GOVERNMENT OF WESTERN AUSTRALIA

Environmental Protection Authority

Environmental Protection Act 1986

Section 45C

NOTICE OF DECISION TO CONSENT TO AMEND AN APPROVED PROPOSAL AND IMPLEMENTATION CONDITIONS WITHOUT INQUIRY

PERSON TO WHOM THIS NOTICE IS GIVEN

Roy Hill Iron Ore Pty Ltd

PROPOSAL TO WHICH THIS NOTICE RELATES

Revised Proposal for the Roy Hill Iron Ore Mine

MINISTERIAL STATEMENT and ANY APPROVED CHANGES

MS 1189, issued 19/05/2022

DECISION

Pursuant to s. 45C (1) (c) of the *Environmental Protection Act 1986* (EP Act), the Deputy Chair acting as delegate for the Minister for Environment gives approval to the following amendments of the approved proposal:

- Remove the total dissolved solids (TDS) limit of 50,000 mg/L for aquifer reinjection of excess mine dewater.
- Remove the TDS limit of 50,000 mg/L for dust suppression using excess mine dewater.
- Replace the introduction to reference a Proposal Content Document for the purposes of describing the approved proposal.
- Replace condition 1-1 to reflect the removal of the TDS limits.

The amended proposal content document and figures are attached.

SUMMARY OF REASONS

- The 50,000 mg/L TDS limit was proposed as a conservative limit at the time of assessment due to the lack of detailed hydrogeological understanding. The proponent has now collected operational data which has provided confidence that the reinjection of hypersaline water will not result in significant environmental impacts associated with ingress or leakage of saline water into the shallow aquifer.

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- The proponent has proposed to only reinject excess water into the confined aquifer of the Remote MAR North and South-West Injection Borefield, where no upwards leakage to the unconfined aquifer has been observed.
- There is unlikely to be any additional loss of stygofauna habitat from leakage or infiltration of saline water to the unconfined aquifer.
- The proponent is required to monitor the shallow aquifer for changes to TDS and groundwater levels through the proponent's Water Management Plan, and implement contingency actions if exceedances of threshold criteria are observed.
- There is unlikely to be any new or additional impacts to flora and vegetation from the application of saline water for dust suppression or leakage to unconfined aquifer.
- The proponent is required to monitor and manage impacts to vegetation health through the proponent's Vegetation Management Plan.
- The amendments are unlikely to result in any impacts on social surroundings values.
- The proponent is required to submit a revised Water Management Plan prior to reinjection into the Remote MAR South borefield prior to reinjecting groundwater above the current 50,000 mg/L TDS limit.
- The Department of Energy, Mines, Industry Regulation and Safety is able to mitigate risks associated with the removal of the TDS limit for dust suppression under the *Mining Act 1978*.
- The proponent has advised that it consulted the Karlka Nyiyaparli Aboriginal Corporation (KNAC) about the proposed change and that KNAC comments were addressed in the change application, and will consult with KNAC about the revised Water Management Plan.
- There are no new environmental factors likely to be significantly affected as a result of the amendments.
- The effects of the amendments on their own, the effect of the amendments in the context of the existing referred proposal, cumulative impacts, and holistic impacts have been considered.
- The amended proposal will be substantially the same character as the existing referred proposal.

EFFECT OF THIS NOTICE:

1. The proposal as amended in accordance with this notice is taken to be able to be implemented under s. 45 of the EP Act.

RIGHTS OF APPEAL:

There are no rights of appeal under the EP Act in respect of this decision.

Ms Lee McIntosh
Delegate of the Environmental Protection Authority
DEPUTY CHAIR

2 July 2024

Attachment 1- Amended proposal content document and figures showing the new approved proposal

Table 1: General proposal content description

Proposal title	**Revised Proposal for the Roy Hill Iron Ore Mine**
Proponent name	Roy Hill Iron Ore Pty Ltd
Short description	The revised proposal is to mine and process iron ore from on the southern slopes of the Chichester Range and to develop and operate associated infrastructure 110 km north of Newman in the Pilbara region of Western Australia. *NO CHANGE*

Table 2: Proposal content elements

Element	Location and description	Existing proposal extent, capacity or range	Proposed amendment (section 45C)	Maximum extent, capacity or range
Physical elements				
Mine pits and associated infrastructure *Indicative Disturbance Footprint*	Figures 1a and 1b	No more than 17,395 ha in a 94,474 ha Development Envelope	No change[1,2]	No more than 17,395 ha
Mine pits and associated infrastructure *Location of disturbance footprint*	Figures 1a and 1b		No change[1]	Within the development envelope Not within the Flora Exclusion Area Not within the Ghost Bat Exclusion Area Not within the Heritage Exclusion Area except for the purposes of: • An access road • Rehabilitation of existing disturbed areas • Environmental monitoring activities

				Not within the sheet flow buffer area except for the purpose of South-West Injection Borefield infrastructure
Overburden	N/a	3,330 Mt overburden to be used as pit infill, used for construction of infrastructure and stored in out of pit dumps	No change	3,330 Mt overburden to be used as pit infill, used for construction of infrastructure and stored in out of pit dumps
In-pit tailings storage facilities	Figure 3	Bravo and Zulu pits utilised for in-pit tailings disposal	No change[1]	Only in mine pits shown in Figure 3
Borefields	Figure 2	Increase in borefield areas and operation of SWIB, Mine Borefield, Stage 1 Borefield, Remote MAR Borefield and Southern Borefield	No change[1]	Within the indicative borefield envelopes
Surface Water Diversion structures	N/a	Permanent surface water diversion structures, rather than reinstatement of creeks following backfill of mine pits and decommissioning of mine infrastructure.	No change	Permanent surface water diversion structures, rather than reinstatement of creeks following backfill of mine pits and decommissioning of mine infrastructure.
Evaporation ponds and SWIB recharge basins	Figure 4	N/a	No change[1]	Avoid the drainage lines (watercourse) shown in Figure 4
Operational elements				
Mineral resources	N/a	1 Bt Marra Mamba Ore, 1 Bt Detrital Ore	No change[2]	1 Bt Marra Mamba Ore, 1 Bt Detrital Ore
Depth of pits	N/a	120 m nominal depth	No change	No more than 120 m below ground level
Dewatering volumes *Mine pit dewatering volumes*	N/a	Up to 626 GL for the Life of Mine dewatering (peak rate of 65 GL/a)	No change[1]	No more than 626 GL

Dewatered Saline Groundwater to be used for dust suppression *Excess water used for dust suppression*	N/a	Up to 7.4 GL/a of surplus water to be used for dust suppression (up to 50,000 mg/L TDS).	Removal of the 50,000 mg/L TDS limit on excess water disposal by dust suppression	No more than 7.4 GL in total
Dewatered Saline Groundwater to be disposed to Evaporation Ponds *Disposal of excess water to evaporation ponds*	N/a	Surplus saline water to be disposed to Evaporation Ponds (proposed up to 540 ha)	No change[1]	No more than 540 ha
Dewatered Saline groundwater and RO Plant reject water to be disposed to recharge basins and/or re-Injection Volumes *Excess water disposal by reinjection basins, and aquifer injection at:* • *South-West Injection borefield* • *Remote MAR borefield* • *Southern borefield* • *Stage 1 borefield* • *Mine borefield*	Figures 1a and 1b Figure 2	508 GL surplus water (up to – 50,000 mg/L TDS) to be disposed of to re-injection bores (MAR) for remaining LOM.	Removal of the 50,000 mg/L TDS limit on excess water disposal by aquifer injection	No more than 508 GL
Water Supply *Volume of water supply from Southern Borefield*	N/a	Water from mine and advanced dewatering would be used. Up to 150 GL from the Southern Borefield	No change[1]	No more than 150 GL
Emissions	N/a	450,000 tCO_2 equivalent per annum	No change	*Line removed due to duplication with below section*

Greenhouse gas emissions *NO CHANGE*	
Average annual emissions	
Scope 1	450,000 tCO_2 equivalent per annum[3]
Scope 2	288,000 tCO_2 equivalent per annum[4]
Scope 3	N/a

Life of mine emissions (2022-2032)	
Scope 1	4.39 $MtCO_2$-e[5]
Scope 2	3.17 $MtCO_2$-e[6]
Scope 3	N/a

Rehabilitation *NO CHANGE*

After completion of activities, rehabilitation of cleared and disturbed areas will be undertaken to meet closure criteria in accordance with the Mine Closure Plan.

Where practicable, progressive rehabilitation will be undertaken over the life of the mine.

Areas disturbed through the implementation of the Proposal will be designed to be safe and non-polluting and will be constructed so the final shape, size, stability, are comparable with the natural landforms in the area.

Commissioning *NO CHANGE*

Commissioning of the infrastructure and operational elements will be undertaken subject to the operational limits above.

Decommissioning *NO CHANGE*

Mine infrastructure and landforms will be decommissioned in accordance with the Mine Closure Plan, this will include permanent surface water diversions.

Other elements which affect extent of effects on the environment

Proposal time	Maximum project life/ life of mine	2032	No change

Note:

1 *these are not considered changes as these amendments to the wording of the Proposed Extent were determined by EPA through the approval of MS 1189.*

2 *these are not considered changes as these amendments were already made and accepted by EPA under the section 43A notice issued by the EPA on 31 August 2021.*

3 *Value as per Table ESO-2 (referred to as stand-in PCD of original MS1189) and as approved in MS1189.*

4 *Table ESO-2 was silent on Scope 2 GHG emissions. The value included was assessed in EPA Report 1716 as an unabated level.*

5 *This value represents the net (abated) GHG emissions for the LOM as per Condition 9-1 of MS1189.*

6 *This value represents the net GHG emissions of Scope 2 (refer to Note 4) at* 288,000 tCO_2 *under an 11 year LOM.*

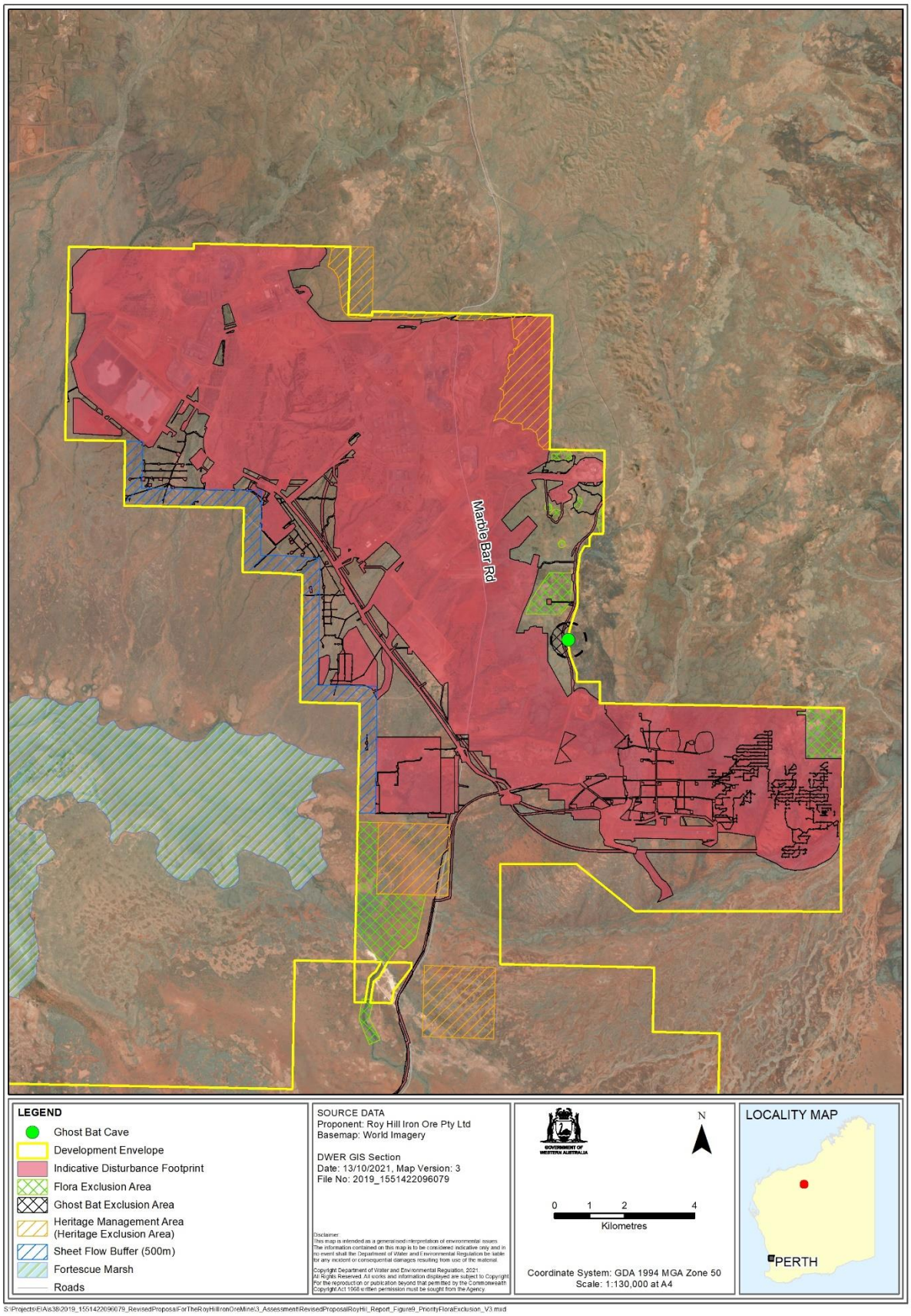

Figure 1a: Development Envelope (North)

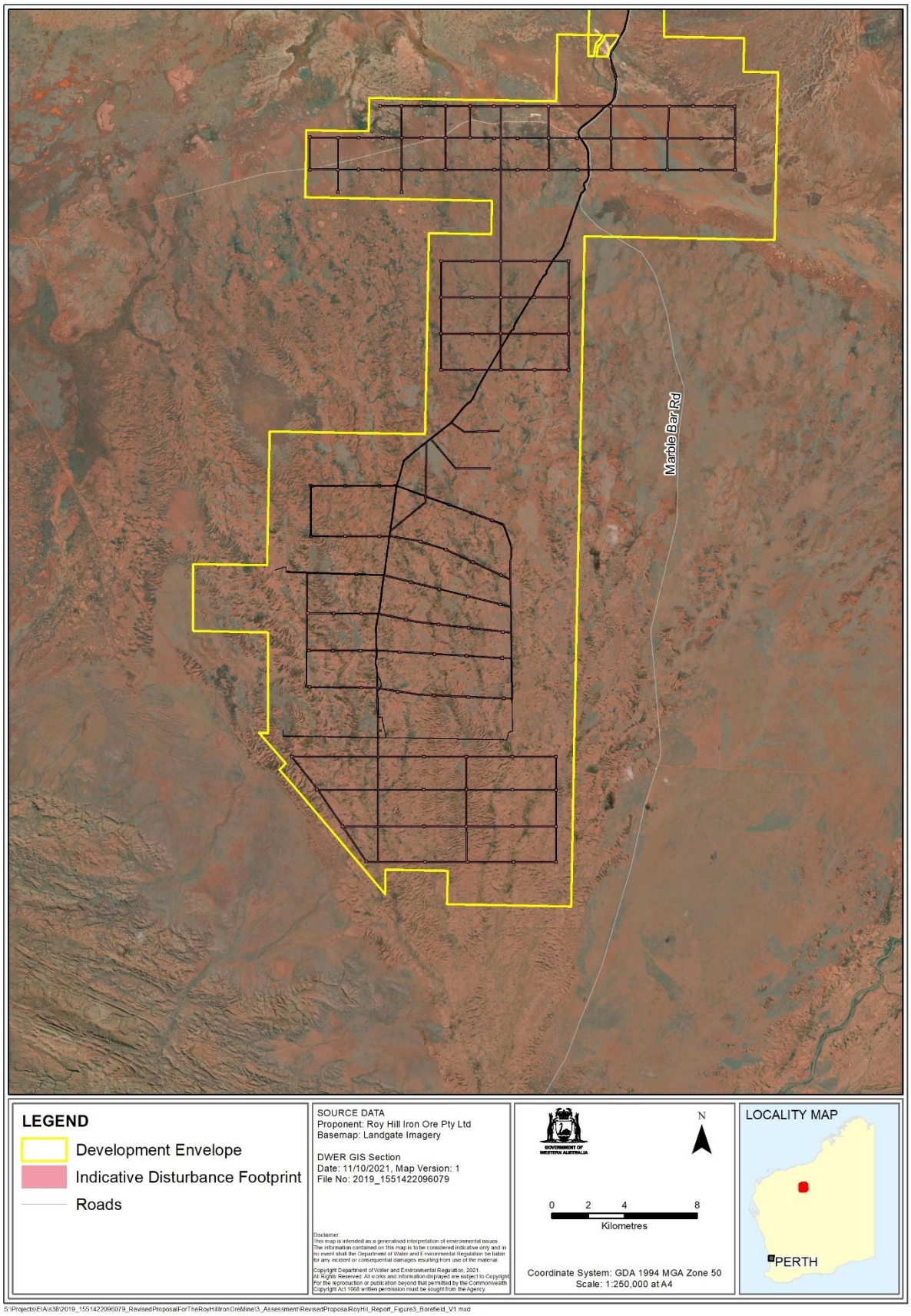

Figure 1b: Development Envelope (South)

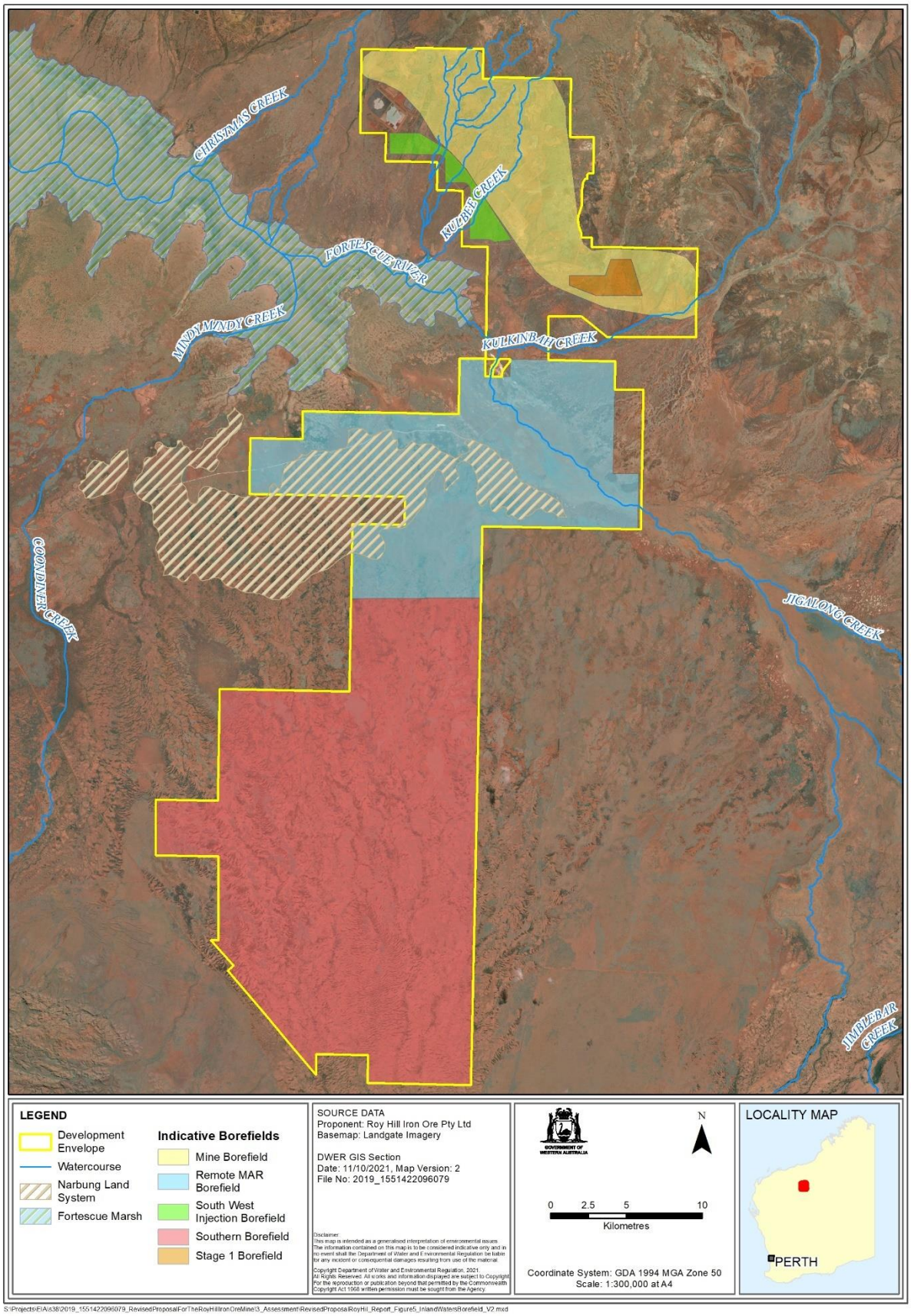

Figure 2: Indicative borefield envelopes

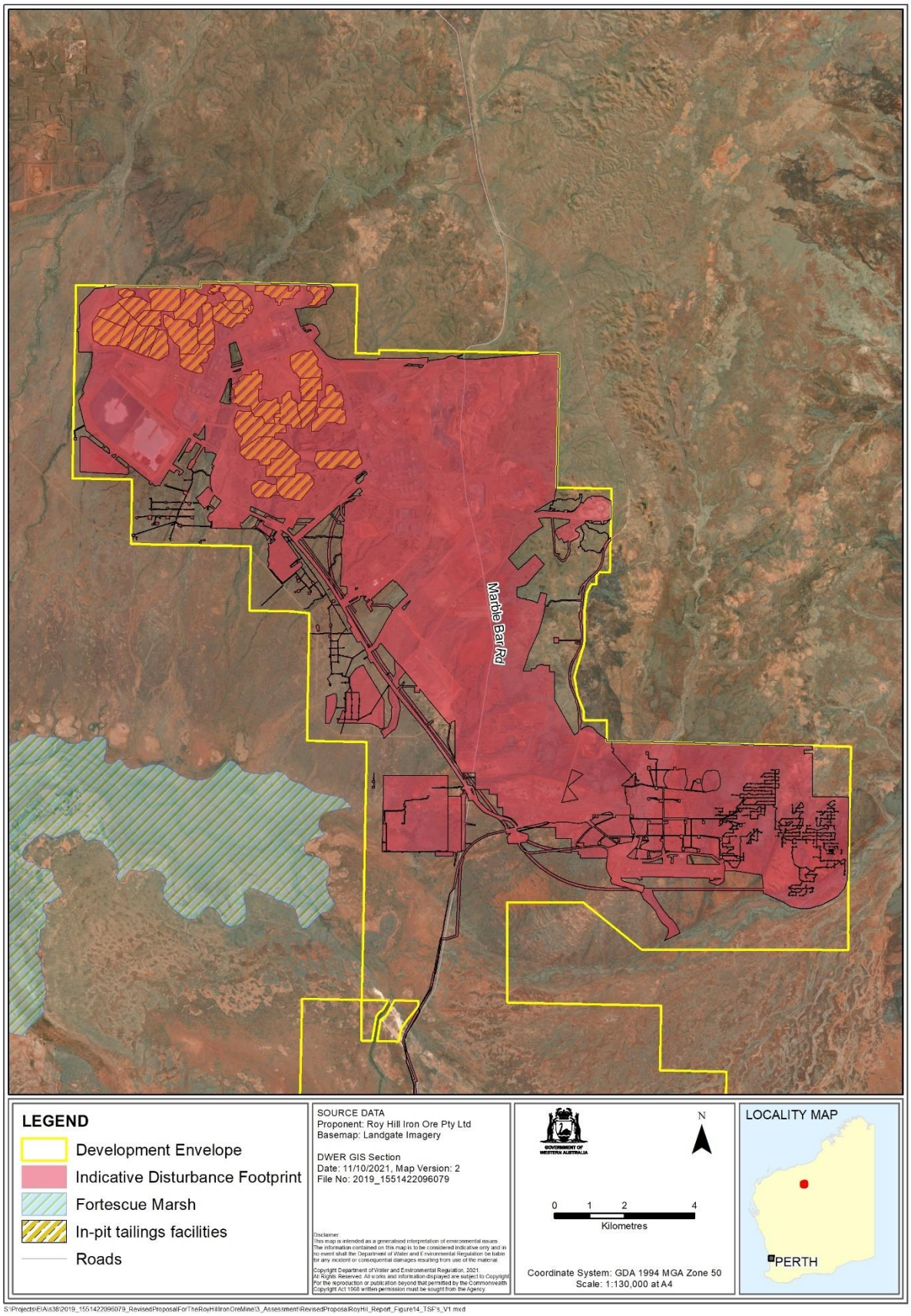

Figure 3: Indicative In-pit tailings storage facilities

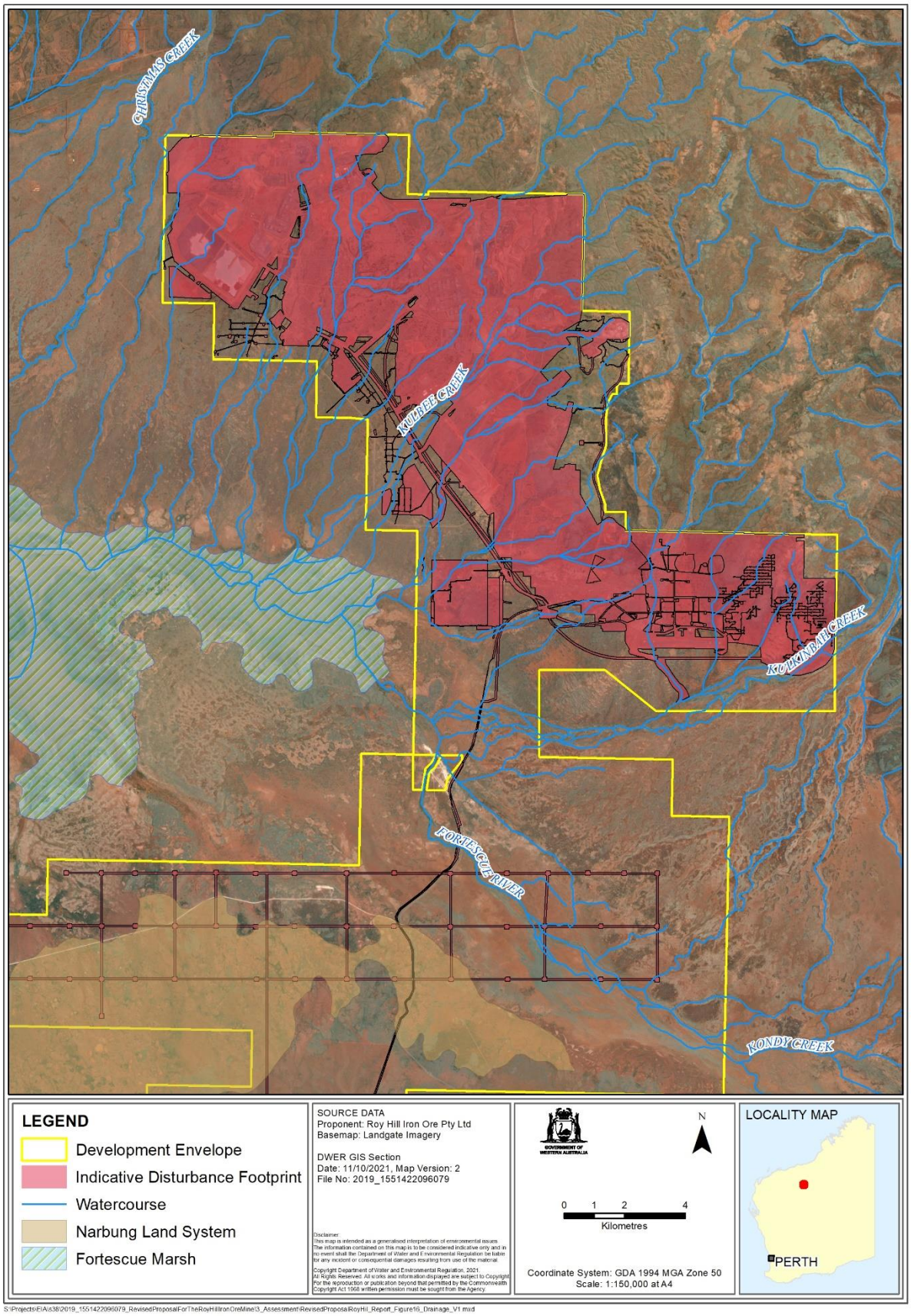

Figure 4: Drainage line (watercourse) avoidance – Evaporation pond and recharge basins

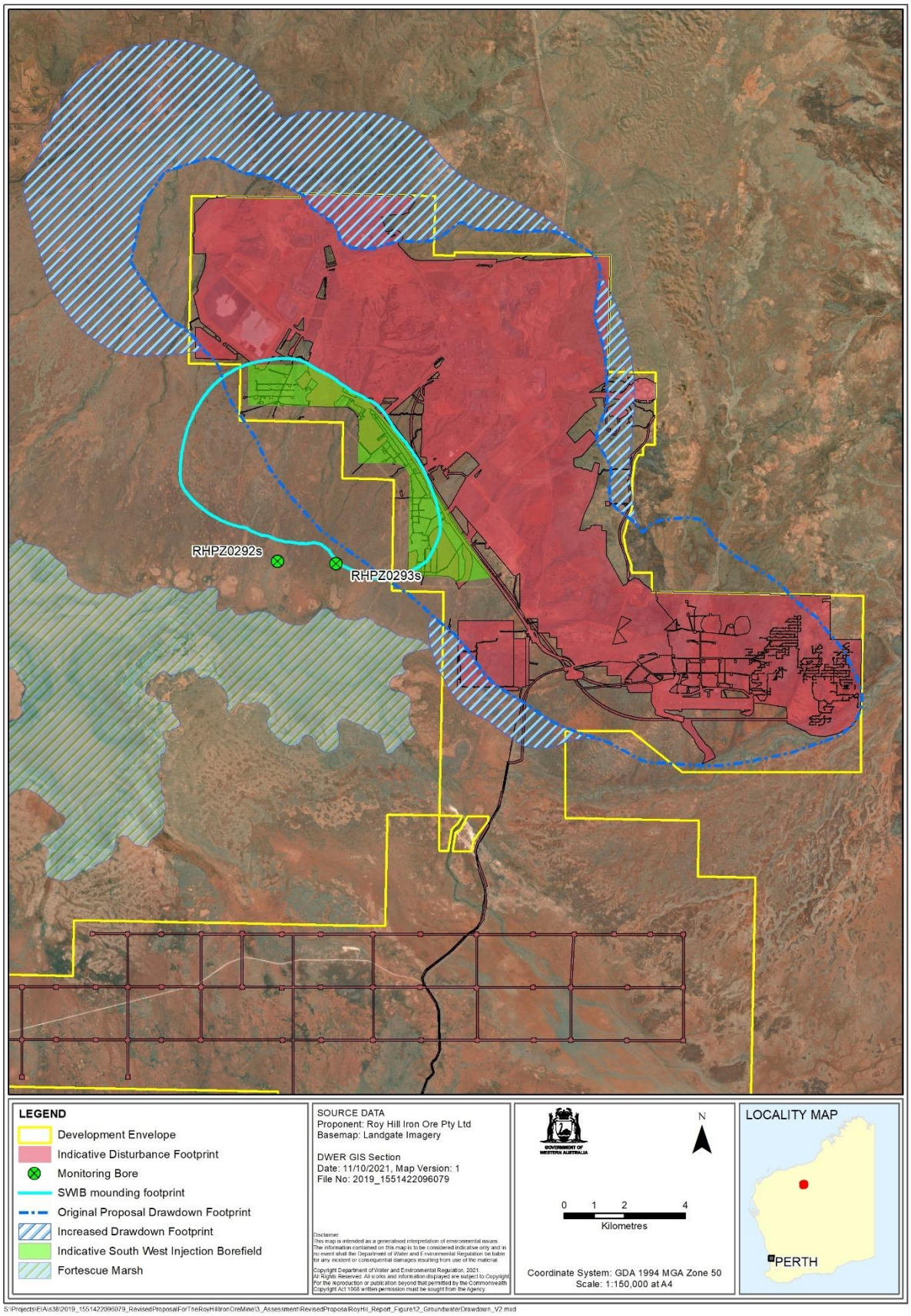

Figure 5: Regional monitoring bores RHPZ0292S and RHPZ0293S

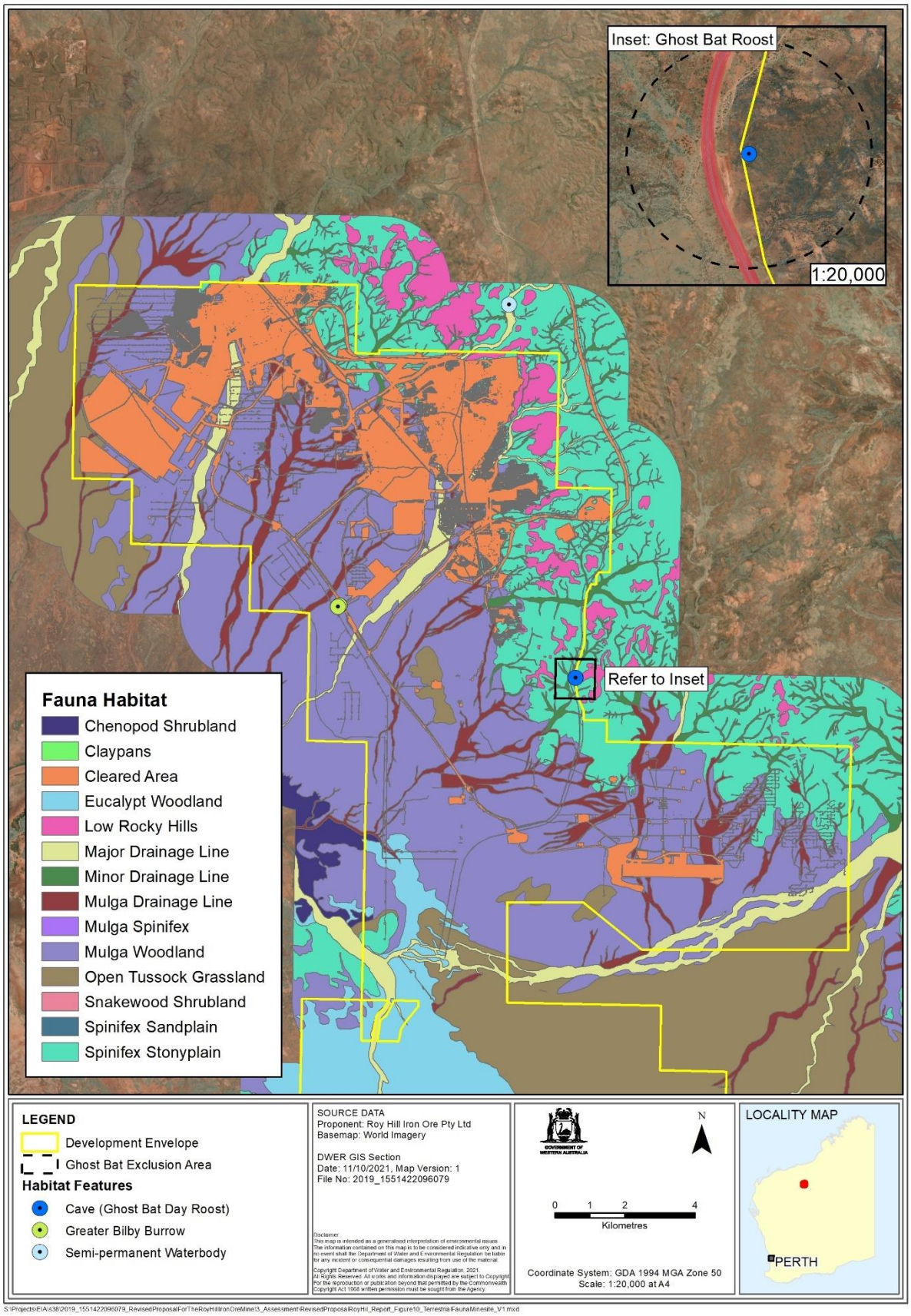

Figure 6(a): Fauna habitats (development envelope north)

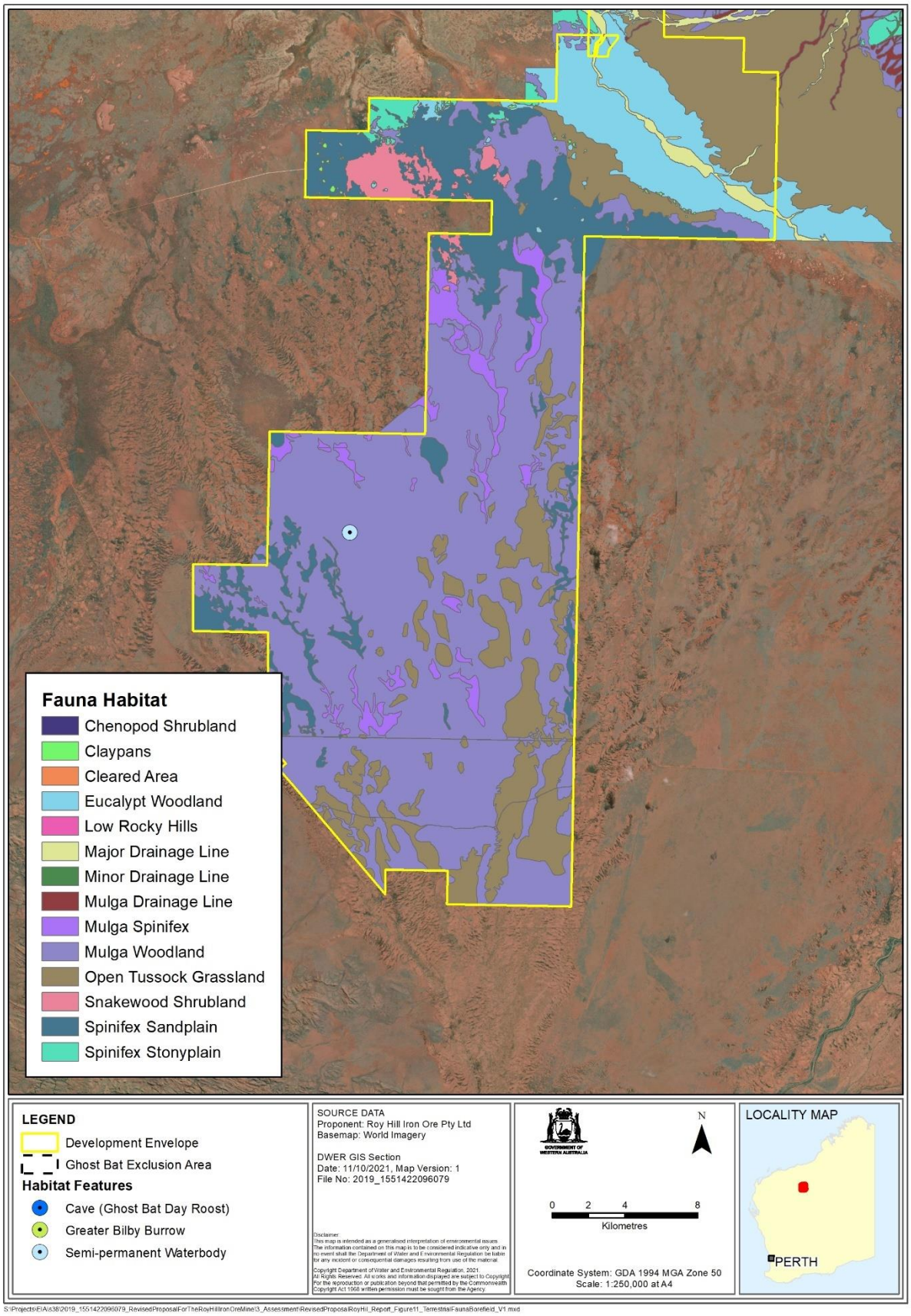

Figure 6(b): Fauna habitats (development envelope south)

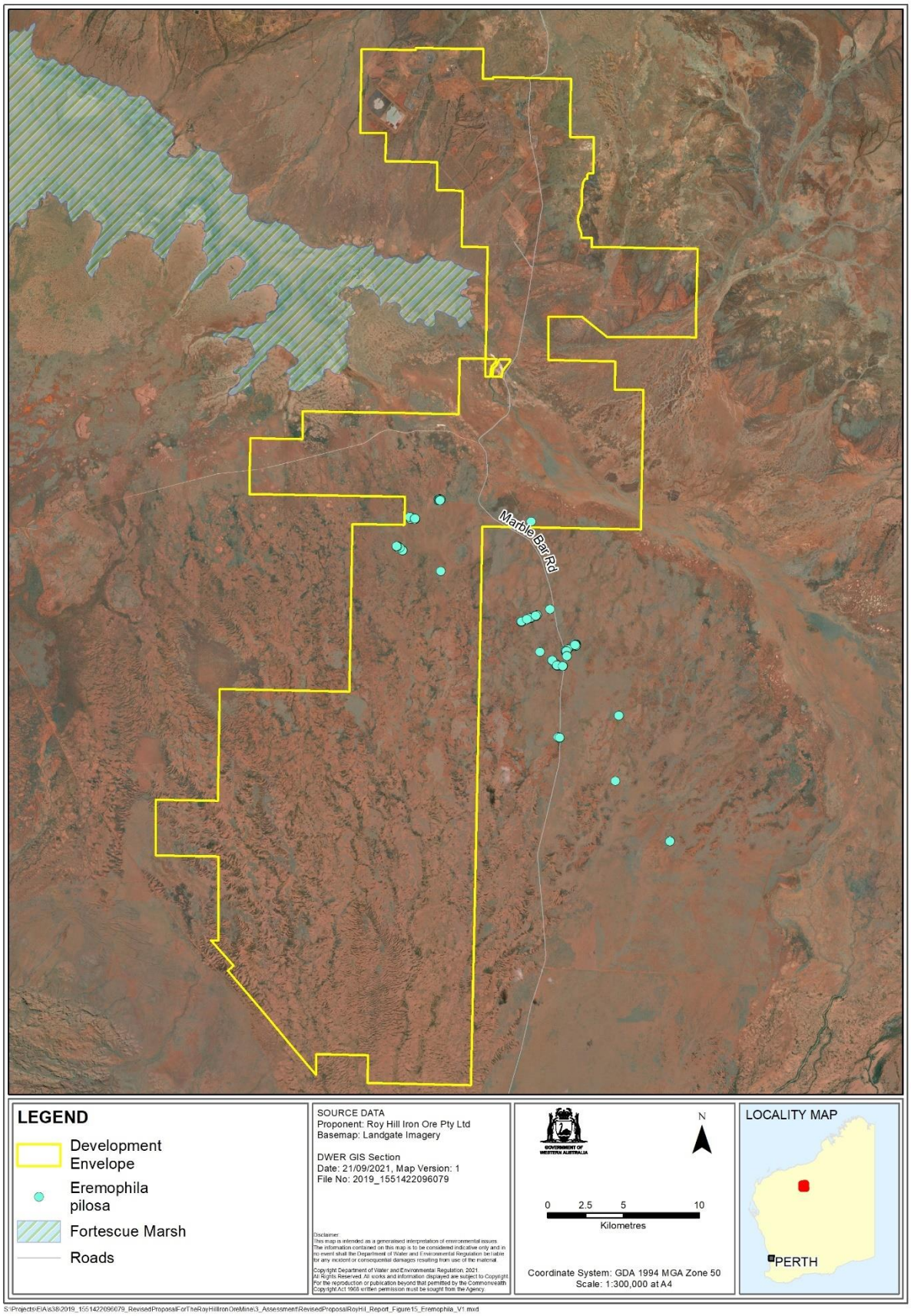

Figure 7: Local records extent - *Eremophila pilosa*