OPTIMISED MARDIE PROJECT

PROPOSAL CONTENT DOCUMENT

Table 1: General Proposal Content Description

Proposal Title	Optimised Mardie Project
Proponent Name	Mardie Minerals Pty Ltd
Short Description	The proposal is to develop a solar salt and sulphate of potash production plant and associated export facility at Mardie, approximately 80 km south-west of Karratha. The proposal includes two seawater intakes, brine discharge, evaporation and crystalliser ponds, processing plant, causeway, trestle jetty with associated dredge channel, offshore disposal of dredge material, and supporting infrastructure.

Table 2: Proposal Content Elements

Proposal Element	Location	Proposal extent, capacity or range
Physical Elements		
Development Envelope	Figure 1 Figure 4	Terrestrial development envelope not to exceed 19,763 ha. Marine development envelope not to exceed 53 ha. Dredge development envelope not to exceed 307.5 ha. Combined area of concentrator ponds and crystalliser ponds not to exceed 11,368 ha.
Disturbance footprint	Figure 1	Terrestrial disturbance not to exceed 13,476 ha within 19,763 ha development envelope.
Direct disturbance of native vegetation	Figure 1	Clearing of no more than 3,014 ha vegetation in 'good' to 'excellent' condition native vegetation. Clearing of no more than 863 ha landward samphire. Clearing of no more than 330 ha of coastal samphire.
Impacts on PEC and Mangrove Habitat	Figure 2	No more than 145 ha direct and 20 ha indirect impacts to Horseflat PEC. No more than 13 ha of direct disturbance to mangrove habitat outside of the RRDMMA. No more than 4 ha of clearing within the RRDMMA inclusive of any clearing conducted by the proponent prior to the issue of this statement and clearing conducted by the proponent under any other approval mechanism subject to the requirements of conditions B3-4 and C1-1.
Direct disturbance to Algal mats	Figure 4	No more than 880 ha of direct impact to algal mats.
Dredging	Figure 3	No more than 800,000 cubic metres, directly disturbing no more than 65 ha within the 307.5 ha dredge development envelope.
Offshore Dredge Spoil Disposal	Figure 6	Capital dredging of no more than 355,000 cubic metres, and maintenance dredging as required, directly disturbing no more than 30.3 ha at Dredge Material Placement Area (DMPA) 4.
Foraging habitat for the Pilbara leaf-nosed bat (*Rhinonicteris aurantia*)	Figure 1	Clearing no more than 3,254 ha.
Foraging habitat for the Northern coastal free-	Figure 1	Clearing no more than 1,186 ha.

Proposal Element	Location	Proposal extent, capacity or range
tailed bat (*Ozimops cobourgianus*)		
Habitat for the Pilbara Olive Python (*Liasis olivaceus barroni*)	Figure 1	Clearing no more than 6 ha.
Foraging habitat for the Northern Quoll (*Dasyurus hallucatus*)	Figure 1	Clearing no more than 80 ha.
Zone of High Impact (e.g. marine)	Figure 3 Figure 6	Marine zone of high impact to be limited to 121 ha at the dredge area and 355 ha at the offshore dredge spoil disposal area.
Level of ecological protection areas (marine environmental quality)	Figure 4	Moderate ecological protection area (MEPA) not to exceed 53.9 ha. Low ecological protection area (LEPA) not to exceed 20.2 ha.
Distance between crystallisers and Mardie pool	Figure 1	Minimum distance of 1000 metres to be maintained between crystalliser ponds and Mardie pool.
Drainage corridors	Figure 1	Minimum of two drainage corridors of a minimum of 200 metres wide to be established and aligned with existing natural drainage lines.
Operational Elements		
Groundwater abstraction	Figure 7	Groundwater abstraction not to exceed 0.7 GL per annum.
Marine discharge rate	Figure 4	Brine discharge not to exceed 5.5 GL per annum with a specific gravity of no more than 1.25 via diffuser.
Seawater intake	-	Seawater intakes to be fitted with four-sided screens designed to ensure a rate not exceeding 0.15 metres per second through the screen. Primary seawater intake is to not exceed 180 GL per annum.
Proposal Elements with greenhouse gas emissions		
Construction Elements		
Scope 1	N/A	57,847 tCO2-e per year
Scope 2	N/A	None
Scope 3	N/A	Unlikely to be significant
Operation Elements		
Scope 1	N/A	66,628.01 tCO2-e per year
Scope 2	N/A	None
Scope 3	N/A	Unlikely to be significant
Rehabilitation and Closure		
Proposal infrastructure to be removed within 3 years of closure Construction disturbance that is not required for operations is to be rehabilitated		
Timing Elements		
Mine life	-	Up to 61 years from issue of this statement.
Seawater intake	-	Abstract seawater from primary and secondary intake only when tides are at or above Mean Sea Level.

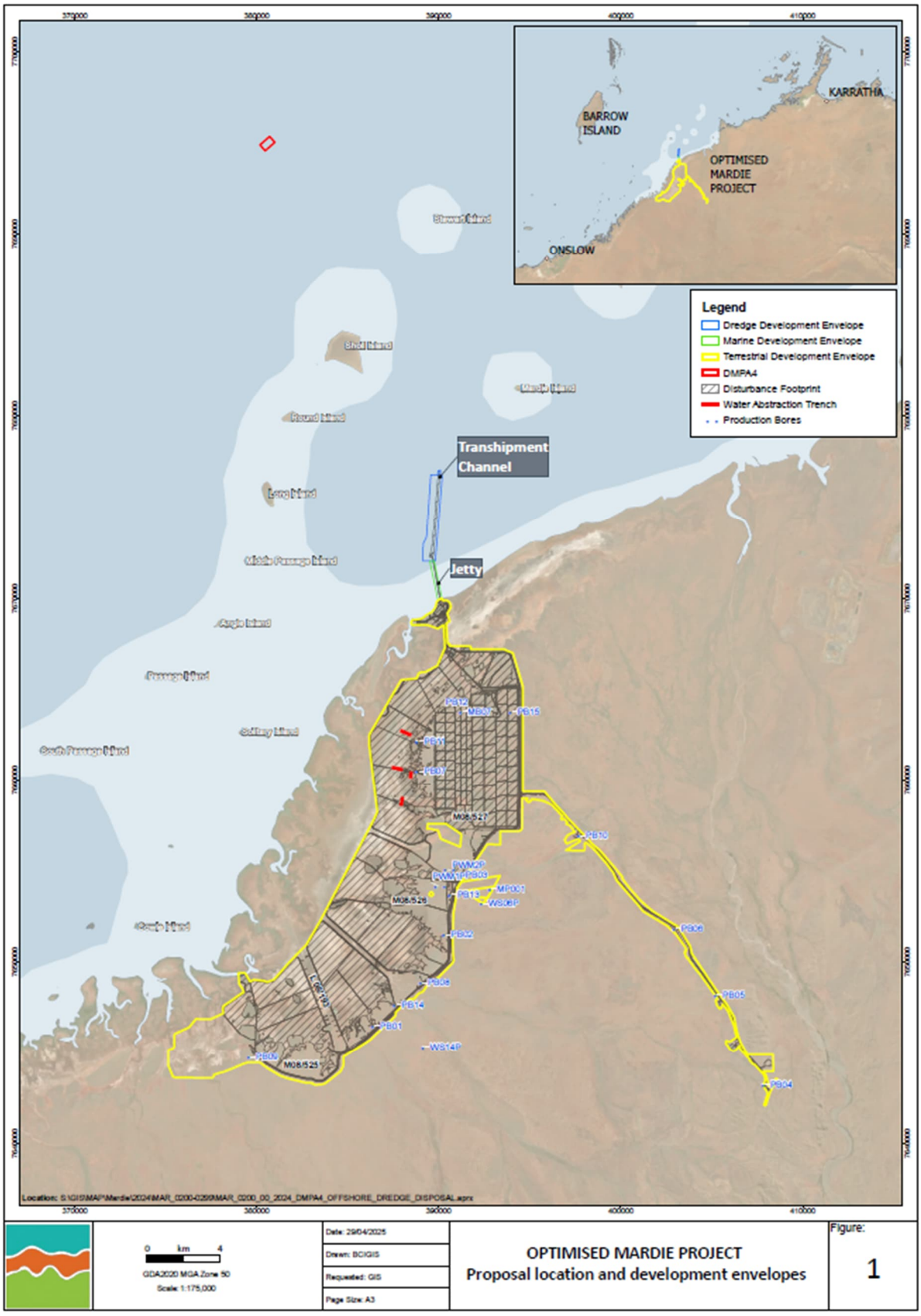

Figure 1: Proposal location and development envelopes

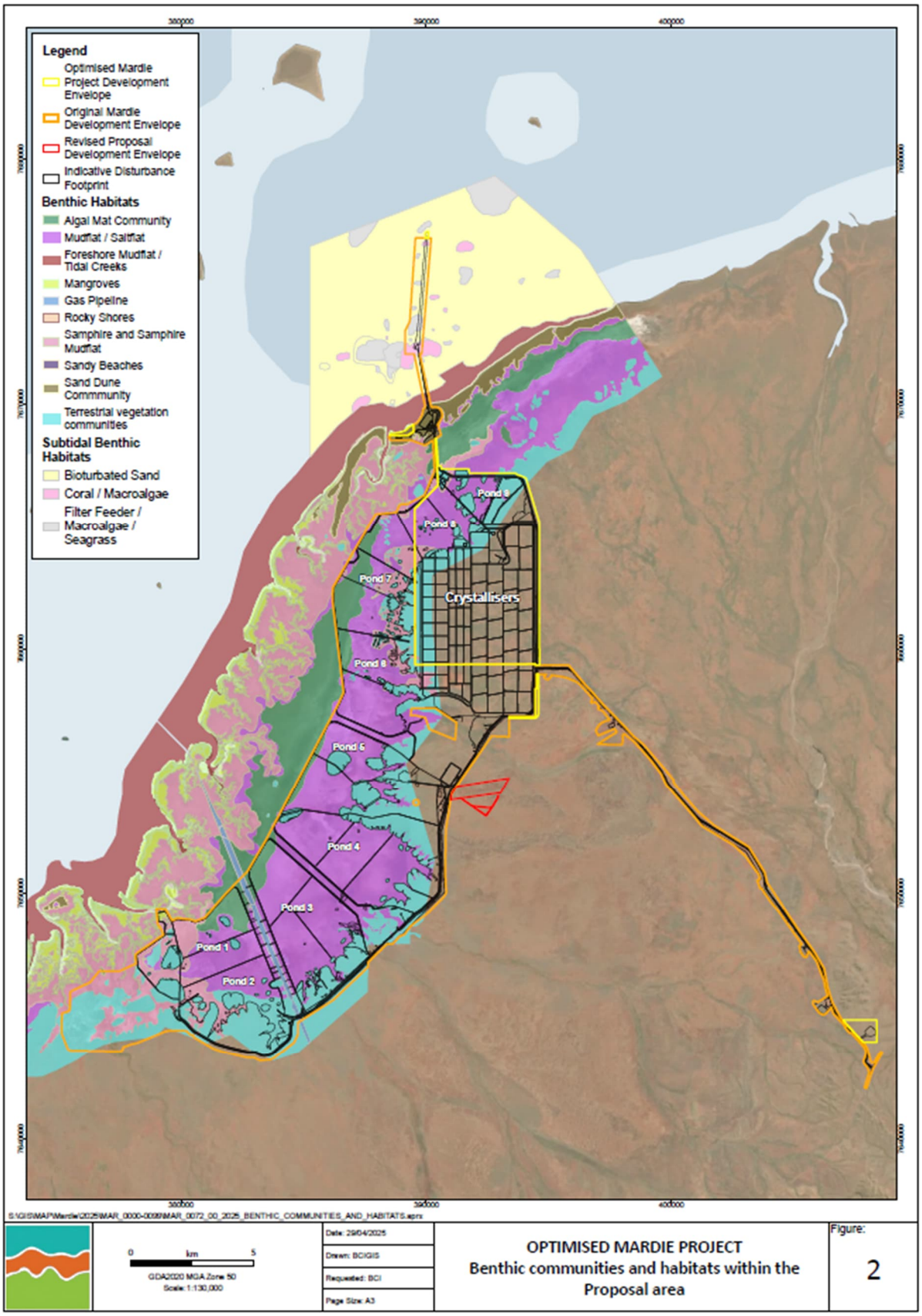

Figure 2: Benthic communities and habitats within the Proposal area

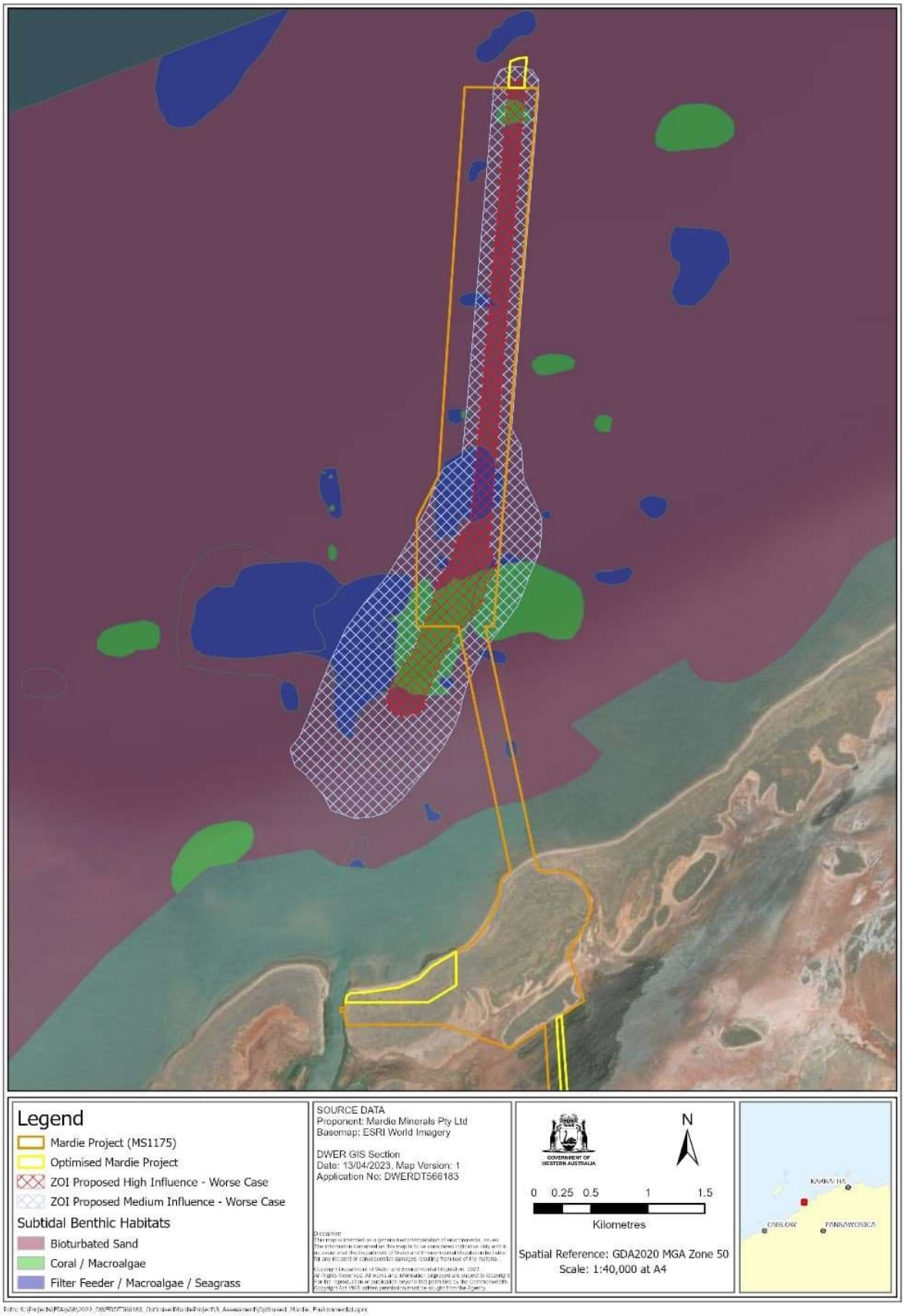

Figure 3: Dredge envelope with zones of High and Moderate Influence

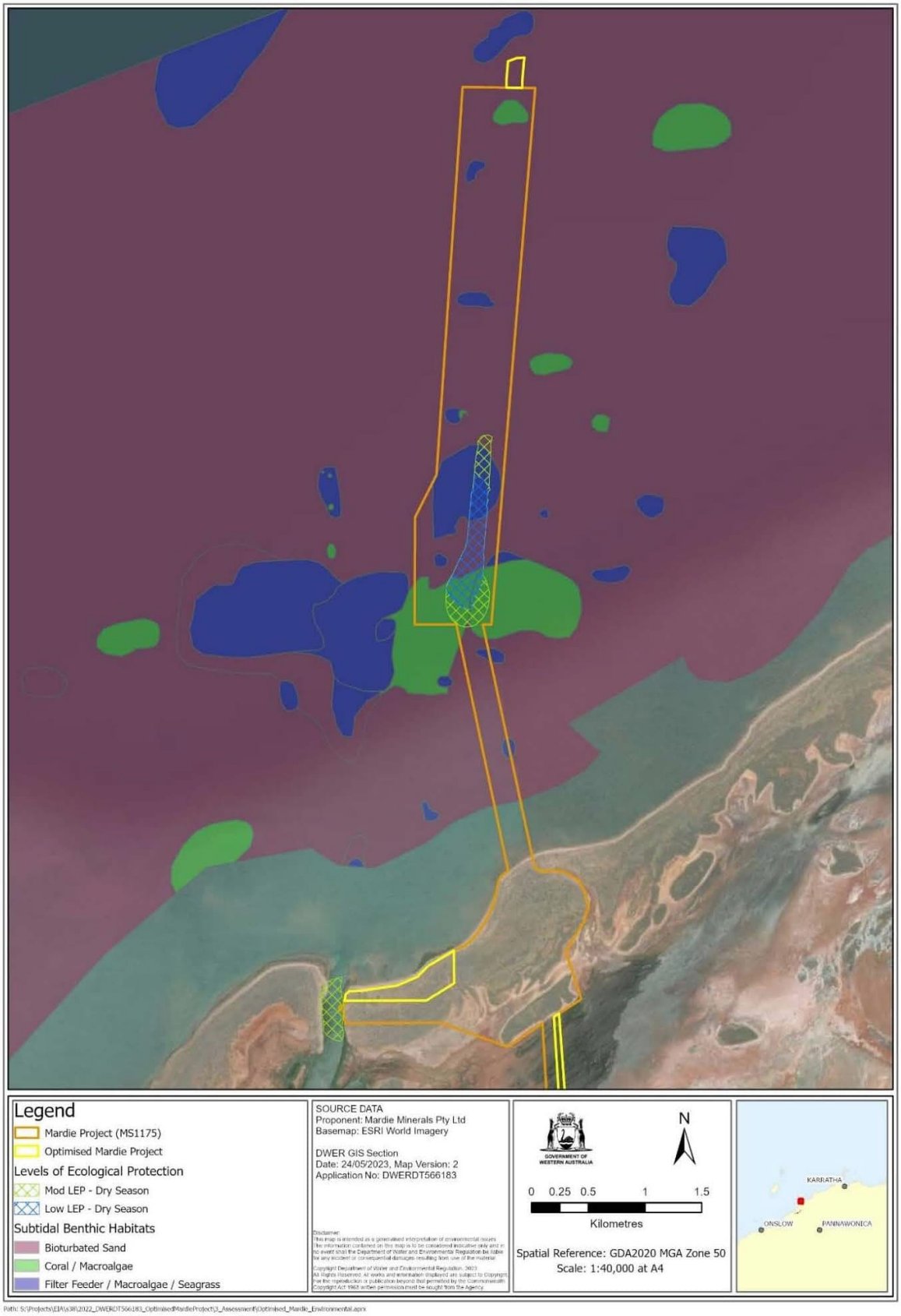

Figure 4: Level of ecological protection areas around diffuser location

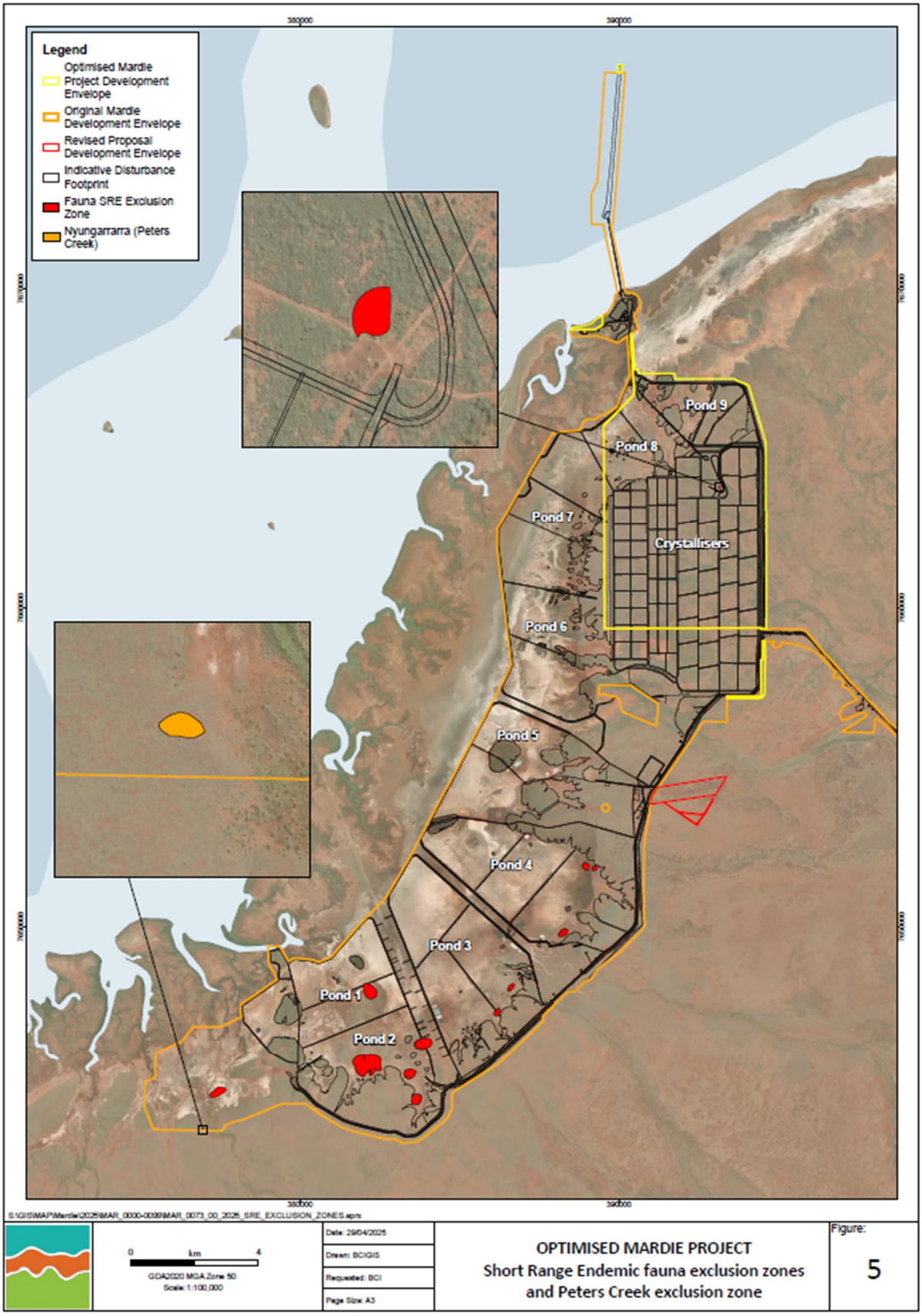

Figure 5: Short Range Endemic fauna exclusion zones and Peters Creek exclusion zone

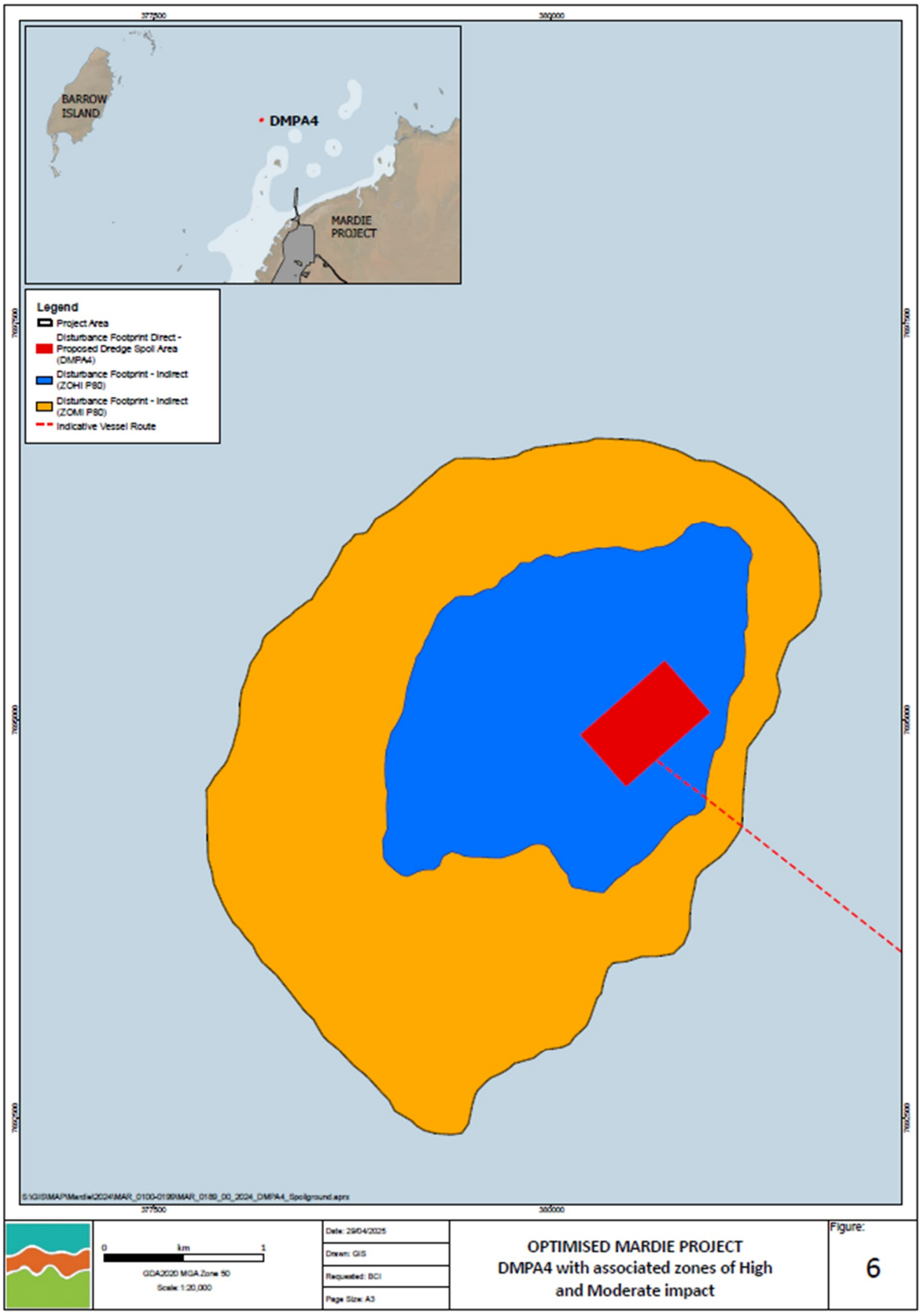

Figure 6: DMPA4 with associated zones of High and Moderate impact

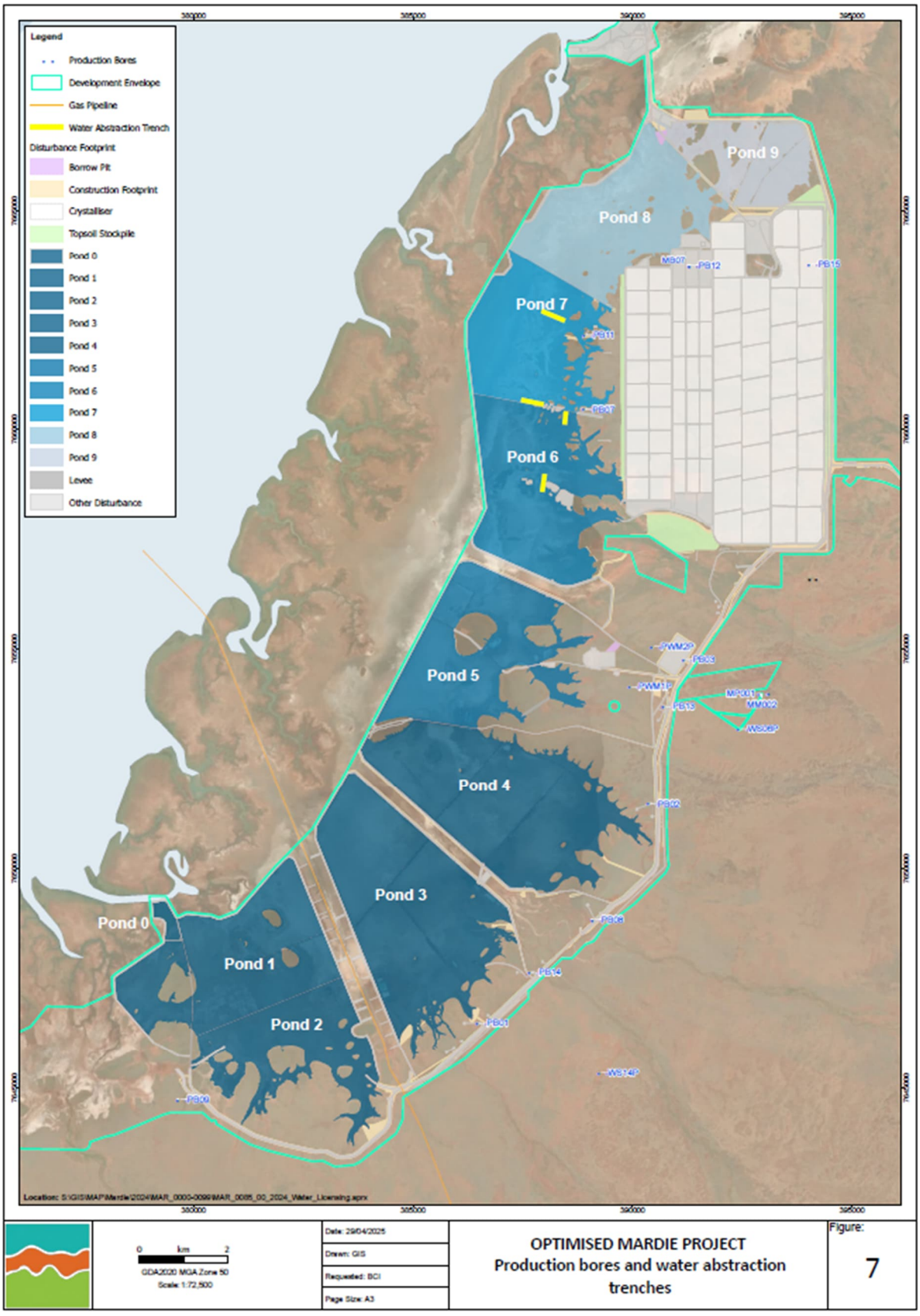

Figure 7: Production bores and water abstraction trenches