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Published on: 24 November 2021

Statement No. 1175

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(*Environmental Protection Act 1986*)

MARDIE PROJECT

Proposal: The proposal is to construct and operate a solar salt production plant and export facility including seawater intake, evaporation and crystalliser ponds, processing plant, trestle jetty and supporting infrastructure to produce salt and sulphate of potash, located 80 kilometres south-west of Karratha, in the Pilbara region of Western Australia.

Proponent: Mardie Minerals Pty Ltd
Australian Company Number: 152 574 457

Proponent Address: Level 2, 1 Altona Street WEST PERTH WA 6872

Assessment Number: 2167

Report of the Environmental Protection Authority: 1704

Pursuant to section 45 of the *Environmental Protection Act 1986*, it has been agreed that the proposal described in part A of the proponent's referral document dated 17 April 2018, as amended by the section 43A notice issued by the EPA on 26 May 2020, may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

1 Proposal Implementation

1-1 When implementing the proposal, the proponent shall ensure the proposal does not exceed the following extents:

Proposal element	Location	Limitation or maximum extent
Physical elements		
Clearing of vegetation in good to excellent condition	Figure 1	No more than 2,319 ha within the 15,667 ha terrestrial development envelope.

Proposal element	Location	Limitation or maximum extent
Direct and indirect impacts to Horseflat PEC	Figure 1	No more than 145 ha direct impacts and 20 ha indirect impacts within the 15,667 ha terrestrial development envelope.
Clearing of landward samphire	Figure 1	No more than 854 ha within the 15,667 ha terrestrial development envelope, subject to the requirements of condition 5-1(4).
Clearing of coastal samphire	Figure 1	No more than 296 ha within the 15,667 ha terrestrial development envelope.
Direct disturbance of algal mat	Figure 1	No more than 880 ha within the 15,667 ha terrestrial development envelope.
Direct disturbance of mangrove habitat outside of the RRDMMA	Figure 1	No more than 13 ha within the 15,667 ha terrestrial development envelope.
Direct disturbance of mangrove habitat inside the RRDMMA	Figure 1	No more than 4 ha of clearing within the RRDMMA, subject to the requirements of condition 2.
Dredging	Figure 1	No more than 800,000 m ³ , disturbing no more than 55 ha within the 304 ha dredge development envelope.
Drainage corridors to maintain surface water flows	Figure 1	Minimum of two drainage corridors of a minimum 200 m wide, aligned with existing natural drainage lines.
Clearing of foraging habitat for the Pilbara leaf-nosed bat	Figure 1	No more than 2,562 ha within the 15,667 ha terrestrial development envelope.
Clearing of foraging habitat for the northern coastal free-tailed bat	Figure 1	No more than 1,132 ha within the 15,667 ha terrestrial development envelope.
Clearing of habitat for the Pilbara olive python, including riparian and freshwater pool habitats	Figure 1	No more than 6 ha within the 15,667 ha terrestrial development envelope.
Clearing of foraging habitat for the northern quoll	Figure 1	No more than 64.5 ha within the 15,667 ha terrestrial development envelope.
Operational elements		
Discharge of bitterns, including desalinisation plant bitterns	Figure 2	Up to 3.6 GL/a with a specific gravity no more than 1.25 via diffuser into the designated Low Ecological Protection Area shown in Figure 2.

Proposal element	Location	Limitation or maximum extent
Seawater intake	Figure 2	Seawater intake not exceeding 0.15 m/s through intake pipes fitted with four-side screens.
Groundwater	N/A	No dewatering of groundwater for any reason except to meet the requirements of condition 3-6.
Timing elements		
Mine life	N/A	Up to 63 years from issue of this statement

2 Robe River Delta Mangrove Management Area

2-1 The proponent shall ensure that the implementation of the proposal achieves the following outcome in the **RRDMMA** as shown in Figure 3:

- (1) no development that would have an **adverse impact** on the ecological function of the **RRDMMA** or the maintenance of ecological processes which sustain mangrove habitats within the **RRDMMA**.

2-2 Prior to any ground disturbance within the **RRDMMA**, the proponent shall submit a revised design for disturbance within the **RRDMMA** to the CEO which meets the outcome of condition 2-1(1). The revised design shall include the following:

- (1) evaluation of how the mangrove habitat in the **RRDMMA** will be affected by the direct and **indirect impacts** associated with the revised design of the proposal (including consideration of mangrove habitats, dependent habitats, ecological function and ecological processes which sustain the mangrove habitat, and worst case scenarios);
- (2) evaluation of the significance of the effects determined in accordance with condition 2-2(1);
- (3) consideration of the following in conditions 2-2(1) and 2-2(2):
 - (a) quantification of the cumulative impacts of the proposal within the **RRDMMA**, including **direct** and **indirect impacts**, and impacts to mangrove capacity to adapt to sea-level rise;
 - (b) modelling of changes to surface water flows as a result of the proposal, including impacts to drainage lines or hydrological features that may support mangroves; and
 - (c) any seepage recovery infrastructure that could be required within the area under condition 3-9;
- (4) demonstration that the implementation of the proposal will not have an **adverse impact** on the ecological function of the **RRDMMA** and the

maintenance of ecological processes which sustain the mangrove habitats;

- (5) demonstration that the proposal includes best practise design, management, monitoring and contingency measures to achieve the outcome of condition 2-1(1);
- (6) maps of the **RRDMMA** which may be directly or indirectly affected by the proposal showing in detail:
 - (a) the location of mangroves;
 - (b) all drainage lines and other hydrological and ecological features that may support mangrove habitat; and
 - (c) areas which may be directly or indirectly affected by the proposal, including reasonable buffer area to account for extent of **indirect impacts**;
- (7) a peer review of the design, and evaluation required by conditions 2-2(1) and 2-2(2) carried out by an independent person or independent persons with relevant expertise determined by the CEO, that provides an analysis of whether the revised design would meet the outcome of condition 2-1(1).

2-3 The proponent shall avoid all **direct** and **indirect impacts** within the **RRDMMA**, unless the CEO has confirmed by notice in writing that the information provided under condition 2-2 demonstrates that the proposed disturbance is consistent with the outcome of condition 2-1(1).

2-4 Within ninety (90) days of the conclusion of construction in the **RRDMMA**, the proponent shall provide to the CEO mapping and arial imagery to demonstrate that loss of mangroves in the **RRDMMA** due to construction for the proposal was not greater than four (4) ha.

3 Inland Waters

3-1 The proponent shall ensure that the following outcomes are achieved:

- (1) no **adverse impact** to water levels or water quality in Mardie pool as a result of changes to groundwater regimes or groundwater quality;
- (2) no **adverse impact** to water levels or water quality in Mardie pool as a result of surface water flows associated with the proposal;
- (3) no changes to the extent of surface water flooding extent during a one (1)-year **ARI** or changes to tidal inundation as a result of the construction of the intertidal causeway that are greater than predicted in *Mardie Project – Environmental Review Document* (June 2020);

- (4) no changes to the health, extent of diversity of more than five (5) ha of intertidal benthic communities and habitat, including mangrove, samphire and algal mat as a result of changes to groundwater regimes or groundwater quality associated with the proposal;
 - (5) decreased freshwater inundation attributable to the project of no more than fifty-two (52) ha of coastal samphire;
 - (6) decreased freshwater inundation attributable to the project of no more than thirteen (13) ha mangroves outside the **RRDMMA**; and
 - (7) decreased freshwater inundation attributable to the project of no more than 130 ha mangroves within the **RRDMMA**, subject to the requirements of condition 2-3.
- 3-2 Prior to ground disturbing activities associated with the intertidal causeway, the proponent shall submit and have approved by the CEO the final design of the intertidal causeway, including modelling to demonstrate that the impacts associated with the causeway do not exceed that predicted in *Mardie Project – Environmental Review Document* (June 2020).
- 3-3 The proponent shall prepare and submit to the CEO a Groundwater Monitoring and Management Plan.
- (1) The proponent shall submit with the Groundwater Monitoring and Management Plan, a peer review of the plan carried out by an independent person or independent persons with relevant expertise determined by the CEO, that provides an analysis of the suitability of the plan to meet the outcomes of conditions 3-1(1) and 3-1(4).
 - (2) The proponent shall not commence transfer of seawater, brine or waste product into any evaporation or crystalliser ponds associated with the proposal until the CEO confirmed by notice in writing that the Groundwater Monitoring and Management Plan meets the requirements of condition 3-4.
- 3-4 The Groundwater Monitoring and Management Plan required by condition 3-3 shall:
- (1) when implemented, substantiate and ensure that the outcome of conditions 3-1(1) and 3-1(4) will be met;
 - (2) provide the details, including timing, of hydrogeological investigations to be carried out that will:
 - (a) provide a detailed understanding of the hydrological regime in the project area;

- (b) inform the final design of monitoring that will meet the requirement of condition 3-4(1); and
 - (c) inform the final design of management and mitigation actions that will be implemented to meet the outcomes of conditions 3-1(1) and 3-1(4);
 - (3) detail the timing of monitoring bore installation and collection of baseline data, providing justification to demonstrate that data will represent baseline where it is collected after the commencement of operations;
 - (4) detail the methodology of seepage recovery actions that will be implemented where seepage from evaporation ponds to groundwater is detected;
 - (5) specify early warning trigger criteria that will trigger the implementation of management and/or contingency actions to prevent non-compliance with conditions 3-1(1) and 3-1(4).
 - (6) specify threshold criteria to demonstrate compliance with condition 3-1(3).
 - (7) specify the methodology of a monitoring program to determine if trigger criteria and threshold criteria have been met and meet the requirement of condition 3-4(1).
 - (8) specify management and/or contingency actions to be implemented if the trigger criteria required by condition 3-4(5) and/or the threshold criteria required by condition 3-4(6) have not been met; and
 - (9) provide the format and timing for the reporting of monitoring results against trigger criteria and threshold criteria to demonstrate that the outcomes in conditions 3-1(1) and 3-1(4) have been met over the reporting period in the Compliance Assessment Report required by condition 18-6.
- 3-5 The exceedance of a threshold criteria, regardless of whether management actions or threshold contingency actions have been or are being implemented, constitutes non-compliance with these conditions.
- 3-6 The proponent shall implement the most recent version of the Groundwater Monitoring and Management Plan which the CEO has confirmed by notice in writing, addresses the outcomes of conditions 3-1(1) and 3-1(4).
- 3-7 In the event that monitoring or investigations at any time indicate an exceedance of threshold criteria specified in the Groundwater Monitoring and Management Plan confirmed under condition 3-6, the proponent shall:

- (1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;
- (2) implement the contingency actions required by the Groundwater Monitoring and Management Plan within seven (7) days of the exceedances being reported and continue implementation of those actions until the CEO has confirmed by notice in writing that it has been demonstrated that the threshold criteria are being met and implementation of the threshold contingency actions are no longer required;
- (3) investigate to determine the cause of the threshold criteria being exceeded;
- (4) investigate to provide information for the CEO to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded;
- (5) provide a report to the CEO within twenty-one (21) days of the threshold criteria exceedance being reported. The report shall include:
 - (a) details of contingency actions implemented;
 - (b) the effectiveness of the contingency actions implemented against the threshold criteria;
 - (c) the findings of the investigations required by conditions 3-7(3) and 3-7(4);
 - (d) measures to prevent the threshold criteria being exceeded in the future;
 - (e) measures to prevent, control or abate impacts which may have occurred; and
 - (f) justification of the threshold criteria remaining, or being adjusted based on better understanding, demonstrating that the outcome in conditions 3-1(1) and 3-1(4) will be met.

3-8 The proponent:

- (1) may review and submit proposed amendments to the Groundwater Monitoring and Management Plan;
- (2) shall review and submit proposed amendments to the Groundwater Monitoring and Management Plan as and when directed by the CEO; and
- (3) shall review and submit proposed amendments to the Groundwater Monitoring and Management Plan every five (5) years.

- 3-9 The proponent shall continue to implement the Groundwater Monitoring and Management Plan or any subsequent revisions as confirmed by the CEO in condition 3-3, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes detailed in conditions 3-1(1) and 3-1(4) have been met.

4 Marine Environmental Quality (operations)

- 4-1 Within five (5) years of the end of the mine life, the proponent shall ensure that all infrastructure associated with the proposal including the trestle jetty, bitterns diffuser, boat launching facilities and loading facilities that:
- (1) is not located on a mining tenement administered under the *Mining Act 1978*; and
 - (2) has not been agreed by notice in writing from the CEO to be retained through transfer of responsibility to a responsible authority or operator,
- is safely decommissioned and removed from the development envelopes for disposal.
- 4-2 The proponent shall manage all aspects of the proposal, including bitterns discharge, to meet the following outcome:
- (1) the levels of ecological protection to be achieved inside of the:
 - (a) Low Ecological Protection Area shown in Figure 2 and described in the spatial data in schedule 1;
 - (b) Moderate Ecological Protection Area shown in Figure 2 and described in the spatial data in schedule 1;
 - (c) High Ecological Protection Area shown in Figure 2 and described in the spatial data in schedule 1; and
 - (d) Maximum Ecological Protection Area shown in Figure 2 and described in the spatial data in schedule 1,
- are consistent with the method for deriving Environmental Quality Guidelines (EQG) and Environmental Quality Standards (EQS) for the corresponding level of ecological protection described in Appendix 1, Table 1 of the EPA's *Technical Guidance for protecting the quality of Western Australia's marine environment*.
- 4-3 To ensure that the outcome of condition 4-2 is met, the proponent shall implement the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021). This plan shall:

- (1) specify early warning trigger criteria (Environmental Quality Guidelines - EQG) that will trigger the implementation of management and/or contingency actions to prevent non-compliance with condition 4-2;
 - (2) specify threshold criteria (Environmental Quality Standards - EQS) to demonstrate compliance with condition 4-2;
 - (3) specify monitoring program to determine if trigger criteria (Environmental Quality Guidelines - EQG) and threshold criteria (Environmental Quality Standards - EQS) have been met;
 - (4) specify management and/or contingency actions to be implemented if the trigger criteria (Environmental Quality Guidelines - EQG) required by condition 4-3(1) and/or the threshold criteria (Environmental Quality Standards - EQS) required by condition 4-3(2) have not been met; and
 - (5) provide the format and timing for the reporting of monitoring results against trigger criteria (Environmental Quality Guidelines - EQG) and threshold criteria (Environmental Quality Standards - EQS) to demonstrate that the outcomes in condition 4-2 have been met over the reporting period in the Compliance Assessment Report required by condition 18-6.
- 4-4 The exceedance of a threshold criteria (Environmental Quality Standards - EQS), regardless of whether management actions or threshold contingency actions have been or are being implemented, constitutes non-compliance with these conditions, if the exceedance is attributable to the proposal.
- 4-5 The proponent shall implement the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) or the most recent version of the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) which the CEO has confirmed by notice in writing, addresses the requirements of condition 4-2.
- 4-6 In the event that monitoring or investigations at any time indicate an exceedance of threshold criteria (Environmental Quality Standards - EQS) specified in the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) confirmed under condition 4-5, the proponent shall:
- (1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;
 - (2) implement the contingency actions required by the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) within seven (7) days of the exceedances being reported and continue implementation of those actions until the CEO has confirmed by notice in writing that it has been demonstrated that the threshold criteria (Environmental Quality Standards - EQS) are being met and

implementation of the threshold contingency actions are no longer required;

- (3) investigate to determine the cause of the threshold criteria (Environmental Quality Standards - EQS) being exceeded;
- (4) investigate to provide information for the CEO to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria (Environmental Quality Standards - EQS) being exceeded;
- (5) provide a report to the CEO within twenty-one (21) days of the exceedance being reported. The report shall include:
 - (a) details of contingency actions implemented;
 - (b) the effectiveness of the contingency actions implemented against the threshold criteria (Environmental Quality Standards - EQS);
 - (c) the findings of the investigations required by conditions 4-6(3) and 4-6(4);
 - (d) measures to prevent the threshold criteria (Environmental Quality Standards - EQS) being exceeded in the future;
 - (e) measures to prevent, control or abate impacts which may have occurred; and
 - (f) justification of the threshold criteria (Environmental Quality Standards - EQS) remaining, or being adjusted based on better understanding, demonstrating that the outcomes in condition 4-2 will be met.

4-7 The proponent:

- (1) may review and submit proposed amendments to the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021);
- (2) shall review and submit proposed amendments to the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) as and when directed by the CEO;
- (3) shall review and submit proposed amendments to the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) every five (5) years.

4-8 The proponent shall continue to implement the Marine Environmental Quality Monitoring and Management Plan (R190108 Rev4A, 24 June 2021) or any subsequent revisions as confirmed by the CEO in condition 4-5, until the CEO

has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes detailed in condition 4-2 has been met.

5 Flora and Vegetation

5-1 The proponent shall ensure that the following outcomes are achieved:

- (1) no more than 165 ha cumulative impacts to the Horseflat **PEC** as a result of the proposal, including **direct impacts** to no more than 145 ha
- (2) no **direct** or **indirect impacts** to the known locations of *Minuria tridens* identified in *Phoenix – Detailed Flora and vegetation survey for the Mardie project* (June 2020);
- (3) no **direct impacts** or **indirect impacts** to any known locations of the sterile, potentially rare or novel *Tecticornia* Taxa, identified within *Phoenix – Detailed Flora and vegetation survey for the Mardie project* (June 2020), unless the CEO has confirmed by notice in writing that further investigations have demonstrated that the specimens represent adequately widespread species such that disturbance of the known specimens would not be inconsistent with EPA's objective for Flora and Vegetation;
- (4) no disturbance associated with the proposal to more than 30% of the currently mapped extent (256 ha) of the 'landward' *Tecticornia* vegetation described in *Mardie Project – Response to Submissions* (March 2021), until the CEO has confirmed by notice in writing that:
 - (a) supplementary *Tecticornia* surveys outside the development envelopes have been undertaken;
 - (b) the methodology of the supplementary surveys is in accordance with (EPA Guidance), or represents adequate effort to meet the outcome of condition 5-1 (3);
 - (c) the supplementary surveys have mapped additional vegetation consistent with the description of the landward samphire in *Mardie Project – Response to Submissions* (March 2021); and
 - (d) the additional *Tecticornia* vegetation mapped in the supplementary surveys is sufficiently widespread in the region that clearing of up to 854 ha of this vegetation would not be inconsistent with the EPA's objectives for Flora and Vegetation.

5-2 The proponent shall conduct targeted pre-clearance surveys of all areas of vegetation mapped as AcAjTE, Tspp or TtSvTc in *Phoenix – Detailed Flora and vegetation survey for the Mardie project* (June 2020).

- 5-3 The proponent shall not clear in any area of AcAjTE, Tspp or TtSvTc vegetation as mapped in *Phoenix – Detailed Flora and vegetation survey for the Mardie project* (June 2020), until the CEO has confirmed by notice in writing that:
- (1) the pre-clearance survey of that area was conducted in accordance with EPA *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016);
 - (2) the proponent has demonstrated avoidance and minimisation of **direct** and **indirect impacts** to any significant flora identified during pre-clearance surveys required by condition 5-2 as far as practicable, including:
 - (a) revision of the development envelope to avoid any significant individual where possible; and
 - (b) where individuals of *Minuria tridens* are identified during pre-clearance surveys and cannot be avoided, development of a research strategy to inform the potential for re-establishment of a population of *Minuria tridens* in the region.

6 Benthic Communities and Habitat Monitoring and Management Plan

- 6-1 The proponent shall ensure the implementation of the proposal achieves the following outcomes:
- (1) **direct impacts** to coastal samphire (as defined in the *Mardie Project – Response to Submissions* March 2021) of no more than 7.2% of the extent within the study area identified in Figure 3;
 - (2) direct and project attributable indirect disturbance to algal mat of no more than 25% of the extent within the study area identified in Figure 3;
 - (3) project attributable **direct** and **indirect impacts** of no more than 8% of the extent of algal mat on the **west Pilbara coast**;
 - (4) no long-term (greater than five (5) years) project attributable net detectable loss of algal mat outside the proposal footprint; and
 - (5) no project attributable loss of subtidal benthic communities and habitat (including subtidal macroalgae) within the area specified in condition 4-2(1)(d) and outside the Zones of impact authorised in condition 7.
- 6-2 The proponent shall ensure the proposal is constructed and operated to meet the following objectives:
- (1) changes to the health, diversity, and extent of benthic communities and habitat (including subtidal macroalgae) as a result of changes to surface water, groundwater quality groundwater regimes, and marine

environmental quality associated with the proposal are detected as early as possible;

- (2) loss of benthic communities and habitat (including subtidal macroalgae) as a result of the proposal, including loss of health, abundance or diversity as a result of project attributable **indirect impacts**, are accurately recorded and reported to meet the requirements of condition 14-1(4); and
- (3) project attributable **adverse impacts** to benthic communities and habitat (including subtidal macroalgae) are addressed using best-practice available management mitigation and contingency measures.

6-3 Prior to the construction of any pond walls, intertidal causeway, or other structure that could potentially impact on intertidal benthic communities and habitat, including mangrove habitat, algal mat and samphire habitat, unless otherwise approved by the CEO in writing, the proponent shall prepare and submit to the CEO a Benthic Communities and Habitat Monitoring and Management Plan.

6-4 The Benthic Communities and Habitat Monitoring and Management Plan shall:

- (1) when implemented, substantiate and ensure that the outcomes of conditions 2-1 and 6-1 will be met, and the objectives of condition 6-2 will be achieved;
- (2) substantiate whether the outcomes of conditions 3-1(4) and 4-2 are being met.
- (3) take account of all available data to determine whether the outcome of condition 6-1(3) will be met;
- (4) include the details of mitigation actions to be implemented if the outcomes of condition 6-1 are not being met;
- (5) include the methodology of a monitoring program for mangroves in the **RRDMMA** shown in Figure 1, to ensure no **indirect impacts** occur within this area as a result of the proposal subject to the requirements of condition 2-3, and to demonstrate that the outcome of condition 2-1 is met;
- (6) specify early warning trigger criteria that will trigger the implementation of management and/or contingency actions to prevent non-compliance with the outcomes of conditions 2-1 and 6-1 or non-achievement of the objectives in condition 3-1 (4) and 6-2;
- (7) specify threshold criteria to demonstrate compliance with conditions 2-1 3-1 (4) and 6-1 and that the objectives in condition 6-2 are being achieved;

- (8) specify the details of a monitoring program to determine if trigger criteria required by condition 6-4(6) and threshold criteria required by condition 6-4(7) have been met;
 - (9) specify management and/or contingency actions to be implemented if the trigger criteria required by condition 6-4(6) and/or the threshold criteria required by condition 6-4(7) have not been met; and
 - (10) provide the format and timing for the reporting of monitoring results against trigger criteria and threshold criteria to demonstrate that the outcomes in condition 6-1 have been met and the objectives in condition 6-2 have been achieved over the reporting period in the Compliance Assessment Report required by condition 18-6.
- 6-5 The proponent must not commence operations until the CEO has confirmed in writing that the Benthic Communities and Habitat Monitoring and Management Plan submitted under condition 6-3 addresses the requirements of condition 6-4, the outcomes of conditions 2-1, 3-1(4), and 6-1, and the objectives of condition 6-2.
- 6-6 The exceedance of a threshold criteria (regardless of whether management actions or threshold contingency actions have been or are being implemented), and/or comply with the requirements of the Benthic Communities and Habitat Monitoring and Management Plan represents non-compliance with these conditions.
- 6-7 The proponent shall implement the most recent version of the Benthic Communities and Habitat Monitoring and Management Plan which the CEO has confirmed by notice in writing, addresses the requirements of conditions 2-1, 3-1(4), 6-1 and 6-2.
- 6-8 In the event that monitoring or investigations at any time indicate an exceedance of threshold criteria specified in the Benthic Communities and Habitat Monitoring and Management Plan confirmed under condition 6-5, the proponent shall:
- (1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;
 - (2) implement the contingency actions required by the Benthic Communities and Habitat Monitoring and Management Plan within seven (7) days of the exceedances being reported and continue implementation of those actions until the CEO has confirmed by notice in writing that it has been demonstrated that the threshold criteria are being met and implementation of the threshold contingency actions are no longer required;

- (3) investigate to determine the cause of the threshold criteria being exceeded;
- (4) investigate to provide information for the CEO to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded;
- (5) provide a report to the CEO within twenty-one (21) days of the exceedance being reported. The report shall include:
 - (a) details of contingency actions implemented;
 - (b) the effectiveness of the contingency actions implemented against the threshold criteria;
 - (c) the findings of the investigations required by conditions 6-8(3) and 6-8(4);
 - (d) measures to prevent the threshold criteria being exceeded in the future;
 - (e) measures to prevent, control or abate impacts which may have occurred; and
 - (f) justification of the threshold criteria remaining, or being adjusted based on better understanding, demonstrating that the objectives in condition 6-1 will be met.

6-9 The proponent:

- (1) may review and submit proposed amendments to the Benthic Communities and Habitat Monitoring and Management Plan;
- (2) shall review and submit proposed amendments to the Benthic Communities and Habitat Monitoring and Management Plan as and when directed by the CEO; and
- (3) shall review and submit proposed amendments to the Benthic Communities and Habitat Monitoring and Management Plan every five (5) years.

6-10 The proponent shall continue to implement the Benthic Communities and Habitat Monitoring and Management Plan or any subsequent revisions as confirmed by the CEO in condition 6-5, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes detailed in conditions 2-1 and 6-1 and the objectives in condition 6-2 have been met.

7 Benthic Communities and Habitat and Marine Environmental Quality

Dredge Management Plan

- 7-1 The proponent shall ensure implementation of the proposal achieves the following environmental protection outcomes:
- (1) no irreversible loss of, or serious damage to, benthic communities and habitats outside of the authorised Zone of High Influence as spatially defined in Figure 4; and
 - (2) no negative change from the baseline state of benthic communities and habitats outside of the authorised Zone of High Influence and authorised Zone of Moderate Influence as spatially defined in Figure 4.
- 7-2 The proponent shall implement the Dredge Management Plan (R190043 Rev2B, 24 June 2021) or any subsequent versions of the Plan which the CEO has confirmed by notice in writing addresses the requirements of condition 7-3, for all dredging activities, including maintenance dredging activities during operations.
- 7-3 The Dredge Management Plan shall:
- (1) when implemented, substantiate that the outcomes of condition 7-1 are being met;
 - (2) specify early warning trigger criteria that will trigger the implementation of management and/or contingency actions to prevent non-compliance with condition 7-1;
 - (3) specify threshold criteria to demonstrate compliance with condition 7-1;
 - (4) specify monitoring program to determine if trigger criteria and threshold criteria have been met;
 - (5) specify management and/or contingency actions to be implemented if the trigger criteria required by condition 7-3(2) and/or the threshold criteria required by condition 7-3(3) have not been met; and
 - (6) provide the format and timing for the reporting of monitoring results against trigger criteria and threshold criteria to demonstrate that the outcomes in condition 7-1 have been met over the reporting period in the Compliance Assessment Report required by condition 18-6
- 7-4 The exceedance of a threshold criteria (regardless of whether management actions or threshold contingency actions have been or are being implemented), represents non-compliance with these conditions, if the exceedance is project-attributable.

7-5 In the event that monitoring or investigations at any time indicate an exceedance of early warning trigger criteria or threshold criteria specified in the Dredge Management Plan (R190043 Rev2B, 24 June 2021) confirmed under condition 7-2, the proponent shall:

- (1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;
- (2) implement the contingency actions required by the Dredge Management Plan (R190043 Rev2B, 24 June 2021) within seven (7) days of the exceedances being reported and continue implementation of those actions until the CEO has confirmed by notice in writing that it has been demonstrated that the trigger criteria and/or threshold criteria are being met and implementation of the trigger criteria and/or threshold contingency actions are no longer required;
- (3) investigate to determine the cause of the early warning trigger criteria or threshold criteria being exceeded;
- (4) investigate to provide information for the CEO to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded;
- (5) provide a report to the CEO within twenty-one (21) days of the exceedance being reported. The report shall include:
 - (a) details of contingency actions implemented;
 - (b) the effectiveness of the contingency actions implemented against the early warning trigger criteria or threshold criteria;
 - (c) the findings of the investigations required by conditions 7-5(3) and 7-5(4);
 - (d) measures to prevent the early warning trigger criteria or threshold criteria being exceeded in the future;
 - (e) measures to prevent, control or abate impacts which may have occurred; and
 - (f) justification of the early warning trigger criteria or threshold criteria remaining, or being adjusted based on better understanding, demonstrating that the outcomes in condition 7-1 will be met.

7-6 The proponent:

- (1) may review and submit proposed amendments to the Dredge Management Plan (R190043 Rev2B, 24 June 2021);

- (2) shall review and submit proposed amendments to the Dredge Management Plan (R190043 Rev2B, 24 June 2021) as and when directed by the CEO; and
 - (3) shall review and submit proposed amendments to the Dredge Management Plan (R190043 Rev2B, 24 June 2021) every five (5) years.
- 7-7 The proponent shall continue to implement the Dredge Management Plan (R190043 Rev2B, 24 June 2021) or any subsequent revisions as confirmed by the CEO in condition 7-2, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes in condition 7-1 have been met.

Marine Pest Procedures

- 7-8 The proponent shall ensure the implementation of the proposal achieves the following outcome:
- (1) No introduction of marine pests into the state or within the state as a result of the proposal.
- 7-9 To achieve the environmental outcome in 7-8 (1), prior to construction the proponent shall develop and submit to the CEO procedures for managing all vessels and immersible equipment prior to mobilisation and during the proposal to the requirements of the CEO, on advice of the Department of Primary Industries and Regional Development.
- 7-10 The proponent shall not commence any marine construction or dredging activities until the CEO has confirmed by notice in writing that the marine pest management procedures required by condition 7-9 have been prepared to the CEO's satisfaction on advice from DPIRD.
- 7-11 The proponent shall implement the procedures required by condition 7-9 during the construction of the proposal.

8 Terrestrial Fauna

- 8-1 The proponent shall undertake the proposal to meet the following outcomes:
- (1) no reduction in the richness and abundance of migratory shorebirds and other shorebirds in the proposal area attributable to the proposal; and
 - (2) no **direct impacts** to the habitats of known short range endemic invertebrates unless demonstrated that the taxon occurs outside the impact areas.
- 8-2 Prior to ground disturbing activities, unless otherwise agreed in writing by the CEO, the proponent shall prepare and submit to the CEO a Long-term migratory shorebird monitoring program, which shall:

- (1) be conducted at the ponds and in proximity to the trestle jetty (impact areas) and in representative habitats in control areas, as per the requirements of the *EPBC Act Policy Statement 3.21—Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species*;
 - (2) continue for a minimum of five (5) years to capture construction and post construction phases of the project;
 - (3) include a commitment and timing for the results of each completed survey to be submitted to the 'Shorebirds 2020' initiative, DAWE and DBCA;
 - (4) include trigger and threshold criteria and management actions to be implemented if change in the richness and abundance of migratory shorebirds and other birds are identified;
 - (5) ensure the annual monitoring program will continue until the CEO has confirmed by notice in writing that the outcomes of condition 8-1 have been met.
- 8-3 Unless otherwise agreed by the CEO, the proponent shall not commence any construction of evaporation ponds, crystalliser ponds, intertidal causeway or trestle jetty until the CEO has confirmed by notice in writing that the Long-term migratory shorebird monitoring program meets the requirements of condition 8-2.
- 8-4 The proponent:
- (1) may review and submit proposed amendments to the Long-term migratory shorebird monitoring program
 - (2) shall review and submit proposed amendments to the Long-term migratory shorebird monitoring program as and when directed by the CEO; and
 - (3) shall review and submit proposed amendments to the Long-term migratory shorebird monitoring program every five (5) years.
- 8-5 The proponent shall implement the Long-term migratory shorebird monitoring program or any subsequent revisions that the CEO has confirmed by notice in writing meets the outcome of condition 8-1 (1) and the requirements of condition 8-2, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes of condition 8-1 (1) have been met.
- 8-6 In order to meet the outcomes of conditions 8-1(2), the proponent shall complete pre-clearance survey for short-range endemic fauna within areas designated as

having moderate or high prospectivity for short range endemic invertebrates in the *Mardie Project – Response to Submissions* (March 2021).

- 8-7 The proponent shall avoid clearing any areas designated as having moderate or high prospectivity for short range endemic invertebrates in the *Mardie Project – Response to Submissions* (March 2021), until the CEO has confirmed by notice in writing that:
- (1) the pre-clearance survey required by 8-6 has been undertaken in accordance with the *EPA Technical Guidance Sampling of short range endemic invertebrate fauna*; and
 - (2) the proponent has demonstrated avoidance and minimisation of impacts to any confirmed short range endemic habitat such that the outcome of condition 8-1(2) has been met including:
 - (a) avoidance of taking construction material from any mudflat islands confirmed to be habitat for short range endemic species.

9 Illumination and Lighting

- 9-1 Prior to ground disturbing activities, unless otherwise agreed in writing by the CEO, the proponent shall develop and submit to the CEO an Illumination Plan for marine and terrestrial fauna, which shall:
- (1) incorporate the design and mitigation measures within the EPA 2010 *Environmental Assessment Guideline No. 5 – Environmental Assessment Guideline for Protecting Marine Turtles from Light Impacts* or subsequent updates; and
 - (2) incorporate the design and mitigation measures within the DotEE (2020) *Light Pollution Guidelines: National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds*, Commonwealth of Australia.
- 9-2 Unless otherwise agreed by the CEO, the proponent shall not operate or install any lighting equipment associated with the construction or operation of the proposal until the CEO has confirmed by notice in writing that the Illumination Plan meets the requirements of condition 9-1.
- 9-3 The proponent shall implement the most recent version of the Illumination Plan which the CEO has confirmed by notice in writing, addresses the requirements of condition 9-1.
- 9-4 The proponent:
- (1) may review and submit proposed amendments to the Illumination Plan;
 - (2) shall review and submit proposed amendments to the Illumination Plan as and when directed by the CEO; and

- (3) shall review and submit proposed amendments to the Illumination Plan every five (5) years.

9-5 The proponent shall continue to implement the Illumination Plan or any subsequent revisions as confirmed by the CEO in condition 9-3, until the CEO has confirmed by notice in writing that the implementation of the Plan may cease.

10 Marine Fauna

10-1 The proponent shall implement the proposal to meet the following environmental outcomes:

- (1) clearing in the fauna habitat type identified as low-quality turtle nesting habitat (sandy beach habitat) in the *Mardie project – Environmental Review Document* (June 2020) is limited to a width of 50 metres, parallel to the high water mark;
- (2) no **adverse impact** to marine turtle behaviour on offshore islands as a result of project attributable light;
- (3) no entrainment or entrapment of marine turtles and fauna within seawater intake pipes (primary, desalination, and diffuser intake), which will be fitted using a four (4) side screen with no larger than 5 millimetres mesh width. Seawater intake on these pipes must not exceed 0.15 metres per second.

10-2 In order to demonstrate that **direct impacts** to significant marine turtle habitat will be minimised as far as practicable, the proponent shall conduct a pre-construction marine turtle survey within habitat identified as sandy beach habitat in the *Mardie project – Environmental Review Document* (June 2020).

10-3 The proponent shall avoid any construction activity within habitat identified as sandy beach habitat in the *Mardie project – Environmental Review Document* (June 2020), until the CEO has confirmed by notice in writing that:

- (1) the surveys required by condition 10-2 have been conducted in accordance with best practice, by a qualified fauna (marine turtle) specialist and completed during the entire breeding and hatchling season of marine turtles;
- (2) outcomes of the surveys required by condition 10-2 have been provided to DAWE, DBCA, DWER; and
- (3) where significant turtle nesting habitat has been identified by surveys required by condition 10-2, mitigation measures to reduce potential impacts to the beach area as far as practicable have been identified and the proponent has committed to implementing the identified mitigation measures.

10-4 Prior to the commencement of operations the proponent shall submit to the CEO a Marine Turtle Monitoring Program. This plan shall:

- (1) when implemented, substantiate that the outcome required by condition 10-1(2) is being met;
- (2) when implemented, determine whether artificial light emissions are influencing nesting and mis-orientation or disorientation of turtles on the offshore islands (including but not limited to Long and Sholl Islands), and any areas determined to be significant turtle nesting habitat by surveys required by condition 10-3;
- (3) specify the details of the methodology of monitoring of the nesting turtle population in the proposal area and offshore islands, including nesting adults and hatchlings, during the species-specific reproductive period, which is to include (but not be limited to):
 - (a) identification of the species of turtles nesting on the beaches;
 - (b) identification of the abundance and the distribution of adult tracks on the nesting beaches;
 - (c) collection of data on the health of the nesting habitat;
 - (d) collection of data on hatchling orientation; and
 - (e) measurements on the intensity and extent of light sources visible from nesting beaches.
- (4) include a commitment to annually compare cumulative results against the baseline assessment (Pendoley Environmental 2019, Mardie Salt Project Marine Turtle Monitoring Program 2018/2019. Rev 0, Report No. RP-59001);
- (5) include measures to reduce light to offshore islands to be implemented in the event that **adverse impacts** from the proposal are detected, including a decrease in percentage range and usage of nesting sites (from the baseline study (*Pendoley Environmental 2019, Mardie Salt Project Marine Turtle Monitoring Program 2018/2019. Rev 0, Report No. RP-59001*); and
- (6) provide criteria for when the Illumination Plan required by condition 9-1 will be revised in response to outcomes of the monitoring required by condition 10-6.

10-5 Unless otherwise agreed by the CEO, the proponent shall not commence operations until the CEO has confirmed in writing that the Marine Turtle Monitoring Program addresses the requirements of condition 10-4.

- 10-6 The proponent shall continue to implement the Marine Turtle Monitoring Program until the CEO has confirmed by notice in writing, on advice from DBCA and DWER, that the outcome of condition 10-1(2) has been, and will continue to be met.
- 10-7 In order to demonstrate that impacts to marine fauna from marine noise associated with the proposal are minimised as far as practicable, the proponent shall implement the *Underwater Noise Management procedure (MAR-0000-EV-PRO-BCI-000-0007, 22 June 2021)*.

11 Social Surroundings

- 11-1 The proponent must implement the proposal to meet the following objectives:
- (1) avoid, where possible, and minimise direct and project attributable **indirect impacts** to:
 - (a) social, cultural, heritage, and archaeological values within and surrounding the development envelope;
 - (b) visual and amenity impacts to social and cultural places and activities; and
 - (c) access to traditional lands.
- 11-2 Prior to ground disturbing activities, the proponent shall develop and submit to the CEO a Heritage Management Plan in accordance with requirements described within the *Horizon Heritage Management 2018. Work Program Clearance for the Yaburara and Marthudhunera People and BCI Minerals Limited for the proposed Mardie Salt Project, south of Cape Preston*.
- 11-3 The Heritage Management Plan required by condition 11-2 shall include (but not be limited to):
- (1) a framework for consultation with Traditional Owners (Yaburara and Mardudhunera People and Kuruma Mardudhunera People) and other relevant stakeholders during the life of the proposal;
 - (2) a commitment that, in the instance of any previously unrecorded heritage places being identified within the development envelope, the proponent shall avoid the area and must contact the Yaburara and Mardudhunera People and the Kuruma Mardudhunera People and DPLH within ten (10) days of discovery, prior to implementing mitigation actions required;
 - (3) a commitment to ensure that staff and contracting personnel are made fully aware of their obligations under the *Aboriginal Heritage Act 1972*;
 - (4) risk-based management actions that will be implemented to demonstrate compliance with the objectives specified in condition 11-1;

- (5) measurable management target(s) to determine the effectiveness of the risk-based management actions;
 - (6) monitoring to measure the effectiveness of management actions against management targets;
 - (7) mitigation actions to be implemented in the event that monitoring demonstrates that management targets will not be met;
 - (8) a process for revision of management actions and changes to proposal activities, in the event that the management targets are not achieved. The process must include an investigation to determine the cause of the management target(s) not being met; and
 - (9) the format and timing to demonstrate that condition 11-1 has been met for the reporting period in the Compliance Assessment Report required by condition 18-6.
- 11-4 Unless otherwise agreed by the CEO, the proponent must not commence ground disturbing activities until the CEO has confirmed in writing that the Heritage Management Plan submitted under condition 11-2 addresses the requirements of condition 11-3.
- 11-5 The proponent shall implement the most recent version of the Heritage Management Plan which the CEO has confirmed by notice in writing, addresses the requirements of condition 11-3.
- 11-6 In the event that monitoring or investigations at any time indicate an exceedance of management targets specified in the Heritage Management Plan confirmed under condition 11-5 the proponent shall:
- (1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;
 - (2) implement the contingency actions required by the Heritage Management Plan within seven (7) days of the exceedances being reported and continue implementation of those actions until the CEO has confirmed by notice in writing that it has been demonstrated that the management targets are being met and implementation of the mitigation actions are no longer required;
 - (3) investigate to determine the cause of the management targets being exceeded;
 - (4) provide a report to the CEO within twenty-one (21) days of the exceedance being reported. The report shall include:
 - (a) details of notification of stakeholders and planned ongoing consultation with stakeholders;

- (b) details of mitigation actions implemented;
- (c) the effectiveness of the mitigation actions implemented against the management targets;
- (d) the findings of the investigations required by conditions 11-6(3);
- (e) measures to prevent the management targets being exceeded in the future;
- (f) measures to prevent, control or abate impacts which may have occurred; and
- (g) justification of the management targets remaining, or being adjusted based on better understanding, demonstrating that the outcomes in condition 11-1 will be met.

11-7 The proponent:

- (1) may review and submit proposed amendments to the Heritage Management Plan;
- (2) shall review and submit proposed amendments to the Heritage Management Plan as and when directed by the CEO; and
- (3) shall review and submit proposed amendments to the Heritage Management Plan every five (5) years.

11-8 The proponent shall continue to implement the Heritage Management Plan or any subsequent revisions as confirmed by the CEO in condition 11-5, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes and objectives detailed in condition 11-1 have been met.

12 Monitoring and Adaptive Management Program

12-1 The proponent must implement a monitoring and adaptive management plan to meet the outcomes and objectives of conditions 3-1(2), 3-1(3), 3-1(5), 3-1(6), 3-1(7), 4-1, 5-1(1), 5-1(2), 5-1(3), 5-1(4), 7-8, 10-1(1), 10-1(3), 10-3(3) and 11-1(1) which includes:

- (1) threshold criteria to determine compliance with all condition limits and outcomes;
- (2) trigger criteria that provide an early warning that any condition limits are not likely to be met;
- (3) monitoring parameters, sites, control/reference sites, methodology, timing and frequencies which will be used to measure threshold and trigger criteria. Include methodology for:

- (a) baseline data;
 - (b) data collection and analysis methods;
 - (c) adaptive management methodology;
 - (d) contingency; and
 - (e) reporting;
- (4) details of monitoring of *Minuria tridens* individuals and populations identified in *Phoenix – Detailed Flora and vegetation survey for the Mardie project (June 2020)* and any found during the pre-clearance surveys required by condition 5-2 must be undertaken yearly for the life of the project to assess **indirect impacts** of changes to groundwater and surface hydrology; and
 - (5) details of reporting requirements in the event that any changes to individuals and populations of *Minuria tridens* are detected, including requirements to provide mitigation measures to protect this species.
- 12-2 The proponent shall submit the monitoring and adaptive management plan to the CEO within one year of the issue of this statement.
- 12-3 The proponent may revise the monitoring and adaptive management plan.
- 12-4 The proponent shall revise the monitoring and adaptive management plan as and when the CEO requires.
- 12-5 The proponent shall implement the version of the plan submitted in accordance with 12-2, or the most recent version of the plan which the CEO has confirmed by notice in writing meets the requirements of 12-1.

13 Terrestrial Offsets

- 13-1 The proponent shall contribute funds to the Pilbara Environmental Offsets Fund calculated pursuant to condition 13-2, to achieve the objective of counterbalancing the significant residual impacts of **direct impacts** and **indirect impacts** to:
- (1) 'Good' to 'Excellent' condition native vegetation, including foraging and dispersal habitat for the Pilbara olive python, northern quoll, Pilbara leaf-nosed bat, and EPBC Act listed migratory/marine bird habitat;
 - (2) Priority 3 **PEC** - Horseflat Land System of the Roebourne Plains; and
 - (3) critical habitat for the Pilbara olive python (riparian and freshwater pool habitat).
- 13-2 The proponent's contribution to the Pilbara Environmental Offsets Fund shall be paid biennially, with the amount to be contributed calculated based on the

clearing undertaken in each year of the biennial reporting period in accordance with the highest applicable rate specified in condition 13-3. The first biennial reporting period shall commence from ground disturbing activities of the environmental value(s) identified in condition 13-3.

13-3 Calculated on the 2019–2020 financial year, the contribution rates are:

- (1) \$826 AUD (excluding GST) per hectare of 'Good' to 'Excellent' condition native vegetation, including foraging and dispersal habitat for the Pilbara olive python, northern quoll, Pilbara leaf-nosed bat and EPBC Act listed Migratory/marine bird habitat cleared or indirectly impacted for the proposal within the Roebourne IBRA subregion;
- (2) \$1,653 AUD (excluding GST) per hectare of Priority 3 **PEC** - Horseflat Land System of the Roebourne Plains cleared or indirectly impacted for the proposal within the Roebourne IBRA subregion; and
- (3) \$1,653 AUD (excluding GST) per hectare of riparian vegetation, which is also critical habitat for the Pilbara olive python, cleared or indirectly impacted for the proposal within the Roebourne IBRA subregion.

13-4 From the commencement of the 2019-2020 financial year, the rates in condition 13-3 will be adjusted annually each subsequent financial year in accordance with the percentage change in the CPI applicable to that financial year.

13-5 Where offsets are required for an area of land under condition 14 that is also subject to offsets under condition 13-3, the higher amount shall apply.

13-6 To achieve the objective in condition 13-1, the proponent shall prepare and submit a Mardie Project Impact Reconciliation Procedure to the CEO prior to ground disturbing activities. This procedure shall:

- (1) spatially define the environmental value(s) identified in condition 13-1;
- (2) spatially define the areas where offsets required by condition 13-1 are to be exempt;
- (3) include a methodology to calculate the amount of clearing undertaken during each year of the biennial reporting period for each of the environmental values identified in condition 13-3;
- (4) state that clearing calculation for the first biennial reporting period will commence from ground disturbing activities in accordance with condition 13-2 and end on the second 30 June following the commencement of ground disturbing activities;

- (5) state that clearing calculations for each subsequent biennial reporting period will commence on 1 July of the required reporting period, unless otherwise agreed by the CEO;
- (6) indicate the timing and content of the Impact Reconciliation Reports; and
- (7) be prepared in accordance with *Instructions on how to prepare Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports* (or any subsequent revisions).

13-7 The proponent:

- (1) may review and revise the Impact Reconciliation Procedure; or
- (2) shall review and revise the Impact Reconciliation Procedure as and when directed by the CEO by a notice in writing.

13-8 The proponent shall submit an Impact Reconciliation Report in accordance with the Impact Reconciliation Procedure approved in condition 13-6

13-9 The Impact Reconciliation Report required pursuant to condition 13-8 shall provide the location and spatial extent of the clearing undertaken as a result of the proposal during each year of each biennial reporting period.

13-10 The proponent may apply in writing and seek the written approval of the CEO to reduce all or part of the contribution payable under condition 13-2 where:

- (1) a payment has been made to satisfy a condition of an approval under the *Environment Protection and Biodiversity Conservation Act 1999* in relation to the proposal; and
- (2) the payment is made for the purpose of counterbalancing impacts of the proposal on matters of national environmental significance identified in condition 13-1.

14 Marine and Intertidal Research Offsets

14-1 Given the significant residual impacts and risks of the proposal to mangroves, algal mat, and coastal samphire, the proponent shall undertake the following offset measures for the purpose of guiding the strategic protection and management of the ecological values of these habitats on the **west Pilbara coast**, which include migratory bird habitat and ecological maintenance of marine fauna habitat, consistent with the financial, governance and accountability arrangements described in schedule 2:

- (1) contribution to a relevant scientific initiative, on the basis described in schedule 2 (Project A), which has the aim of mapping the original and current extent of Samphire and Algal mat on the **west Pilbara coast**;

- (2) contribution to a relevant scientific initiative, on the basis described in schedule 2 (Project B), which has the aim of identifying and quantifying the potential effects of sea level rise on the values of mangroves, samphire, and algal mat on the **west Pilbara coast**, and identifying the significance of salt projects in preventing the adaptation of intertidal BCH to sea-level rise;
 - (3) contribution to a relevant scientific initiative, on the basis described in schedule 2 (Project C(i)), for the purposes of funding research with the aim of identifying the ecological roles, values and functions of intertidal benthic communities and habitat;
 - (4) maintenance of a contingency fund, on the basis described in schedule 2 (Project C (ii)) for the purposes of funding research with the aim of identifying the ecological roles, values and functions of intertidal benthic communities and habitat, to be paid in the event that loss of intertidal benthic communities and habitat, or loss of health, percent cover or diversity of intertidal benthic habitat and communities is identified by the Benthic communities and habitat monitoring and management plans required by condition 6; and
 - (5) contribution to a relevant scientific initiative, on the basis described in schedule 2 (Project C (iii)) for the purposes of funding research with the aim of identifying the ecological roles, values and functions of intertidal benthic habitat, to be paid in the event that disturbance to mangrove habitat in the **RRDMMA** occurs subject to the requirements of condition 2.
- 14-2 The proponent shall ensure that the real funding for Projects A, B and C will be maintained through indexation to the Perth consumer price index (CPI) with the first indexation occurring on 30 June 2021.
- 14-3 The proponent shall ensure that the financial arrangements described in schedule 2 and under condition 14-2 are maintained to achieve the outcomes of Projects A, B and C to the extent that:
- (1) funding between projects is transferred as agreed by the CEO; and
 - (2) additional funds up to a maximum of 10 per cent are contributed to complete project outcomes.
- 14-4 The proponent shall select a third party to carry out the work required to meet the outcomes of condition 14-1 to the satisfaction of the CEO, on advice of DPIRD and DBCA. In applying to the CEO for endorsement of the selected third parties, the proponent shall provide:

- (1) demonstration of the track record, experience, qualifications and competencies of the proposed third party to carry out the work and achieve the outcomes in the intertidal and marine environment.
- 14-5 Prior to the commencement of ground disturbance, unless otherwise agreed by the CEO, the proponent shall provide to the CEO documentation of an agreement between the proponent and the third parties endorsed by the CEO under condition 14-4. This agreement shall:
 - (1) ensure that the funds described in schedule 2 are used to meet the outcomes of condition 14-1
 - (2) provide the objectives, timing (deliver outcomes within three (3) years of issue of Ministerial Statement or as otherwise agreed with the CEO), milestones and methodology of the proposed research and management programs to meet the outcomes in condition 14-1;
 - (3) include a Summary Offset Plan, on advice of DPIRD and DBCA, that provides the design for the proposed research and management programs and completion criteria for each project to meet the outcomes of condition 14-1;
 - (4) set out that the Summary Offset Plan will be made available publicly, within a reasonable time period in a manner agreed by the CEO; and
 - (5) identify how outcomes of the proposed programs will be made available publicly.
- 14-6 The proponent shall include in each Compliance Assessment Report required by condition 18-6:
 - (1) an outline of the success of implementation of Projects A, B and C, including progress against completion criteria; and
 - (2) the details of payments made with consideration for the requirement of conditions 14-2 and 14-3.

15 Environmental Performance Report

- 15-1 The proponent shall submit a ten yearly Environmental Performance Report to the CEO within three months of the expiry of the ten year period commencing from the date of substantial commencement of the proposal, or such other time as may be approved in writing by the CEO.
- 15-2 Each Environmental Performance Report shall report on proposal impacts on the following environmental values:
 - (a) state of algal mats;
 - (b) state of mangroves inside and outside the **RRDMMA**;

- (c) state of groundwater;
- (d) state of surface water;
- (e) holistic assessment of proposal impacts against environmental values, including a comparison of the state of each environmental value at the beginning and end of the ten year period; and
- (f) proposed adaptive management and continuous improvement strategies.

15-3 The Environmental Performance Report may be in whole or part prepared in conjunction with other proponents where there are cumulative impacts from their proposals.

16 Contact Details

16-1 The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

17 Time Limit for Proposal Implementation

17-1 The proponent shall not commence implementation of the proposal after five (5) years from the date of this Statement, and any commencement, prior to this date, must be substantial.

17-2 By the date that is five (5) years from the date of this Statement, the proponent shall notify the CEO in writing of the date of substantial commencement of the proposal, together with reasons why that date has been selected.

18 Compliance Reporting

18-1 The proponent shall prepare, and maintain a Compliance Assessment Plan which is submitted to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 18-6, or prior to implementation of the proposal, whichever is sooner.

18-2 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.
- 18-3 After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 18-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 18-1.
- 18-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 18-1 and shall make those reports available when requested by the CEO.
- 18-5 The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known.
- 18-6 The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the CEO.
- 18-7 The Compliance Assessment Report shall:
- (1) be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer'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 18-1.

19 Public Availability of Data

- 19-1 Subject to condition 19-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal, the proponent shall make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)), management plans and reports relevant to the assessment of this proposal and implementation of this Statement.
- 19-2 If any data referred to in condition 19-1 contains particulars of:

- (1) a secret formula or process; or
- (2) confidential commercially sensitive information,

the proponent may submit a request for approval from the CEO to not make these data publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

[signed on 24 November 2021]

HON AMBER-JADE SANDERSON MLA
MINISTER FOR ENVIRONMENT; CLIMATE ACTION

Key decision-making authorities consulted under section 45(2):
Minister for Water Minister for Aboriginal Affairs Minister for Mines and Petroleum Minister for Transport; and Ports

Table 1: Abbreviations and definitions

Acronym or abbreviation	Definition or term
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or his delegate.
ha	Hectare
direct impact	Any impact resulting from physical disturbance of the environment, including digging, clearing, or otherwise breaking or changing the ground or other surfaces, or direct contact with the environment by emissions from the proposal.
indirect impact	Any impact to the environment as a result of changes to ecological processes.
adverse impact	Any negative change that could result in a loss of health, diversity or abundance of the receptor/s being impacted.
PEC	Priority Ecological Community
landward Samphire	Samphire described as landward in <i>Mardie Project: Response to Submissions (29 March 2021)</i>
coastal Samphire	Samphire described as coastal in <i>Mardie Project: Response to Submissions (29 March 2021)</i>
RRDMMA	The Robe River Delta Mangrove Management Area as shown in Figure 3.
ARI	Annual Recurrence Interval
DAWE	The Commonwealth Department of Agriculture, Water and the Environment, or any of its successors responsible for the administration of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
DBCA	The Western Australian Department of Biodiversity, Conservation and Attractions, or any of its successors responsible for the administration of the <i>Biodiversity Conservation Act 2016</i> .
DPIRD	The Western Australian Department of Primary Industries and Regional Development, or any of its successors responsible for the administration of the <i>Fish Resources Management Act 1994</i> .
DWER	The Western Australian Department of Water and Environmental Regulation, or any of its successors responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> .
west Pilbara coast	The extent of the Pilbara coast from the bottom of the Exmouth Gulf to Karratha.

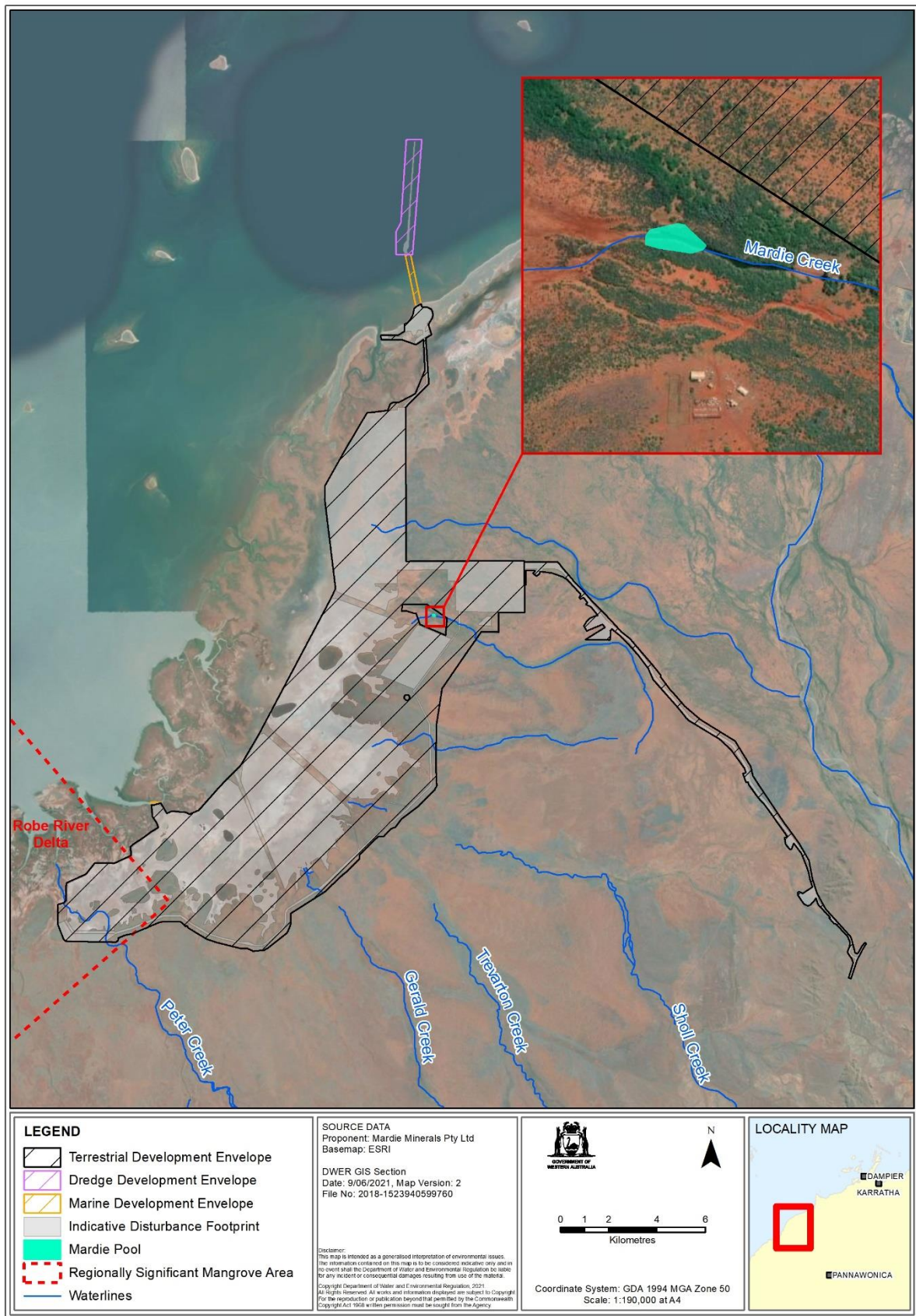


Figure 1: Proposal location and development envelopes

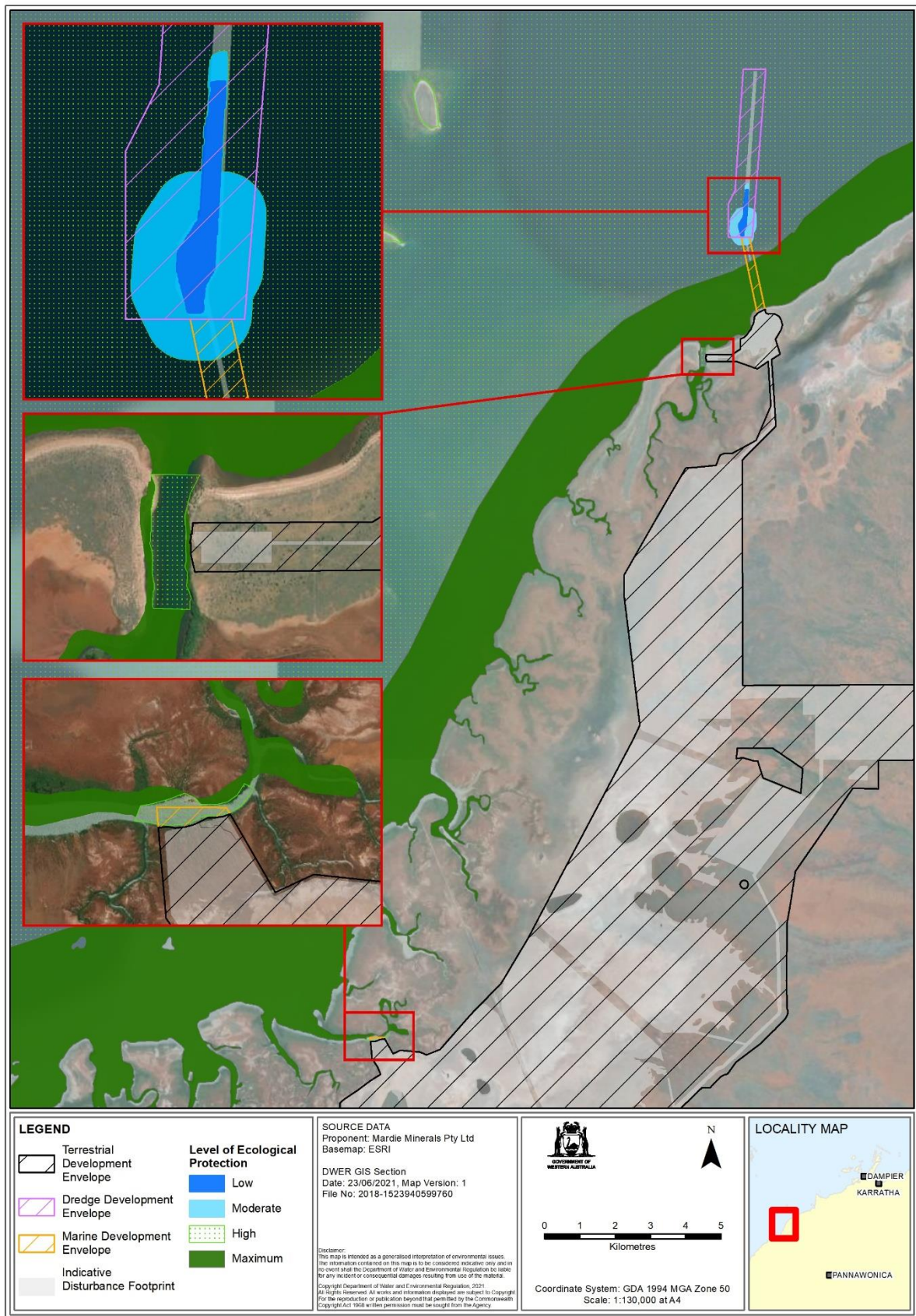


Figure 2: Marine levels of environmental protection

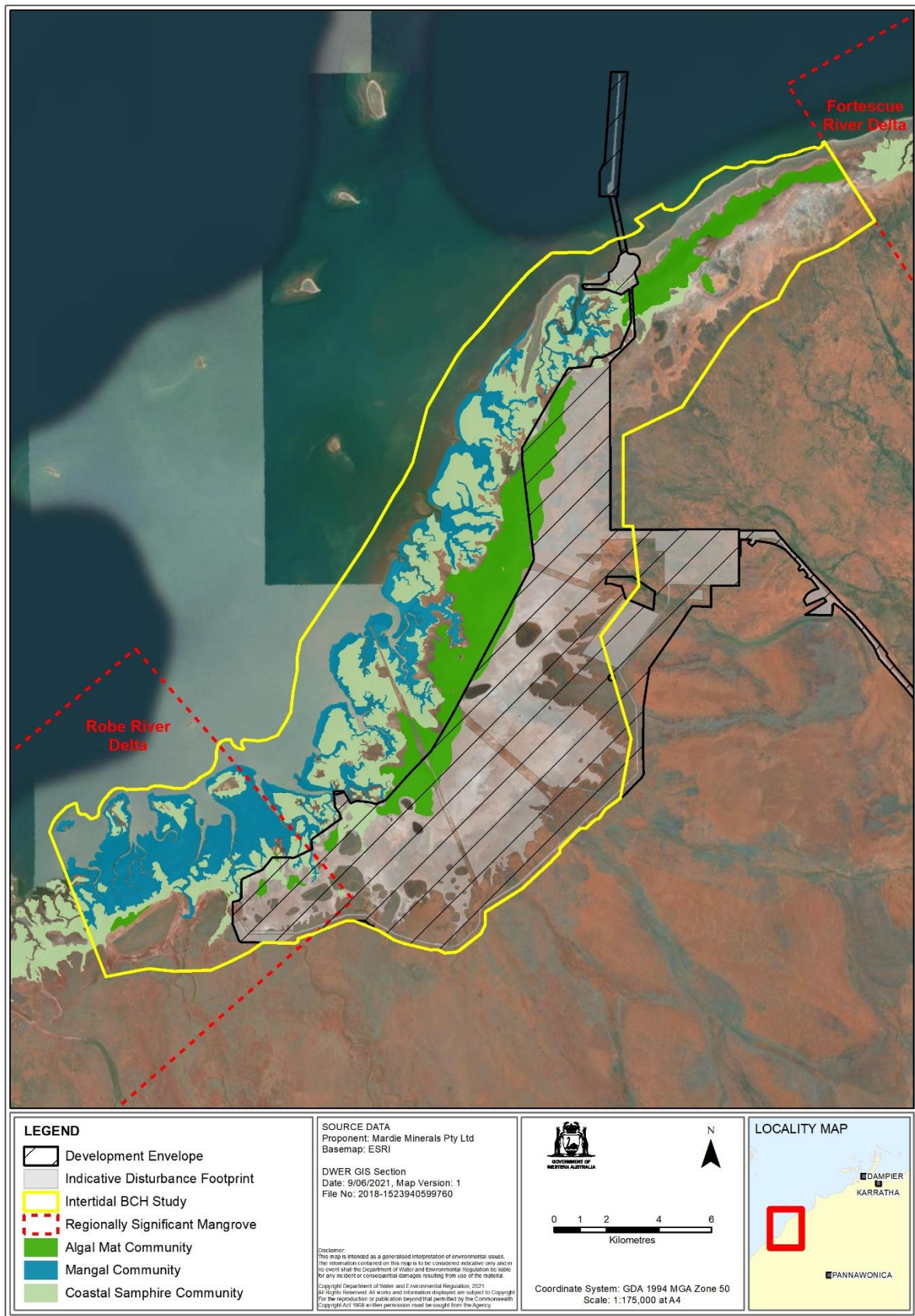


Figure 3: Intertidal benthic communities and habitat study area

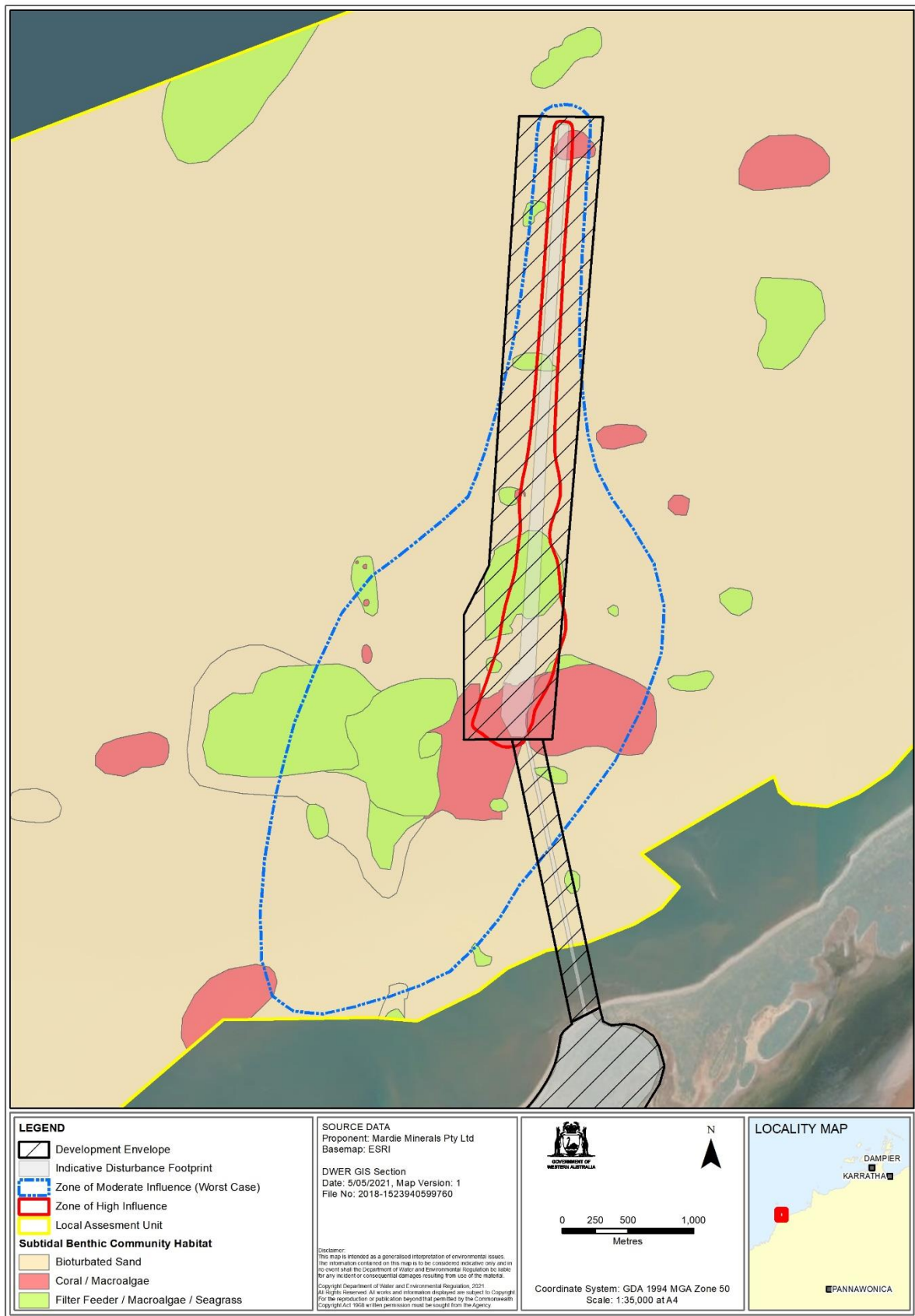


Figure 4: Zone of High Influence and Zone of Moderate Influence for dredging operations

Schedule 1

All co-ordinates are in metres, listed in Map Grid of Australia Zone 51 (MGA Zone 51) datum of Geocentric Datum of Australia 1994 (GDA94)

Spatial data depicting the figures in this schedule are held by the Department of Water and Environmental Regulation as follows:

- Development envelopes and Indicative Footprint (Figure 1) – DWERDT468947
- Marine Levels of Environmental Protection (Figure 2) – DWERDT468963
- Intertidal BCH study area (Figure 3) – DWERDT468968
- Dredging areas on influence (ZoMI and ZoHI) (Figure 4) – DWERDT468959

**Schedule 2: Proponent residual Impacts and Risk Management Measures –
Mardie Project (Condition 14)**

Project	Value and Timeframe	Responsibility to implement	Cost
Project A Mapping of the original and current extent of Samphire and Algal mat on the west Pilbara Coast .	\$1500,000 prior to the commencement of construction	Proponent	\$1500,000
Project B Identify and quantify the potential effects of sea level rise on mangroves, samphire and algal mat on the west Pilbara Coast	\$500,000 prior to the commencement of construction.	Proponent	\$500,000
Project C (i) Identify the ecological roles, values and functions of algal mat on the west Pilbara coast	\$500,000 prior to the commencement of construction	Proponent	\$500,000
Project C (ii) Identify the ecological roles, values and functions of intertidal benthic communities and habitat on the west Pilbara coast	\$2102 per hectare of algal mat, coastal samphire or mangroves that monitoring indicates has been lost due to project-attributable indirect impacts, or subject to loss of health, per cent cover or diversity of intertidal within 3 months of the loss being identified.	Proponent	
Project C (iii) Identify the ecological roles, values and functions of intertidal benthic communities and habitat on the west Pilbara coast	\$2102 per hectare of mangroves within the RRDMMMA, that the CEO has approved to be disturbed, prior to the commencement of disturbance within the RRDMMMA	Proponent	