6-3 indicates that any of the water quality management trigger levels for any of the parameters in condition 6-1 have been reached:
1. the proponent shall cease discharge of dewater to the environment immediately;
 2. the proponent shall undertake further monitoring to determine the area over which the trigger level for that parameter has been reached and the values for that water quality parameter;
 3. the proponent shall report such findings to the Chief Executive Officer of the Office of the Environmental Protection Authority within seven (7) days of the trigger level being reached;
 4. the proponent shall provide evidence which allows determination of the cause of the trigger level to be reached;
 5. if determined by the Chief Executive Officer of the Office of the Environmental Protection Authority to be project attributable, the proponent shall submit any actions to be taken in response to reaching the trigger level and any actions to prevent the trigger level being reached in the future, within seven (7) days of the determination being made to the Chief Executive Officer of the Office of the Environmental Protection Authority; and
 6. the proponent shall implement management actions in response to reaching the trigger level upon approval of the Chief Executive Officer of the Office of the Environmental Protection Authority and shall continue until such time as the Chief Executive Officer of the Office of the Environmental Protection Authority determines that the management actions may cease.

- 6-5 The proponent shall submit bi-annually, or at a frequency defined to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority, the results of monitoring required by condition 6-3 to the Chief Executive Officer of the Office of the Environmental Protection Authority, until such time as the Chief Executive Officer of the Office of the Environmental Protection Authority determines that reporting may cease.
- 6-6 The proponent shall ensure that dredged material is retained in the dredge material management areas, as shown in Figure 1, and no seepage or release of dredged sediments into the marine environment occurs.

7 Management and Rehabilitation of Dredge Material Management Areas

- 7-1 The proponent shall rehabilitate the dredge material management areas shown in Figure 1 so that their surface soil stability, surface drainage, resistance to erosion is managed during dredge spoil stockpiling and following the completion of dredging to achieve the following:
1. minimal dust generated by the dredge material management areas at all times consistent with the Port Hedland Air Quality and Noise Management Plan (March 2010) or its approved updates;
 2. no uncontrolled erosion impacts beyond the dredge material management areas drainage system; and
 3. sediment loads in drainage system stormwater flows cause minimal change to receiving water quality.
- 7-2 In order to the requirements of condition 7-1-1 the proponent shall, during dredge spoil stockpiling and for a period of five years following the completion of dredging:
1. apply hydromulch or chemical stabilisation measures to establish an artificial crust on the surface of the dredge material management areas;
 2. prevent unauthorised vehicle access to the stabilised areas referred to above; and
 3. monitor dust levels at the boundary of the dredge material management areas consistent with the guidelines in 'A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites, contaminated sites remediation and other related activities' (Department of Environment and Conservation, 2011) to determine the effectiveness of 7-2-1 and 7-2-2 above.
- 7-3 The proponent shall submit a report to the Chief Executive Officer of the Office of the Environmental Protection Authority within 12 months following the completion of dredging and annually thereafter for four years in the compliance assessment report referred to in condition 4-6, to demonstrate the requirements of conditions 7-1 and 7-2 have been met.

- 7-4 In the event dredged material is not utilised within five years following the completion of dredging, the proponent shall rehabilitate the dredge material management areas shown in Figure 1 to achieve the following:
1. minimal dust generated by the dredge material management areas during periods of high winds;
 2. no uncontrolled erosion impacts beyond the dredge material management areas drainage system;
 3. sediment loads in drainage system stormwater flows cause minimal change to receiving water quality;
 4. vegetation cover of at least 50% average cover established over 80% of revegetation areas within two years of revegetation;
 5. no more than 10% of dredge material management areas' surface area and berm areas infected by weeds; and
 6. no uncontrolled slumping of berm surfaces beyond geotechnical limits.
- 7-5 Rehabilitation shall continue as necessary until such time as the requirements of condition 7-4 are met, and are demonstrated by inspections and reports to be met, for a minimum of five years to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority.

HON BILL MARMION MLA
MINISTER FOR ENVIRONMENT; WATER

The Proposal (Assessment No. 1856)

The proposal involves the dredging of 14.2 million cubic metres (Mm³) of material for the construction of eight new berth pockets and a turning circle. The new berth pockets will accommodate a ship size of up to 300 metres in length and 50 metres wide.

The proposal will require the widening of South West Creek and includes the clearing of mangroves.

Dredged material will be disposed of both onshore and offshore with approximately 5.5 Mm³ to be disposed at an established offshore disposal ground in Commonwealth Waters, and 8.7 Mm³ to the land-based dredged material management areas (DMMA), as shown in Figure 1.

Table 1: Key characteristics

Element	Description
Volume of material to be dredged	Not more than 14.2 Mm ³ based on <ul style="list-style-type: none"> • Approx 5.5 Mm³ offshore disposal • Approx 8.7 Mm³ onshore disposal
Area of marine disturbance for dredging	Not more than 116 hectares (ha) at South West Creek
Area of land disturbance for onshore disposal	Not more than 227 ha <p>Dredge Material Management Area DMMA G construction footprint: not more than 139 ha</p> <p>DMMA B north construction footprint: not more than 81 ha</p> <p>Construction corridors for access and pipelines: not more than 7 ha</p>

Figures

1. Location of proposal showing dredging area and dredging material management areas
2. Location of Zone of Permanent Mangrove Loss

Figure 1: Location of proposal showing dredging area and dredging material management areas

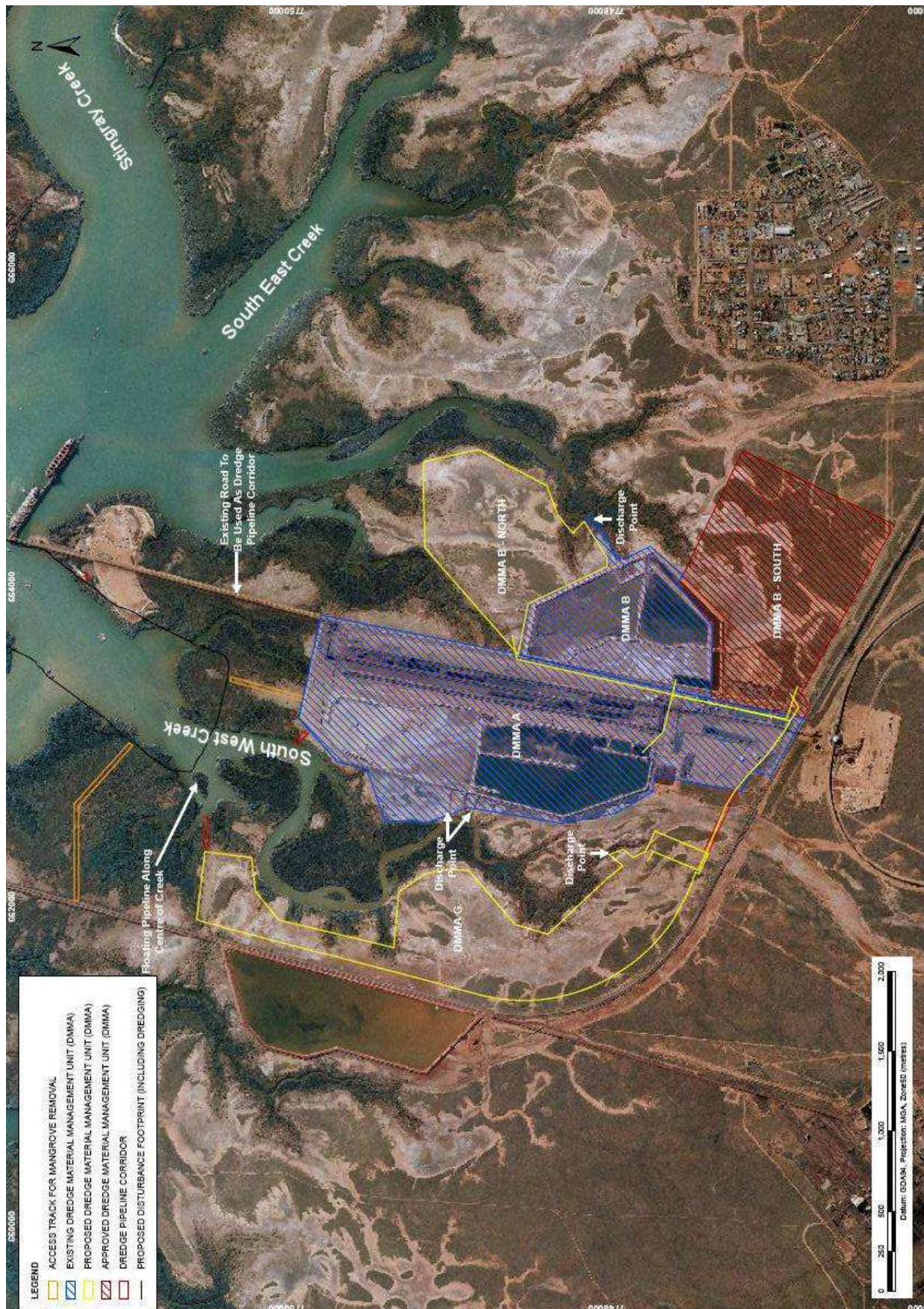
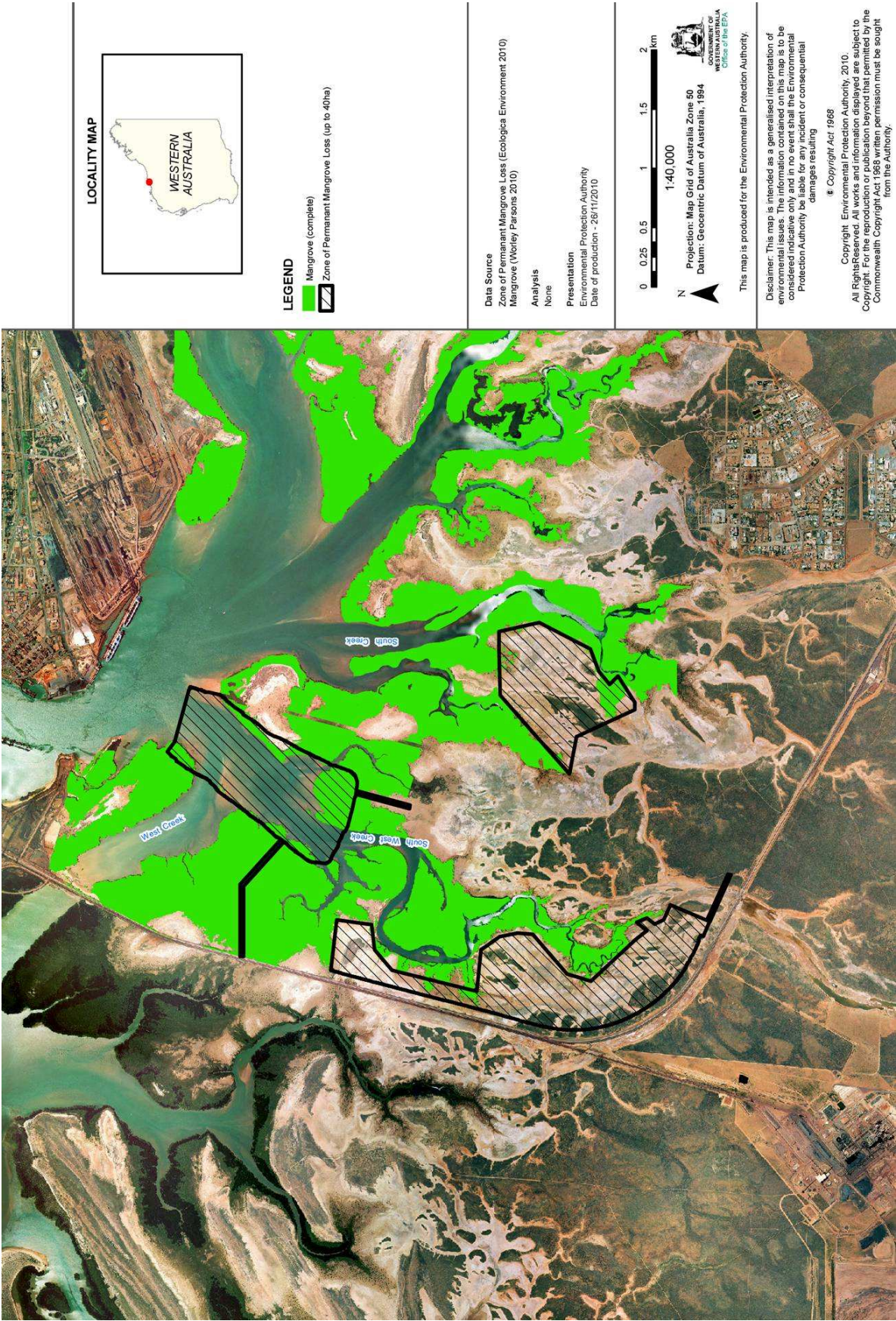


Figure 2: Location of Zone of Permanent Mangrove Loss



Attachment 1 to Ministerial Statement 859

Change to Proposal

Proposal: South West Creek Dredging and Reclamation Project

Proponent: Port Hedland Port Authority

Change: Relocation of DMMA G Discharge Point and Modification of zone of Permanent Mangrove loss

Figure 1: Location of proposal showing dredging area and dredging material management areas.

Figure 2: Location of zone of permanent mangrove loss

Note: No changes to the Key Proposal Characteristic table of the South West Creek Dredging and Reclamation Project are required.

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 27 October 2011

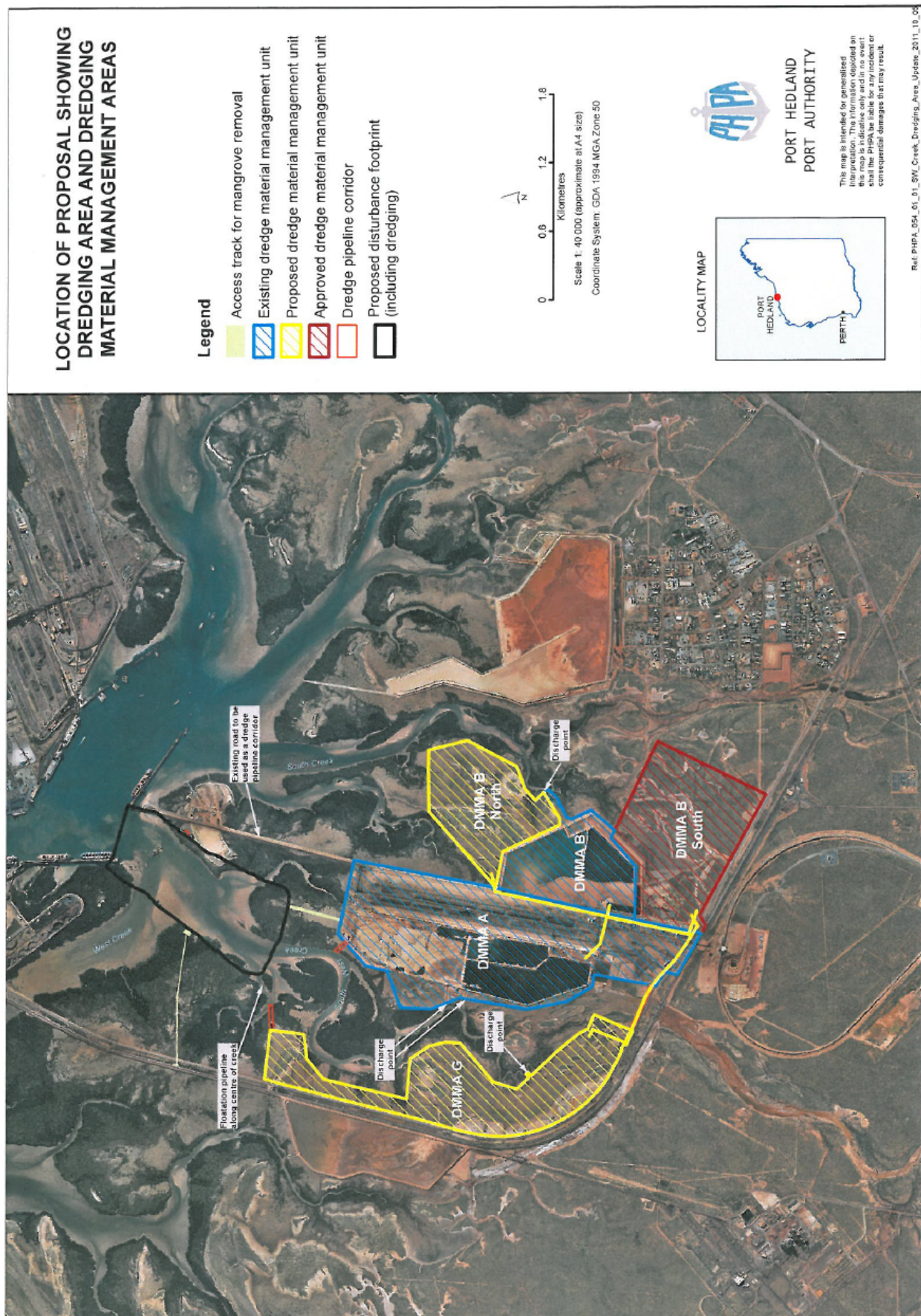


Figure 1: Location of proposal showing dredging area and dredging material management areas.



Figure 2: Location of zone of permanent mangrove loss

Attachment 2 to Ministerial Statement 859

Change to Proposal

Proposal: South West Creek Dredging and Reclamation Project

Proponent: Port Hedland Port Authority

Change: Realignment of the access track between Utah Point Road and the dredging area, and associated changes to the zone of permanent mangrove loss.

Figure 1: Location of proposal showing dredging area and dredging material management areas.

Figure 2: Location of zone of permanent mangrove loss

Note:

- This Attachment replaces Figure 1 and Figure 2 of Attachment 1 to Ministerial Statement 859.
- No changes to the Key Characteristics Table of the South West Creek Dredging and Reclamation Project are required.

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 2 May 2012

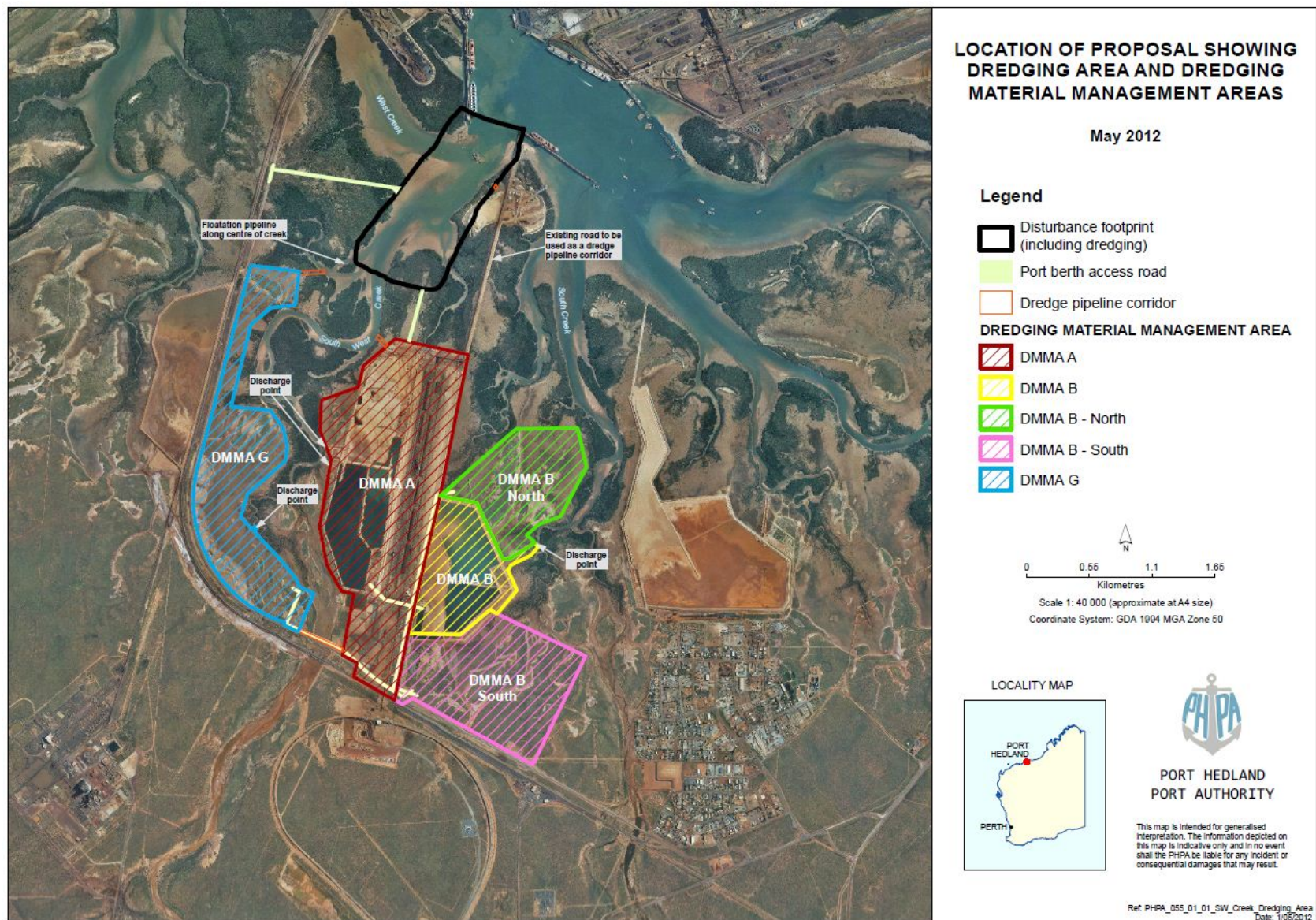


Figure 1. Location of proposal showing dredging area and dredging material management areas.



Figure 2. Location of zone of permanent mangrove loss.

ATTACHMENT 3 TO MINISTERIAL STATEMENT 859

section 46C
Environmental Protection Act 1986

NOTICE OF CHANGES TO IMPLEMENTATION CONDITIONS MINISTERIAL STATEMENT 859

SOUTH WEST CREEK DREDGING AND RECLAMATION PROJECT

Pursuant to sections 46C(1)(a) of the *Environmental Protection Act 1986*, the implementation conditions applying to the above proposal are changed in accordance with this Notice. I consider these changes to be of a minor nature and desirable in order to standardise the implementation conditions applying to different proposals.

[Signed 7 November 2013]

MINISTER FOR ENVIRONMENT; HERITAGE

1. Conditions 6-1, 6-2, 6-3, 6-4, 6-5 and 6-6 are deleted, and replaced with:

- 6-1 The proponent shall implement the South West Creek Dredging Approvals – Project Execution Plan (24 April 2011) (the Plan), or the Plan as amended to the satisfaction of the CEO, from the date of this notice until such time as the CEO determines that monitoring actions may cease.

The objective of the Plan is to ensure the quality of the return water discharge from the Dredge Material Management Areas shown in Figure 1 of Schedule 1 is consistent with a high level of ecological protection in South West Creek and South Creek.

6-2 Implementation of the Plan referred to in Condition 6-1 shall include:

1. daily monitoring of turbidity (NTU), temperature, pH, dissolved oxygen, and conductivity in South West Creek and South Creek, during discharge activities under a range of tidal conditions;
2. fortnightly monitoring of nickel at the discharge outlets during discharge activities; and
3. the application of water quality management trigger levels based on a high level of ecological protection, as detailed in the following table:

Water quality parameter	Management trigger levels ('High' level of ecological protection)
Turbidity (NTU)	Median > 80 th percentile of baseline or reference site data
Temperature	Median < 20 th or > 80 th percentile of baseline or reference data
pH	Median < 20 th or > 80 th percentile of baseline or reference data
Dissolved Oxygen	< 60% saturation
Conductivity	Median < 20 th or > 80 th percentile of baseline or reference data
Metals (Nickel)	> or = 7 micrograms per litre

4. contingency management measures that will be implemented in the event that a high level of ecological protection is not being achieved in South West Creek and South Creek as result of the proposal; and
5. procedures for reporting the results of water quality monitoring, exceedance of any water quality trigger levels and effectiveness of the contingency management measures.

2. Definitions

'CEO' refers to the Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the *Environmental Protection Act 1986*, or his delegate.