ELECTROSTATE MALINDA PTY LTD

YINNETHARRA LITHIUM PROJECT

HYDROLOGY ASSESSMENT

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Disclaimer

PROJECT 311012-02206 - 311012-02206-HY-REP-00002-0: Yinnetharra Lithium Project - Hydrology Assessment

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Executive summary

Worley was engaged by Electrostate Malinda Pty Ltd. (Electrostate), a wholly owned subsidiary of Delta Lithium Limited (Delta), to complete a hydrology assessment (the Study) for the Yinnetharra Lithium Project, located approximately 120 km northeast of Gascoyne Junction in Western Australia.

Hydrologic and hydraulic modelling was completed to characterise hydrological behaviour and assess flood risk under existing conditions. Post-development flood modelling was then conducted with proposed pits and mine infrastructure in place and the results used to:

- Identify the surface water management measures needed to protect the proposed pits and associated mine infrastructure from flooding during operations,
- Determine the surface water management infrastructure required to protect final landforms from erosion so they remain stable following mine closure, and
- Assess surface water related impacts of the proposed mine development, based on comparison of existing conditions and post-development flood modelling results.

A range of surface water management measures are recommended based on the outcomes of the hydrologic and hydraulic modelling and conceptual designs presented in this report.

The results from this assessment are summarised below:

- **Under existing (pre-development) conditions:** the proposed mine area is impacted by flooding from minor creeks only, with 1% Annual Exceedance Probability (AEP) flood depths and velocities not exceeding 0.3 m and 1 m/s respectively. Surface water management measures such as creek diversions, flood levees and road waterway crossings are required to prevent ponding and protect proposed mine infrastructure from flooding.
- **Under operational conditions:** flood modelling shows that the recommended surface water management measures effectively protect mine infrastructure in events up to the 1% AEP. Peak 1% AEP flood depths range from 0.5 to 0.8 m, while peak velocities are less than 2 m/sec so rock protection is not required.
- **At mine closure:** the IWL, WRD, North Pit and South Pit will be rehabilitated, while all other mine infrastructure removed to reinstate pre-development topographic conditions across the mine site. Probable Maximum Flood (PMF) modelling with the final landforms in place, has identified the need for two flood levees as well as placement of rock protection on levees and on the toe of the IWL and WRD landforms to protect from scour and erosion, and ensure a safe, stable and non-polluting landform following mine closure.

To assess surface water impacts to potential downstream surface water receptors, existing and operational conditions flow hydrographs were extracted from the flood model at various locations and for a range of AEP events, then compared. The results suggest the proposed mine development is expected to result in only minor changes in peak flows, flow volumes, flood depths and velocities and no significant impact to surface water receptors in the study area.

It is recommended that the following surface water quality control measures are included in the mine infrastructure design during future phases of the project to mitigate potential impacts to downstream water quality:

- All runoff from disturbed areas to be directed to sedimentation ponds to remove suspended sediment prior to discharge to the environment,
- Installation of creek diversions and bunds to redirect clean water around disturbed areas and prevent mixing of clean and dirty runoff, and
- Containment of hydrocarbon storage and refuelling areas.

Acronyms and abbreviations

Acronym/Abbreviation	Definition
AEP	Annual Exceedance Probability
ARF	Aerial Reduction Factors
ARR	Australian Rainfall and Runoff
BoM	Bureau of Meteorology
CL	Continuing Loss
DEM	Digital Elevation Model
DPIRD	Department of Primary Industries and Regional Development
FFA	Flood Frequency Analysis
GIS	Geographic Information System
GSDM	Generalised Short Duration Method
GTSMR	Revised Generalised Tropical Storm Method
HQ	Water Level Head versus Flow (TUFLOW Boundary Condition)
IFD	Intensity Frequency Duration
IL_s	Storm Initial Loss
IWL	Integrated Waste Landform
LiDAR	Light Detection and Ranging
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
RORB	Runoff Routing Burroughs (rainfall-runoff hydrologic modelling software)
TP	Temporal Pattern
TSF	Tailings Storage Facility
WMO	World Meteorological Organization

1. Introduction

1.1 Background

Electrostate Malinda Pty Ltd. (Electrostate), a wholly owned subsidiary of Delta Lithium Limited (Delta), is looking to develop the Yinnetharra Lithium Project, located approximately 120 km northeast of Gascoyne Junction in Western Australia. Worley (formerly Advisian) completed a baseline hydrology study for the project site in 2023 to simulate and characterise flooding under existing conditions and to inform mine planning and regulatory approvals for the Project.

Since the baseline hydrologic assessment, Delta has progressed with mine planning and has developed mine infrastructure layouts for the Project, shown in Figure 1-1. A hydrology assessment is therefore required to assess flood risk with the proposed mine infrastructure in place, identify surface water management measures to protect mining operations from flooding, and establish a stable landform design following mine closure. The assessment will also evaluate the potential impacts of the proposed mine development on the existing hydrology and provide recommendations to mitigate risk to downstream environments.

The results from the hydrology assessment are presented in this report and will be used by Delta to inform mine planning and support regulatory approvals.

1.2 Study Objective

The objective of this study is to simulate the 20% AEP, 10% AEP, 1% AEP and PMF flood events under existing and post development conditions then use the results to identify surface water management measures for mining operations and closure and assess surface water related impacts.

1.3 Scope of Work

The scope of work includes the following tasks:

- Collect and review proposed mine infrastructure layouts.
- Develop a basis of design for surface water management measures.
- **Existing conditions:** Update the existing two-dimensional (2D) hydraulic model developed as part of the Yinnetharra Baseline Hydrology Study (Advisian, 2023) to simulate the 20%, 10%, 1% AEP and PMF events in line with the recommendations of Australian Rainfall and Runoff (ARR2019) and produce flood depth and velocity maps.
- **Operational conditions:** update the 2D model to include the proposed mine infrastructure layouts, pits Integrated Waste Landform (IWL) and Waste Rock Dump (WRD) designs, then:
    - Simulate the 20%, 10% and 1% AEP events and produce flood depth and velocity maps.
    - Compare the results from existing conditions and operational conditions modelling and identify surface water management measures needed to protect mining

  - operations from flooding and mitigate surface water impacts to downstream environments.
  - Prepare conceptual schematics/layouts for surface water management measures.
- **Mine closure:**
  - Estimate the Probable Maximum Precipitation (PMP) rainfall.
  - Update the operational conditions flood model to include the IWL, WRD landforms and pits only, with all other mine infrastructure removed and rehabilitated to pre-development conditions.
  - Use the PMP rainfall and flood model to simulate the Probable Maximum Flood (PMF) event in accordance with the recommendations of ARR2019. Produce a PMF flood depth and velocity map.
  - Use results to recommend surface water management measures needed to achieve a stable final landform design for closure.
- **Surface water impact assessment**: compare existing and operational conditions flood levels and flow hydrographs to quantify and assess potential for surface water related impacts to downstream environments.
- Preparation of a summary report (this report).

1.3.1 Exclusions

The following tasks were excluded from the scope of work:

- Assessment of flooding in the pits and associated in pit pumping requirements.
- The design of internal drainage systems and sedimentation ponds for proposed mine infrastructure.

1.4 Sources of Information

Following sources of information (relied upon information) were provided by Delta to inform the hydrology assessment:

- Photogrammetrically derived 10 m resolution Landgate DEM (dated 4/11/2009) sourced by Worley.
- GIS data for the proposed mine infrastructure, pit, IWL and WRD layouts supplied by Delta. A mine site overview and infrastructure layouts are provided in Figure 1-1.

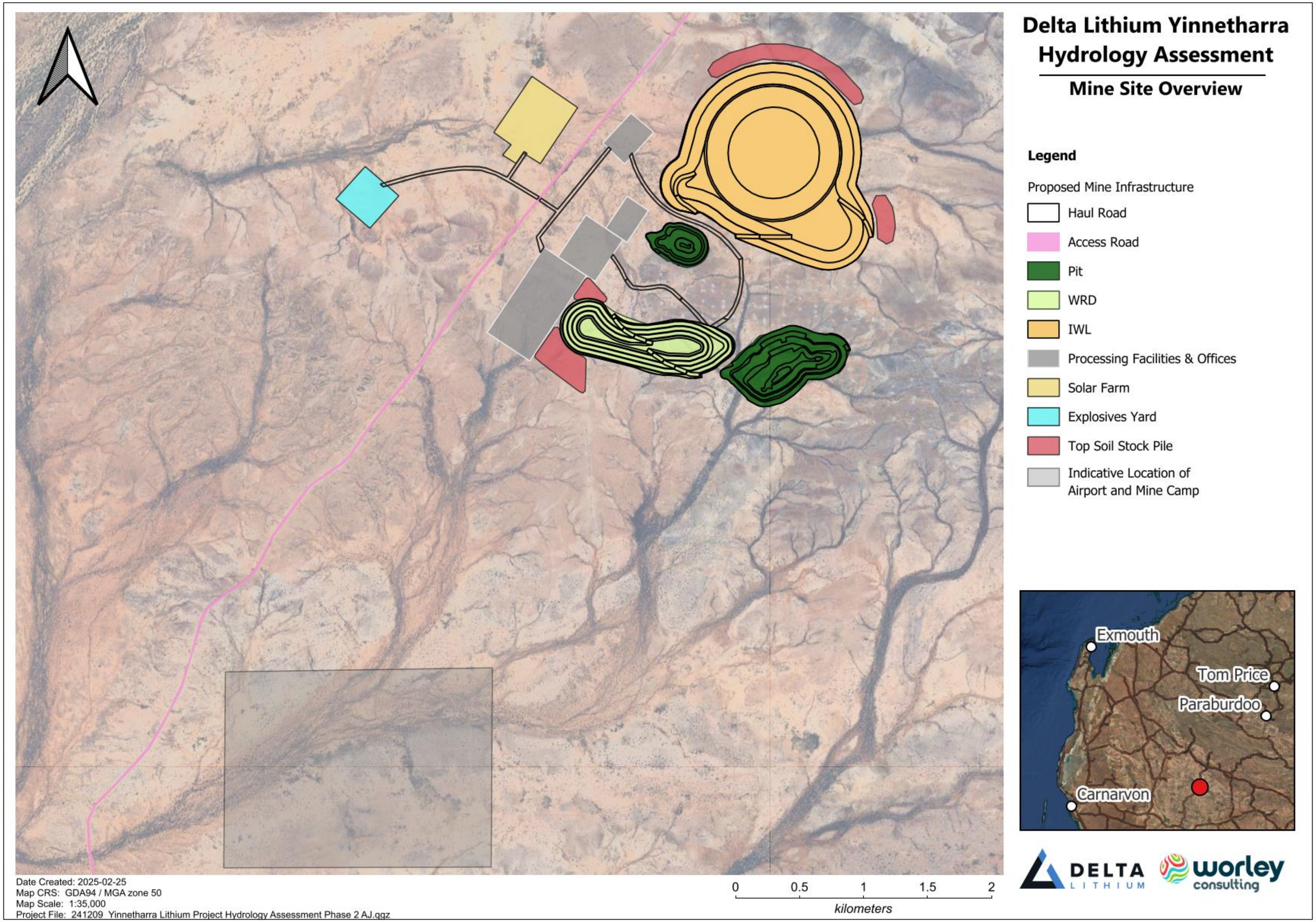

Figure 1-1. Yinnetharra Project: Mine site overview and infrastructure layouts

2. Project Setting

2.1 Topography

Topographic survey data listed in Section 1.4 was used to generate a digital elevation model (DEM) for the study area. The resulting DEM, presented in Figure 2-1, shows ground elevations varying from 350 to 290 mAHD within proposed mine site area. The DEM shows the proposed mine infrastructure located on a local catchment divide intersecting several minor creeks.

2.2 Rainfall

The nearest BoM rainfall station at Yinnetharra (Station Number 007094) is located 20 km south of the site (BoM, Climate Data Online,2025). This rainfall station has recorded 55 years of rainfall data between 1961 and 2021. The average annual rainfall recorded at this rainfall gauging station is 205 mm, with the average monthly rainfall totals presented in Figure 2-2.

2.3 IFD Data

Gridded rainfall data was extracted for the study area using the Bureau of Meteorology (BoM) Design Rainfall Data System (BoM, 2016). A representative IFD extracted from the Yinnetharra Project area in Figure 2-3.

2.4 Regional Hydrology

The Project is located within the upper reaches of the Gascoyne River catchment with predominantly red shallow sandy duplex / loamy duplex soils (DPIRD, 2019). The proposed mine infrastructure is more than 10km north of the main tributary of the Gascoyne River and associated floodplain. A significant tributary of the Gascoyne River is located approximately 3km from the mine which flows south before its confluence with the Gascoyne River. The Gascoyne River and its tributaries flow in response to extreme rainfall events often associated with cyclonic activity between the months of November and April. Figure 2-1 shows the proposed mine site in relation to the mainstream of the Gascoyne River, Five Mile Creek, Morrissey Creek and Thirty-Three River. Gascoyne River streamflow is recorded at the Yinnetharra Crossing gauging station (#705195) shown in Figure 2-1.

2.5 Surface Water Receptors

The existing watercourses and associated environmental and cultural values are identified as surface water receptors within the study area. The potential surface water impacts associated with the proposed mine development have been assessed in Section 5.

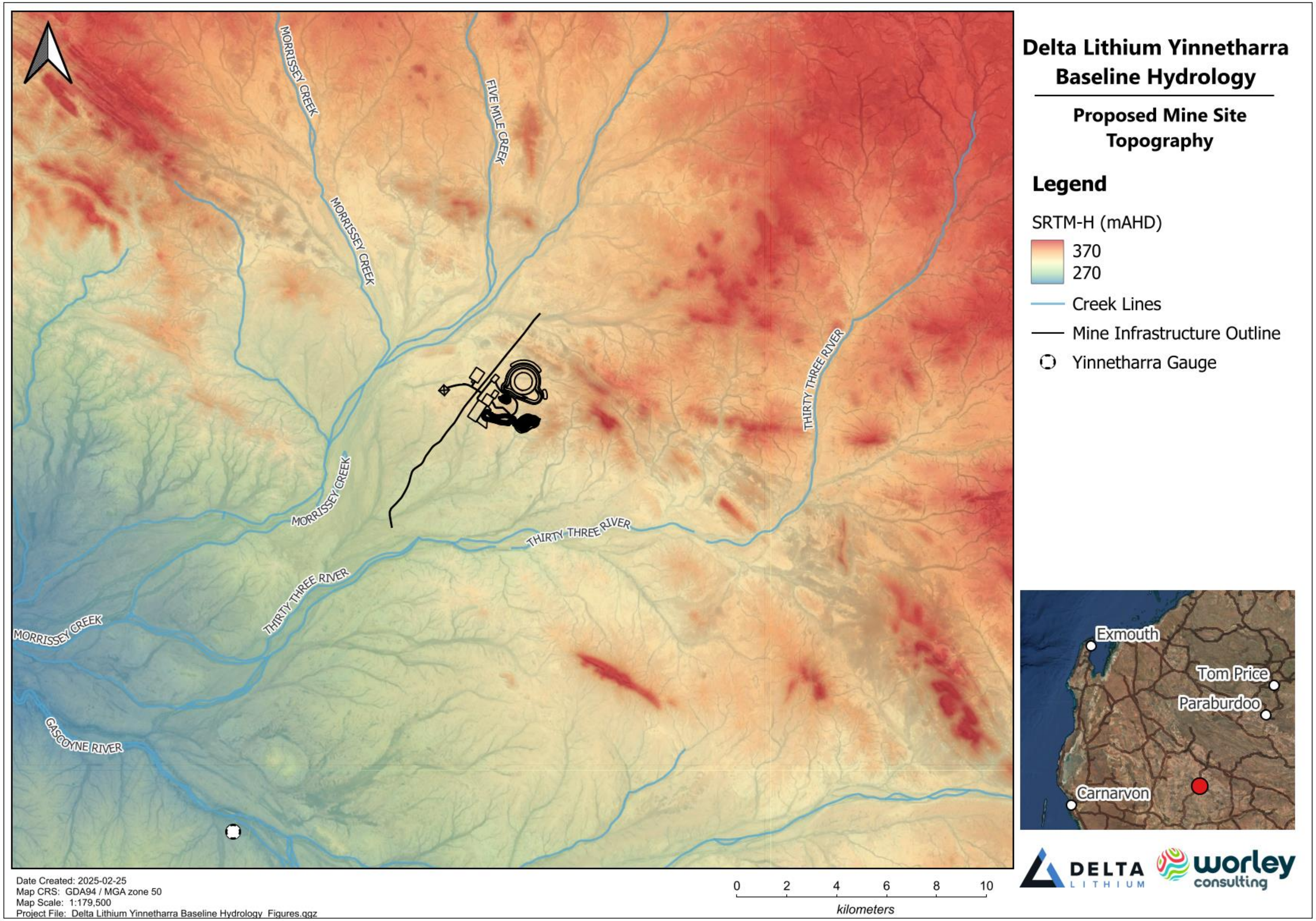

Figure 2-1. Mine site topography

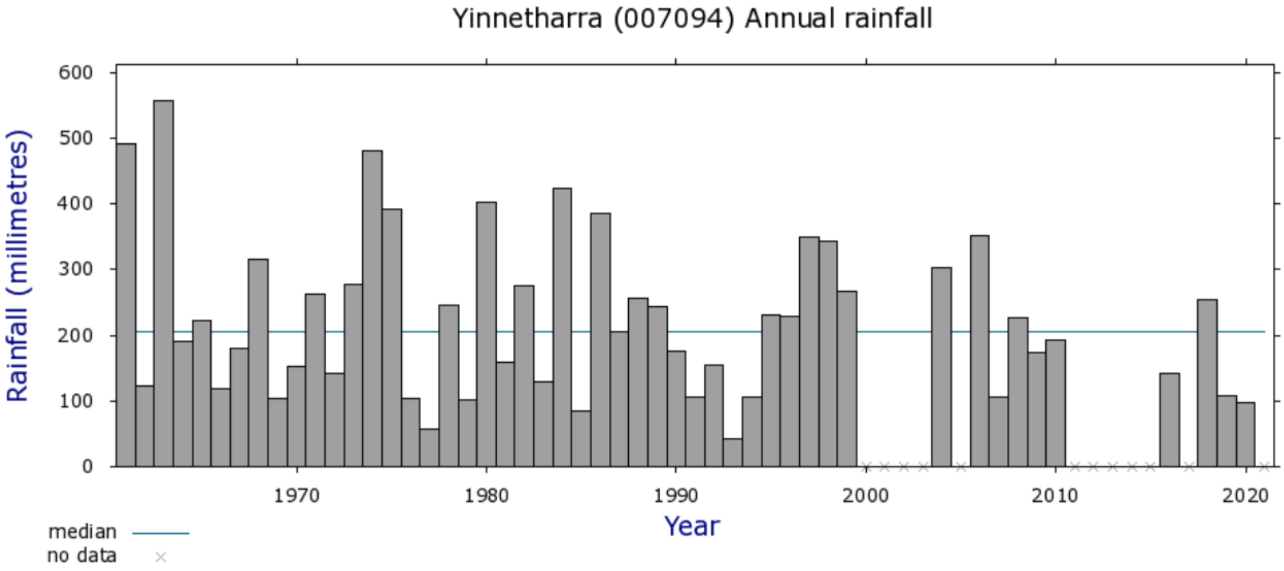

Figure 2-2. Average monthly rainfall recorded at Yinnetharra Station (BoM Station #007094)

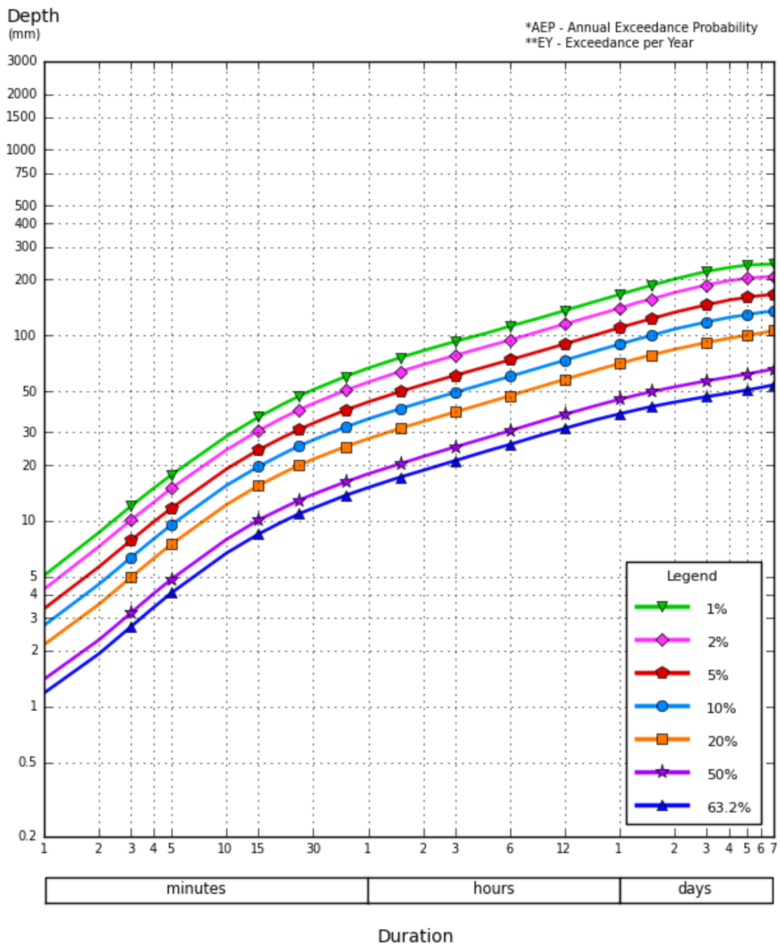

Figure 2-3. Design IFD at Yinnetharra project area (BoM, 2024)

3. Basis of Concept Design

The surface water management measures presented in this report includes diversion drains, flood levees, road waterway crossings and rock protection for scour protection. These measures are to be designed to protect mining operations from flooding, maintain a stable landform design following mine closure, while minimising impacts on quantity and quality of streamflow downstream. The following design criteria form the basis of concept design.

3.1 Flood Levees and Diversions

3.1.1 Design AEP

Flood levees and diversion drains shall be designed to the 1% AEP to prevent uncontrolled ingress of floodwater into pit voids and to protect critical mine infrastructure from flooding during operations. Haul and access road waterway crossings shall be designed to the 20% and 10% AEP events respectively.

3.1.2 Flood Levees

Flood levees are sized to provide 1 m freeboard from the top of crest to the design 1% AEP flood levels. The concept design of flood levees adopted in this study is presented in Figure 3-1. The batter slopes and crest widths are nominal and dependent on material properties and construction methods. Rock protection may be required along the flood levees (or pads) where peak velocities exceed 2 m/sec (Austroads, 2019), as discussed in Section 3.2.

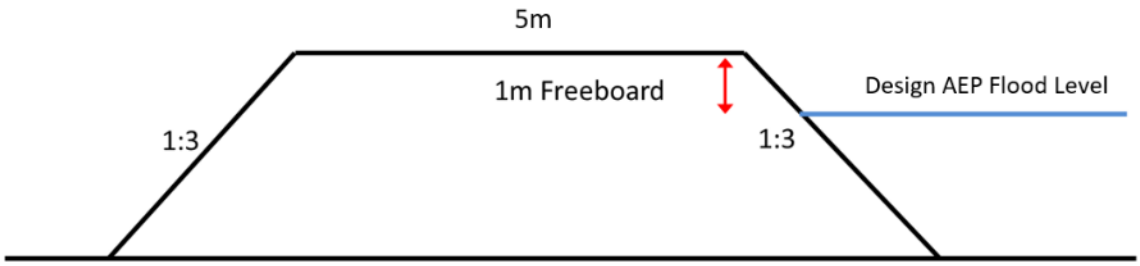

Figure 3-1. Concept flood levee design

3.1.3 Diversions

Diversion drains should be sized to provide 1m of freeboard for the 1% AEP event. Operational diversion drains should be constructed as trapezoidal channels cut into in-situ material. If the diversion is to remain at closure, then diversions should be designed to have similar geomorphological features and hydraulic behaviour as the existing creek system, in accordance with the recommendations of ACARP (ACARP 2022). As the mine is in the upper reaches of the catchment, with small contributing catchment areas, trapezoidal diversion designs have been adopted.

The concept design for diversion channels adopted for this study is shown in Figure 3-2. The cut slopes are nominal and dependent on material properties. Spoil from the diversion cut should be placed on the downstream side of the channel to form a flood levee where required to maintain 1m of freeboard to the design AEP event.

Rock protection may be required along the diversions and levees where located adjacent critical infrastructure and where peak velocities exceed 2 m/sec (Austroads, 2019) and the in-situ material is susceptible to erosion, as discussed in section 3.2.

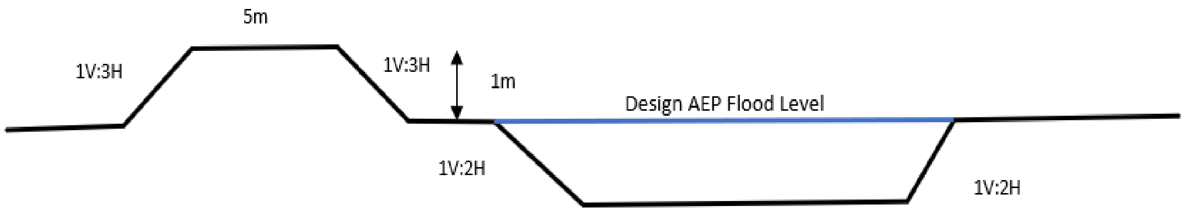

Figure 3-2. Diversion channel and flood levee

3.2 Rock Protection

Austroads (2019) provides guidance on the hydraulic design of waterway structures, which includes methods for the selection and design of rock protection of earth embankments. Rock classes recommended by Austroads (2019) are presented in Table 3-1 and Table 3-2. The peak velocity outputs produced for the mine area were used to identify areas potentially requiring rock protection to protect operational flood control measures and final landform designs from scour/erosion during operations and at closure respectively. Table 3-1 suggests rock protection is not required when peak velocities are less than 2 m/s.

Table 3-1. Design of rock slope protection (Austroads, 2019)

Velocity Range (m/sec)	Class of Rock Protection (tonne)	Section Thickness (m)
<2	None	-
2.0-2.6	Facing	0.50
2.6-2.9	Light	0.75
2.9-3.9	¼	1.00
3.9-4.5	½	1.25
4.5-5.1	1.0	1.60
5.1-5.7	2.0	2.00
5.7-6.4	4.0	2.50
>6.4	Special	-

Table 3-2. Standard Classes of Rock Protection (Austroads, 2019)

Rock Class (tonne)	Rock Size (m)	Rock Mass (kg)	Minimum Percentage of Rock Larger Than
Facing	0.40	100	0
	0.30	35	50
	0.15	2.5	90
Light	0.55	250	0
	0.40	1010	50
	0.20	10	90
¼	0.75	500	0
	0.55	250	50
	0.30	35	90
½	0.90	1000	0
	0.70	450	50
	0.40	100	90
1.0	1.15	2000	0
	0.90	1000	50
	0.55	250	90
2.0	1.45	4000	0
	1.15	2000	50
	0.75	500	90
4.0	1.80	8000	0
	1.45	4000	50
	0.90	1000	90

3.3 Road Waterway Crossings

Waterway crossings are required at locations where the proposed haul and access road alignments intersect waterways, to maintain serviceability of the road during flood events and safely convey floodwaters across the road alignments. Waterway crossings prevent ponding of water upstream of the road crossings and formation of water shadows downstream. The basis of road design is summarised in Table 3-3.

Table 3-3. Basis of road drainage design

Design parameter	Haul road	Access road
Road design event	20% AEP (1 in 5)	10% AEP (1 in 10)
Freeboard for roadside drains	300mm	
Waterway crossings- Floodways		
Floodway type	Sacrificial floodway (cement stabilized) with rock foundation	
Design AEP	20% AEP	10% AEP

3.4 Water Quality Management

Runoff from disturbed areas (IWL, WRD, Stockpiles, ROM pads etc.) will contain suspended sediment which has the potential to impact on surface water related environments downstream. Therefore, stormwater drainage systems should be developed to separate clean runoff from undisturbed catchments and runoff from disturbed areas. Diversions and/or flood levees should be constructed to prevent clean water entering disturbed areas.

Direct rainfall-runoff on disturbed areas should be directed to sedimentation ponds to remove suspended sediment prior to discharge to the environment. Perimeter levees should be installed around IWL's, WRD's and topsoil stockpiles to contain runoff and suspended sediment. Where possible, the perimeter levees can be combined with diversion levees presented in this report. The design of internal drainage systems and sedimentation ponds for proposed mine infrastructure is excluded from the scope of this study.

4. Hydrological and Hydraulic Modelling

4.1 Existing Conditions

This section summarises the results from the earlier the Yinnetharra Baseline Hydrology Study (Advisian, 2023), and presents the existing (pre-development) conditions 2D flood modelling results for the 20%, 10%, 1% AEP and PMF events.

4.1.1 Hydrology

A baseline hydrology study was completed by Advisian (2023) which characterised flooding under existing (pre-development) conditions to inform preliminary mine planning and regulatory approvals for the Project. The findings and recommendations from the study are summarised below (refer to the Yinnetharra Baseline Hydrology Study (Advisian, 2023) report for more details):

The study area is within the Gascoyne River catchment. Analysis of the topographic survey data suggests there are two distinct catchment areas upstream of the Yinnetharra Crossing gauging station (#705195). These catchment areas are described below and shown in Figure 4-1:

  - a lower catchment which has steep rocky terrain, and
  - an upper catchment area with lower gradients and broad floodplains.

- A hydraulically calibrated (using direct rainfall TUFLOW model) RORB model was developed for the gauged catchment. Empirical loss parameters were calibrated by comparing the RORB model results against Flood Frequency Analysis (FFA) at the gauge. An initial loss (ILs) of 20mm and continuing loss (CL) of 1 mm/hr was found to be appropriate for the catchment area. Since the study area and lower Gascoyne River catchment areas have similar catchment characteristics and rainfall, the same model parameters were adopted for simulating flooding in the study area catchments.
- A TUFLOW model was developed covering the study area and 1% AEP flood event simulated using the adopted loss parameters.

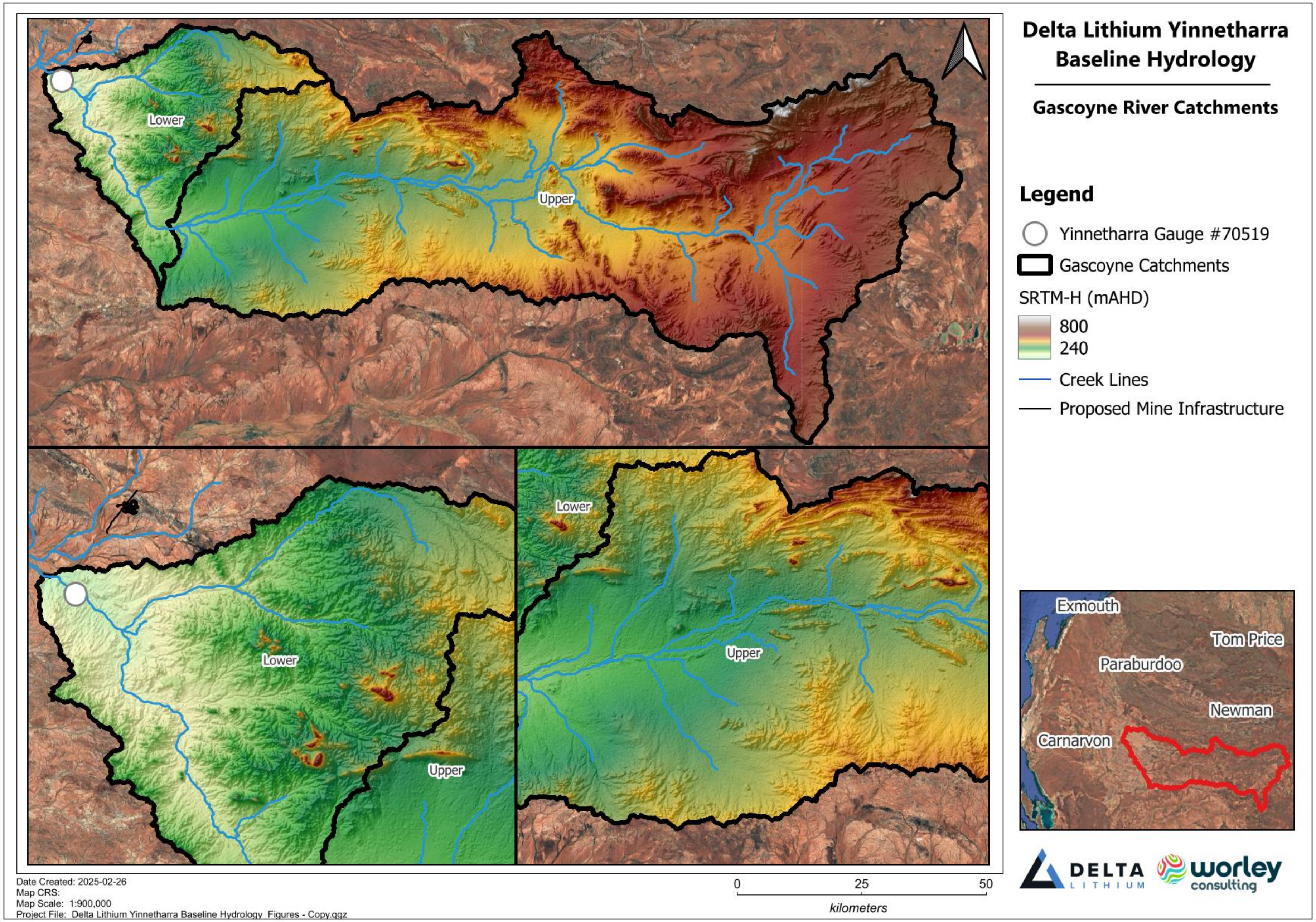

Figure 4-1. Gascoyne River catchments

4.1.2 Hydraulic Modelling

4.1.2.1 Model Set Up

The TUFLOW model extent and setup is shown in Figure 4-2. The TUFLOW model inputs and parameters are listed in Table 4-1 and discussed in following sections.

Table 4-1. TUFLOW model inputs and parameters

Parameter	Adopted values
Rainfall	
Rainfall depths for direct rainfall boundary condition	Extracted from BoM Design Rainfall Data System (BoM, 2016) using TUFLOW ARR2019 QGIS plugin.
Rainfall Events	1%, 10%, 20% AEP and PMF
Losses	20 mm Initial loss and 1 mm/hr continuing losses adopted from Advisian (2023) for event up to 1% AEP 0 mm Initial loss and 1 mm/hr continuing loss for PMF
Temporal patterns	Areal Temporal patterns for the Rangelands West Region (Ball et al., 2019)
Areal Reduction Factor (ARF)	Calculated based on contributing catchment upstream of the mine site (Ball et al., 2019)
Terrain	
Terrain	10 m resolution Landgate (4/11/2009)
Total model area	2,461 km²
Base grid size	40 m
Manning's 'n' value	Depth varying with 0.1: <0.1m, interpolated 0.1m – 0.2m, 0.04: >0.2m
Boundary conditions	
Outflow boundary	Automated stage-discharge curve (HQ) with calculated stream bed slope of 0.2%. Located sufficient distance downstream as to not potentially impact Study Area.

4.1.2.2 Modelling Approach

A range of design storm durations were simulated in the TUFLOW model using ensemble approach to determine the critical storm (the storm duration and temporal pattern resulting in the highest mean peak flow) at various locations in the catchments. The approach is conceptualised in Figure 4-3.

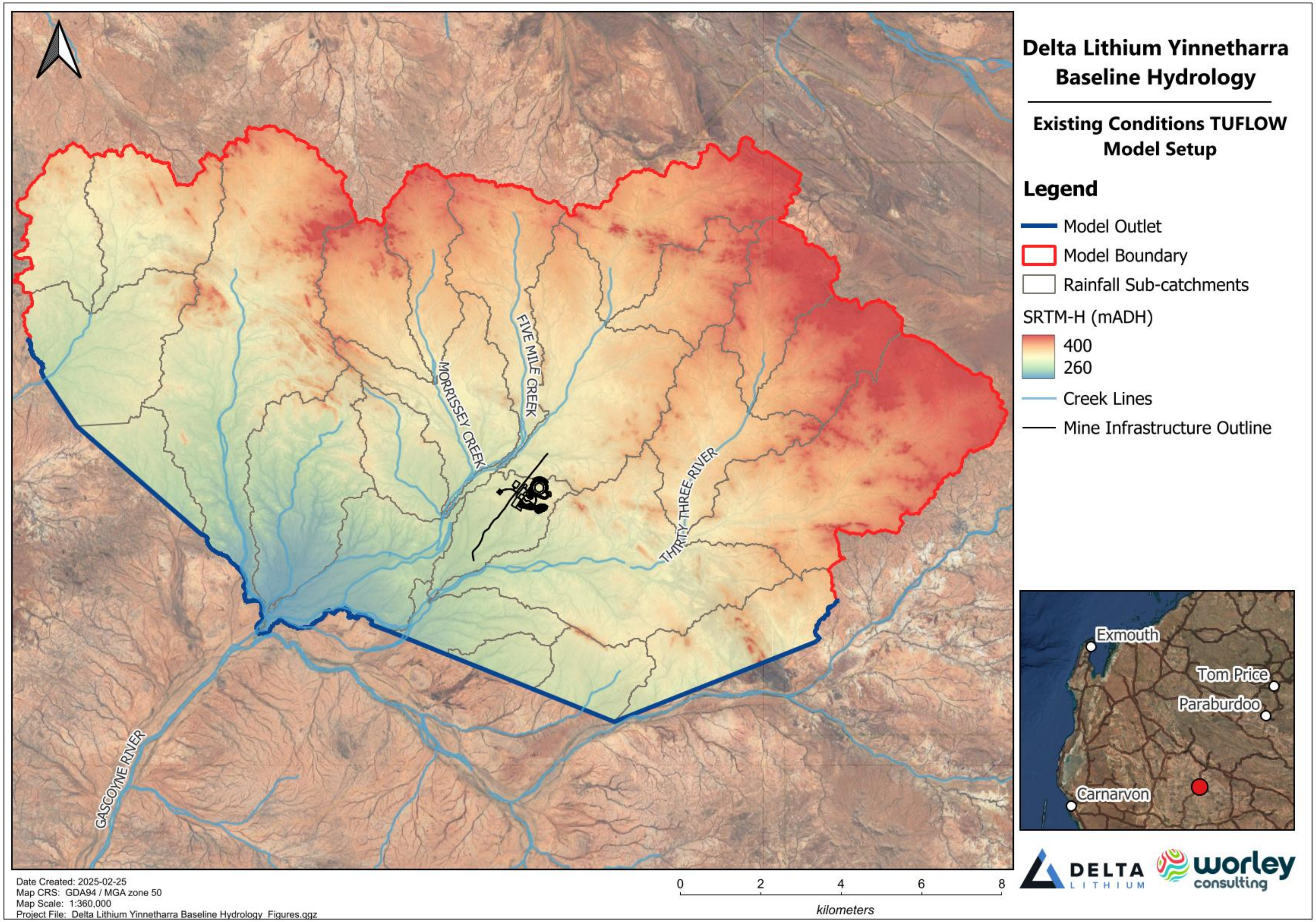

Figure 4-2. Existing conditions TUFLOW model setup

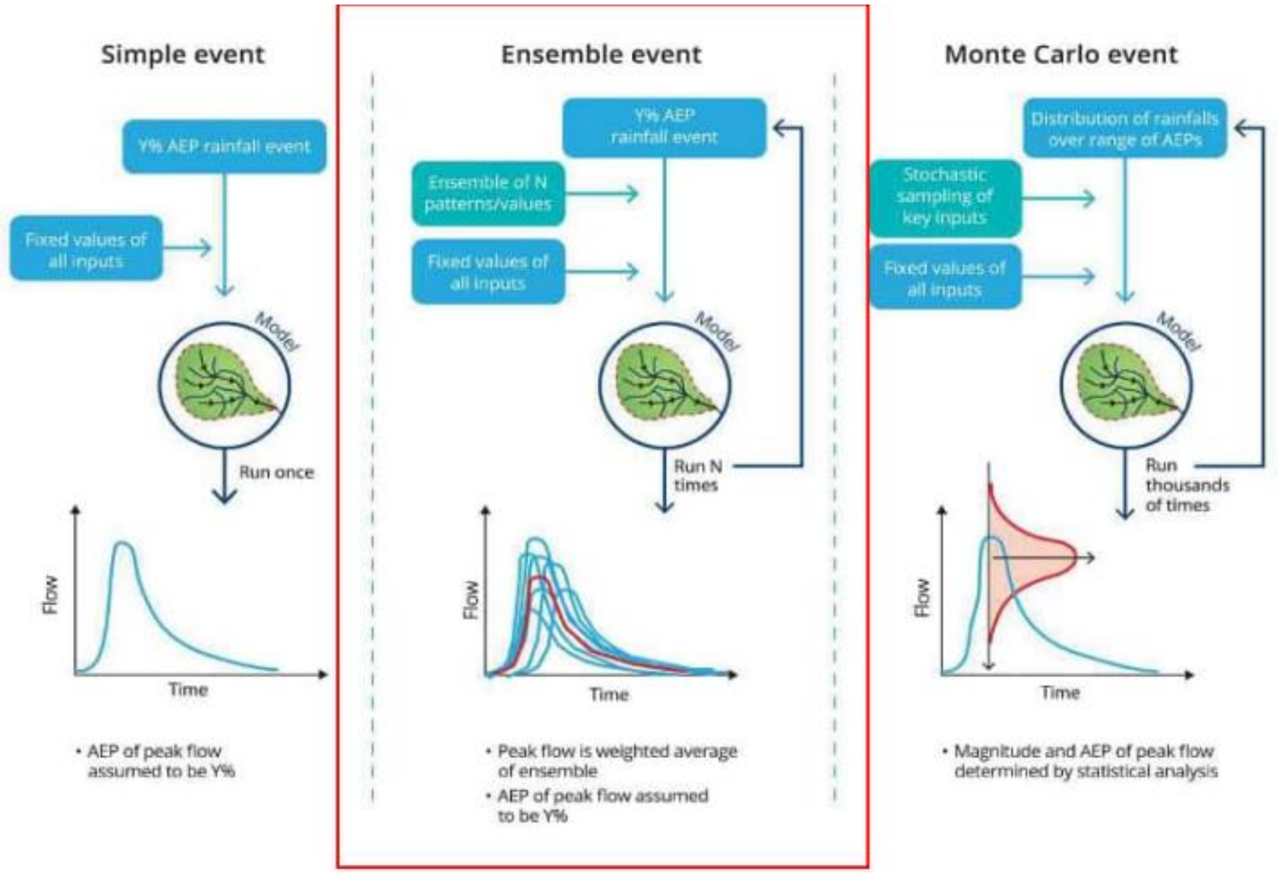

Figure 4-3. Ensemble approach conceptual model (Ball et al., 2019)

4.1.2.3 Design Events

The 20%, 10% and 1% AEP design storm events were simulated to assess risk to mining operations and inform the identification of surface water management measures where required. To ensure critical durations in all the main flow paths are identified, storm durations up to 72 hours were simulated as listed in Table 4-2.

Table 4-2. Design storms assessed in TUFLOW model

Storm detail	Events assessed
Annual Exceedance Probabilities (AEP)	20%, 10%, 1% AEP and PMF
Design Storm Durations (minutes)	60, 90, 120, 180, 270, 360, 540, 720, 1080, 1440, 1800, 2160, 2880 and 4320

Probable Maximum Precipitation (PMP) is defined as 'the theoretical greatest depth of precipitation that is physically possible over a particular catchment' (WMO, 1986). PMP estimation was undertaken using the currently recommended methods for Australia as outlined in ARR 2019 (Ball et al., 2019). The following methods were applicable for the catchments:

- BoM (2003) Generalised Short Duration method (GSDM) applicable across Australia for catchment areas less than 1,000 km² and durations up to six hours (Figure 4-4).

- BoM (2005) Revised Generalised Tropical Storm Method (GTSMR) which is applicable to the north two-thirds of Australia where it is assumed that the causative mechanism of the PMP would be a tropical storm (Figure 4-4). The GTSMR method is applicable for durations from 12 hours to 120 hours and was undertaken for the Coastal Zone.

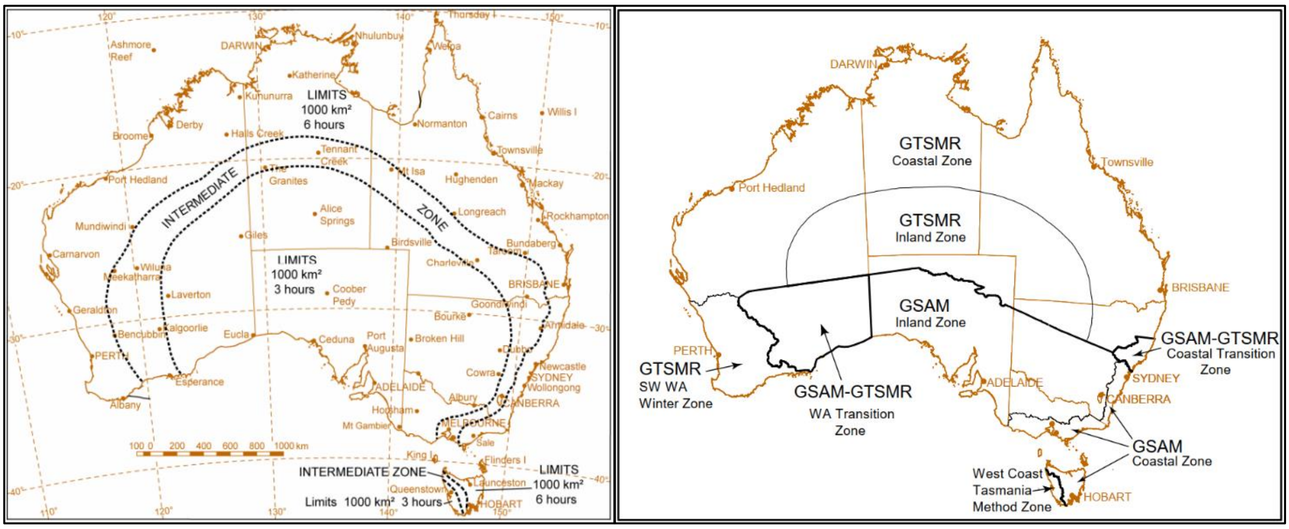

Figure 4-4. GSDM zones (BoM, 2003) and GTSMR zones (BoM, 2005)

To estimate the PMP, Generalized Short-Duration Method (GSDM) was applied for the 6-hour duration and Generalized Tropical Storm Maximum Rainfall (GTSMR) was utilized for the 24-hour to 48-hour duration storms. The 12-hour and 18-hour durations were interpolated using the results from the 6-hour and 24-hour analyses. Rainfall depths for PMP were estimated for the small catchment area of Thirty-Three River tributary that flows through the mine site as well as the larger catchment area of Morrissey Creek located 4 km from the mine site. Flooding from the two PMF events were simulated independently, and maximum flood depths, levels and peak flows determined.

The estimated PMP rainfall was applied as direct rainfall boundary to the TUFLOW model discussed in previous section. Spatial distribution for shorter events follows the standard ellipses defined in GSDM (BoM, 2003) and the longer event rainfall were applied using GTSMR (B0M, 2005) spatial pattern. For deterministic estimate of PMF, a 0 mm IL_B and 1 mm/hr CL was adopted.

4.1.3 Results

Appendix A shows the existing (pre-development) conditions flood depths and velocities for the 20%, 10%, and 1% AEP and PMF events. To determine the inflows and outflows to/from the mine site, five flow reporting locations (PO lines) were located along the major flow paths as shown in Figure 4-5. The peak flows extracted at each of the PO lines are presented in Table 4-3.

The results suggest the following:

- Five Mile Creek, Morrissey Creek and Thirty-Three River are located approximately 2.5 km north-west, 4 km west and 4 km south of the mine site respectively. Modelling shows that floodwater from these watercourses do not impact the mine site for events up to the 1% AEP. The site is also more than 10km north of the Gascoyne River mainstream and not impacted by regional flooding.

- The local site hydrology is characterised by sheetflow runoff and flooding of minor creeks at depths up to 0.3 m and velocities below 1 m/s in events up to 1% AEP. The mine area is impacted by westerly and southerly flows from minor tributaries of Morrissey Creek and Thirty-Three River, respectively.
- A series of creek diversions and flood levees are required to prevent ponding behind the waste rock dump, stockpiles and other mine infrastructure and to protect mining operations from flooding.
- The access and haul road alignments are impacted by flooding so several road waterway crossings will be required to safely convey floodwater across the roads. To improve conveyance, drainage channels may be required upstream and/or downstream of some crossings.

Table 4-3. Existing conditions: peak flows and critical durations at flow reporting locations (PO lines)

<table>
<tr><th rowspan="2">PO Line</th><th colspan="4">Critical Storm Duration (min) and corresponding temporal pattern (TP)</th><th colspan="4">Peak Flow (m3/s)</th></tr>
<tr><th>20% AEP</th><th>10% AEP</th><th>1% AEP</th><th>PMF</th><th>20% AEP</th><th>10% AEP</th><th>1% AEP</th><th>PMF</th></tr>
<tr><td>1</td><td>360 (TP4)</td><td>360 (TP4)</td><td>180 (TP4)</td><td rowspan="5">360
(Darwin 1974 storm temporal pattern from Jordan et al., (2005))</td><td>2.6</td><td>4.2</td><td>11.6</td><td>83.8</td></tr>
<tr><td>2</td><td>360 (TP4)</td><td>360 (TP4)</td><td>180 (TP4)</td><td>1.4</td><td>2.2</td><td>5.4</td><td>50.4</td></tr>
<tr><td>3</td><td>360 (TP9)</td><td>360 (TP8)</td><td>180 (TP2)</td><td>4.6</td><td>8.1</td><td>17.2</td><td>151</td></tr>
<tr><td>4</td><td>1,080 (TP3)</td><td>1,080 (TP10)</td><td>360 (TP10)</td><td>5.5</td><td>11.7</td><td>36.8</td><td>383</td></tr>
<tr><td>5</td><td>2,160 (TP1)</td><td>2,160 (TP7)</td><td>1,080 (TP10)</td><td>47.0</td><td>95.6</td><td>274</td><td>2,571</td></tr>
</table>

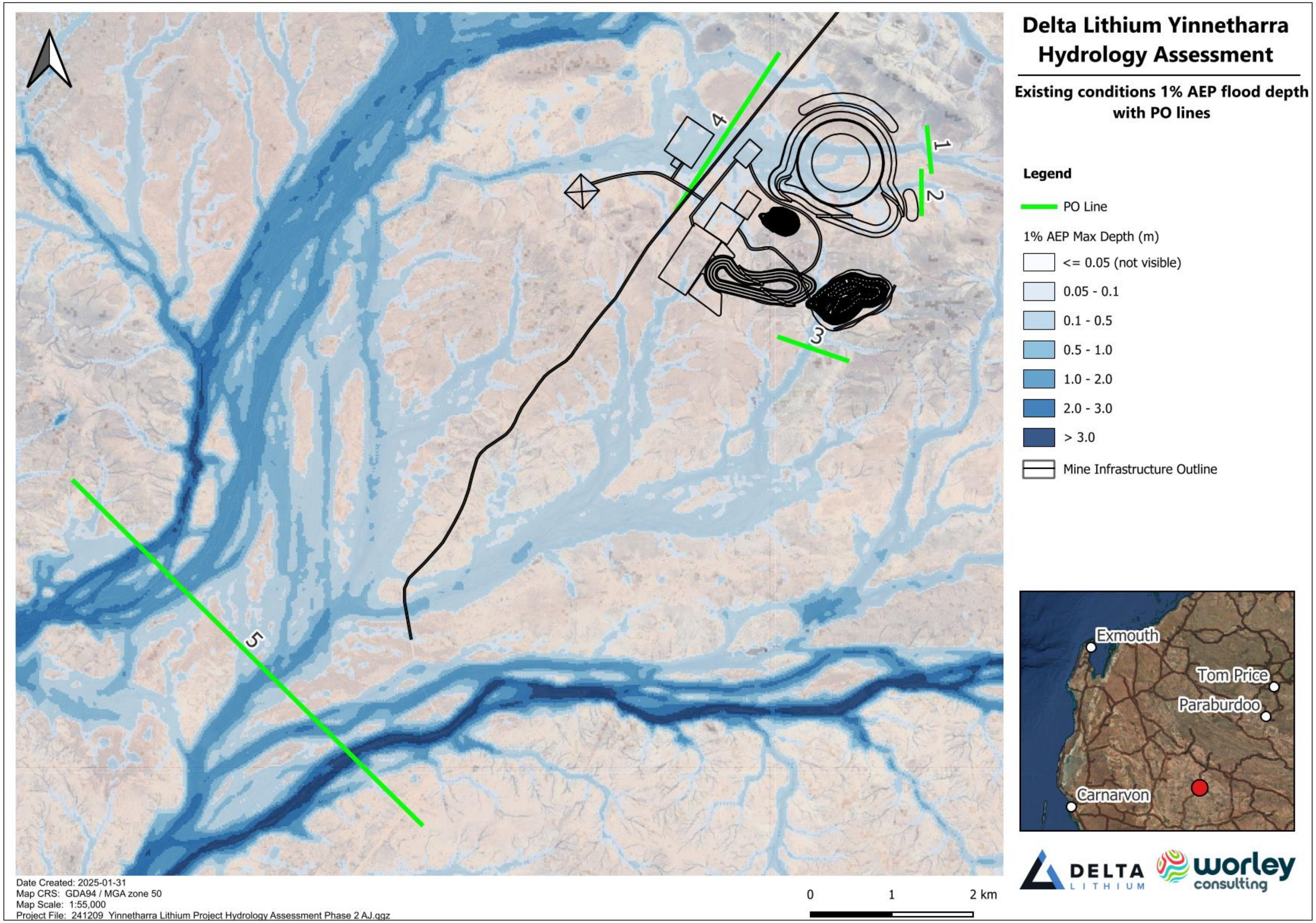

Figure 4-5. Existing conditions 1% AEP flood depth with PO lines

4.2 Operational Conditions

4.2.1 Model Set Up

The existing conditions model described in Section 4.1.2 was updated to include the surface water management measures recommended in Section 4.1.3. As discussed in Section 4.1.3, the site is impacted by local catchment flooding only and not by flooding from the main channels of Thirty-Three River and Morrissey Creek catchments. Therefore, the extent of the TUFLOW model shown in Figure 4-6, was limited to include the local catchments upstream of the main channels of Thirty-Three River and Morrissey Creek. The TUFLOW model was also updated to a 10 m grid to match the resolution of the topographic survey data.

Diversion drains and flood levees were sized using hydraulic calculations and tested in the TUFLOW model. Peak flood depths and velocities were used to refine the design and the model results used to demonstrate the concept designs meet the basis of design. Haul and access road waterway crossings were also included, and performance tested in the model.

Figure 4-7 shows the recommended diversion drains, levees and waterway crossings along the access and haul road alignments, which are described in detail below.

4.2.1.1 Diversion Drains and Levees

Diversion channels and levees are required to direct floodwater around the mine infrastructure before discharging it back into the watercourses downstream. The diversion and levee locations are shown in Figure 4-7 and the concept design details provided in Table 4-4 and Table 4-5 respectively. The proposed diversion and levee designs will need to be updated and optimised in the next phase of the project when higher resolution LiDAR data is available.

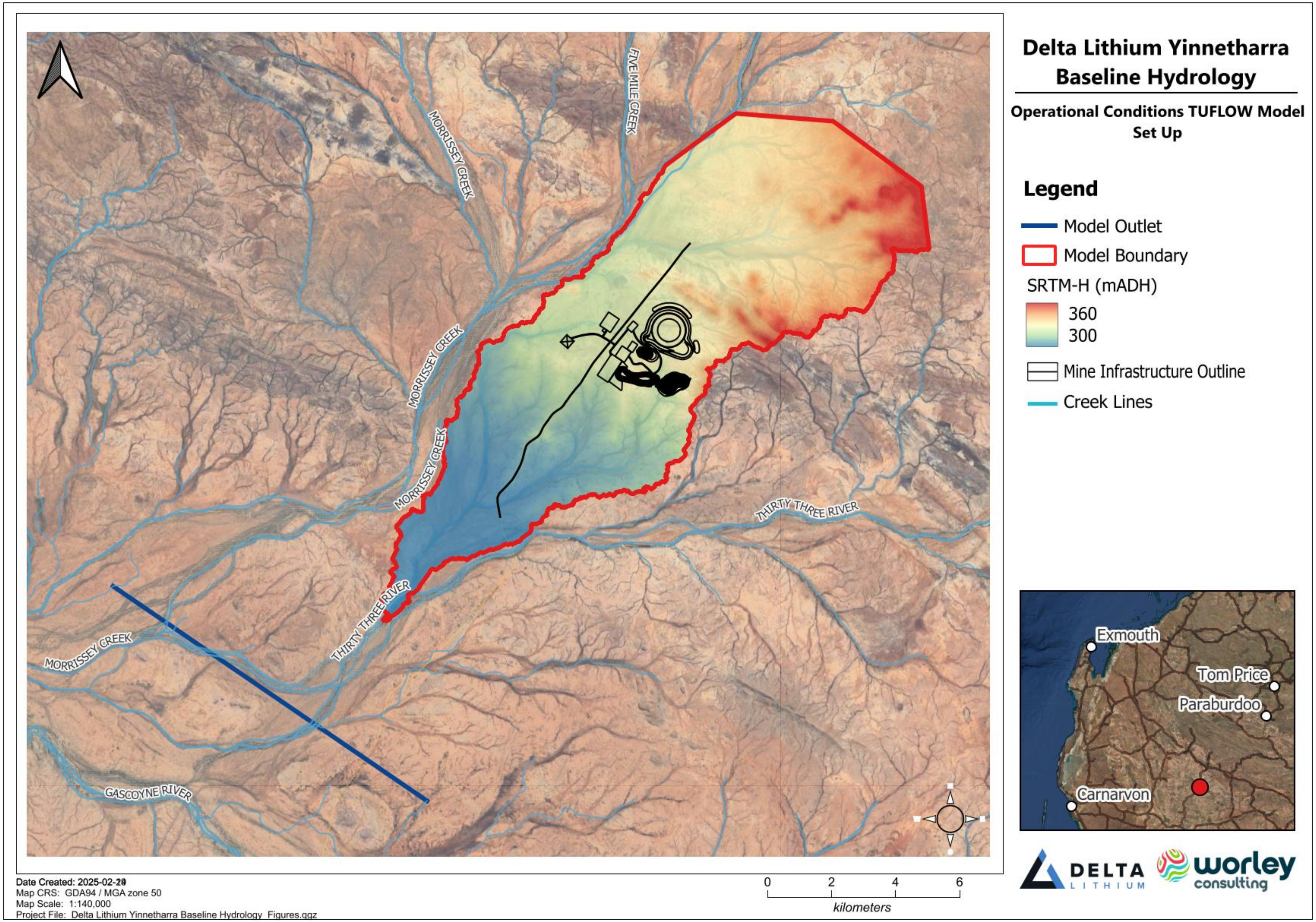

Figure 4-6. Operational conditions TUFLOW model set up and extent

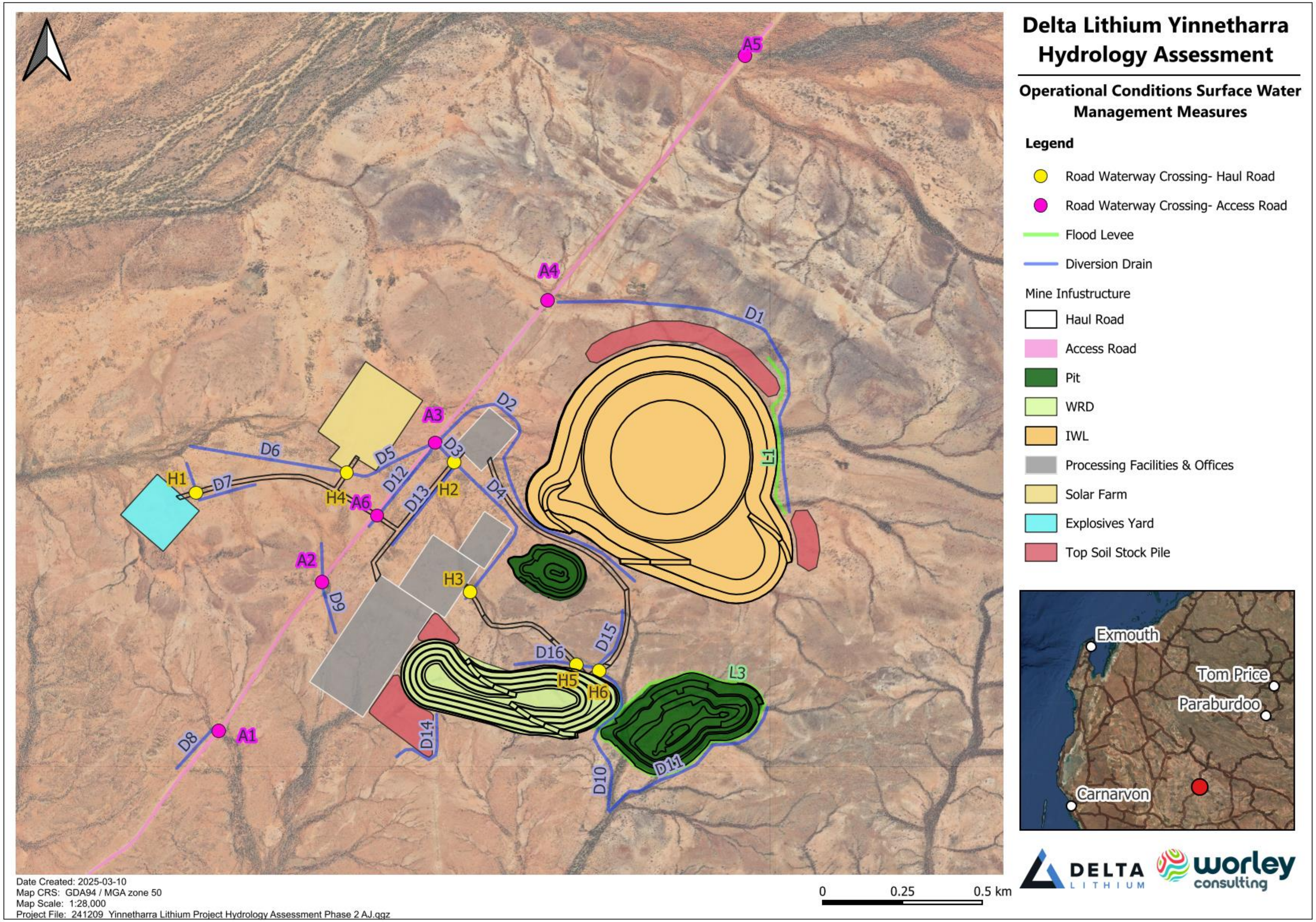

Figure 4-7. Operational conditions: surface water management measures

Table 4-4. Conceptual diversion design details

Drain	Length of Diversion (m)	Base width (m)
D1	2,700	8
D2	2,020	5
D3	180	5
D4	1,100	5
D5	580	5
D6	990	5
D7	600	5
D8	340	5
D9	290	5
D10	850	5
D11	1,300	5
D12	670	5
D13	670	5
D14	540	5
D15	355	5
D16	510	5

Table 4-5. Conceptual flood levee design details

Levee	Length of Levee (m)	Average height (including 1m freeboard)	Rock Class
L1	1,040	1.5 m	N/A
L2	315	1.8 m	N/A
L3	2,800	1.8 m	N/A

4.2.1.2 Haul Roads

The haul roads require floodway crossings at the locations shown in Figure 4-7, sized to the 20% AEP event. Table 4-6 provides conceptual floodway design details. Additional longitudinal drains may be required along the road to ensure effective drainage and maintain road integrity.

Table 4-6. Conceptual floodway designs details for Haul Roads

Crossing ID	Easting and Northing	Floodway length (m)
H1	423,683 7,290,272	25
H2	425,294 7,290,463	25
H3	425,396 7,289,651	25
H4	424,624 7,290,398	50
H5	426,058 7,289,196	25
H6	426,198 7,289,158	25

4.2.1.3 Access road

The access roads require floodway crossings at the locations shown Figure 4-7, sized to the 10% AEP event. Table 4-7 provides conceptual floodway design details. Additional longitudinal drains may be required along the road to ensure effective drainage and maintain road integrity.

Table 4-7. Conceptual floodway designs details for Access Roads

Crossing ID	Easting and Northing	Floodway length (m)
A1	423,824 7,288,784	50
A2	424,469 7,289,714	25
A3	425,177 7,290,585	50
A4	425,880 7,291,472	50
A5	427,113 7,293,003	70
A6	424,817 7,290,127	25

4.2.2 Results

Peak flood depth and velocity maps showing flood behaviour with the proposed mine infrastructure and recommended surface water measures in place, are presented in Appendix B for the 20%, 10% and 1% AEP events. Flood afflux mapping (flood depth difference maps), are also provided in Appendix B and show the difference in peak flood depths under existing and operational conditions. These afflux maps were calculated by subtracting the existing conditions flood levels from the operational flood depths (negative values showing a reduction in depth).

The 1% AEP flood modelling results are discussed below with reference to Figure 4-8 to Figure 4-14.

- **Airport and Mine Camp**: The airport and camp are currently located within the 1% AEP floodplain of Thirty-Three River so are at risk from flooding. Therefore, it is recommended that this infrastructure is relocated to the south outside the 1% AEP flood extents shown in Figure 4-8.
- **Explosives Yard and Solar Farm**: The explosives yard and solar farm are not significantly impacted by flooding in the 1% AEP event (Figure 4-9). Floodwater from minor creeks flow around the explosives yard and solar farm infrastructure with peak flood depths of up to 0.15 m in the 1% AEP event. Therefore, the pad designs should be set to levels that provide sufficient freeboard to the 1% AEP event. The peak velocities are less than 1 m/sec in the 1% AEP event, so rock protection is not required.
- **Integrated Waste Landform (IWL)**: The proposed diversions and flood levees direct the 1% AEP floodwater north and south of the IWL then to the west before returning to existing creeks (Figure 4-10). Peak 1% AEP flood depths adjacent to the flood levees are up to 0.5 m. Peak 1% AEP velocities are less than 1 m/sec in the 1% AEP event, so rock protection is not required.
- **Waste Rock Dump (WRD)**: The proposed diversions and flood levees direct the 1% AEP floodwater around the WRD before returning to natural creeks (Figure 4-11). Peak 1% AEP flood depths adjacent to the flood levees are up to 0.8 m. Peak 1% AEP velocities are less than 1 m/sec in the 1% AEP event, so rock protection is not required.
- **Processing Facilities and Offices**: The proposed diversions and waterway crossings direct the 1% AEP floodwater around the Processing Facilities and Offices before returning to existing creeks (Figure 4-12). Peak 1% AEP flood depths adjacent to the infrastructure are up to 0.5 m. Peak 1% AEP velocities are less than 1 m/sec in the 1% AEP event, so rock protection is not required.
- **North Pit**: The proposed diversions and flood levees direct the 1% AEP floodwater around the North Pit before returning to existing creeks (Figure 4-13). Peak 1% AEP flood depths adjacent to the haul road on the northern side of the pit (which also acts as a flood levee) are up to 0.6 m. Peak 1% AEP velocities are less than 1 m/sec in the 1% AEP event, so rock protection is not required. The road on the northern side of the pit should be designed and constructed to act as a flood levee.
- **South Pit**: The proposed diversions and flood levees direct the 1% AEP floodwater around the South Pit before returning to existing creeks (Figure 4-14). Peak 1% AEP

flood depths adjacent to the flood levees are up to 0.8 m. Peak 1% AEP velocities are less than 1 m/sec in the 1% AEP event, so rock protection is not required during operations.

- **Access and Haul Roads**: The proposed access and haul road waterway crossings effectively convey floodwater under the roads, preventing ponding upstream and water shadows downstream.

Overall, the flood modelling results show that proposed surface water management measures effectively protect mining operations from flooding in events up to 1% AEP.

It is noted that due to the low resolution of the topographic survey data used to develop the model (10m grid), local depressions with shallow water (dark blue areas) are observed along the perimeter of some mine infrastructure. These artefacts of modelling are not expected to be present when the TUFLOW model is updated using high resolution LiDAR data and the diversion and levee designs optimised in the next phase of the project.

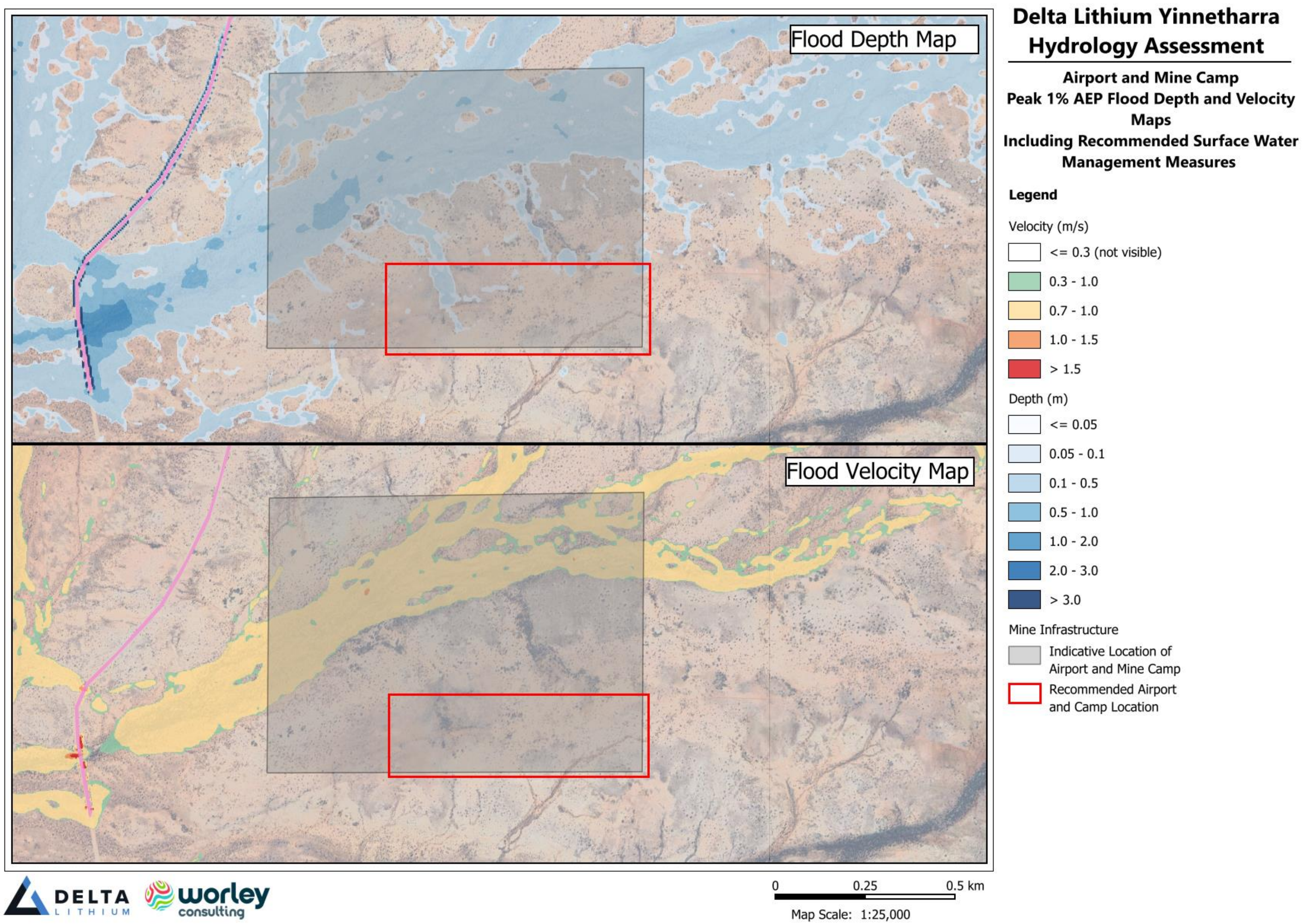

Figure 4-8. Airport and Mine Camp: Peak 1% AEP flood depth and velocity maps for Operational Conditions with recommended surface water management measures

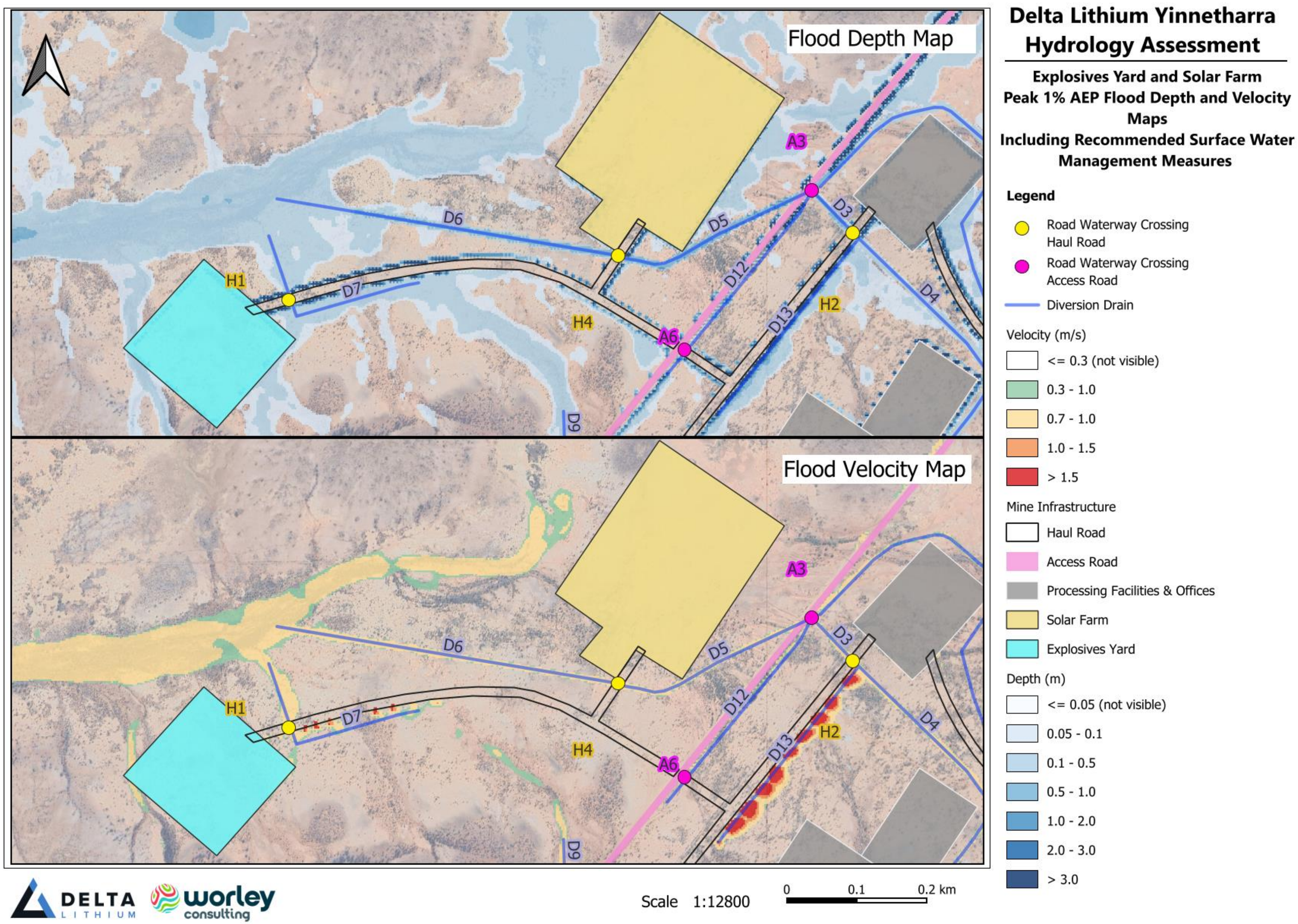

Figure 4-9. Explosives Yard and Solar Farm: Peak 1% AEP flood depth and velocity maps for Operational Conditions including recommended surface water management measures

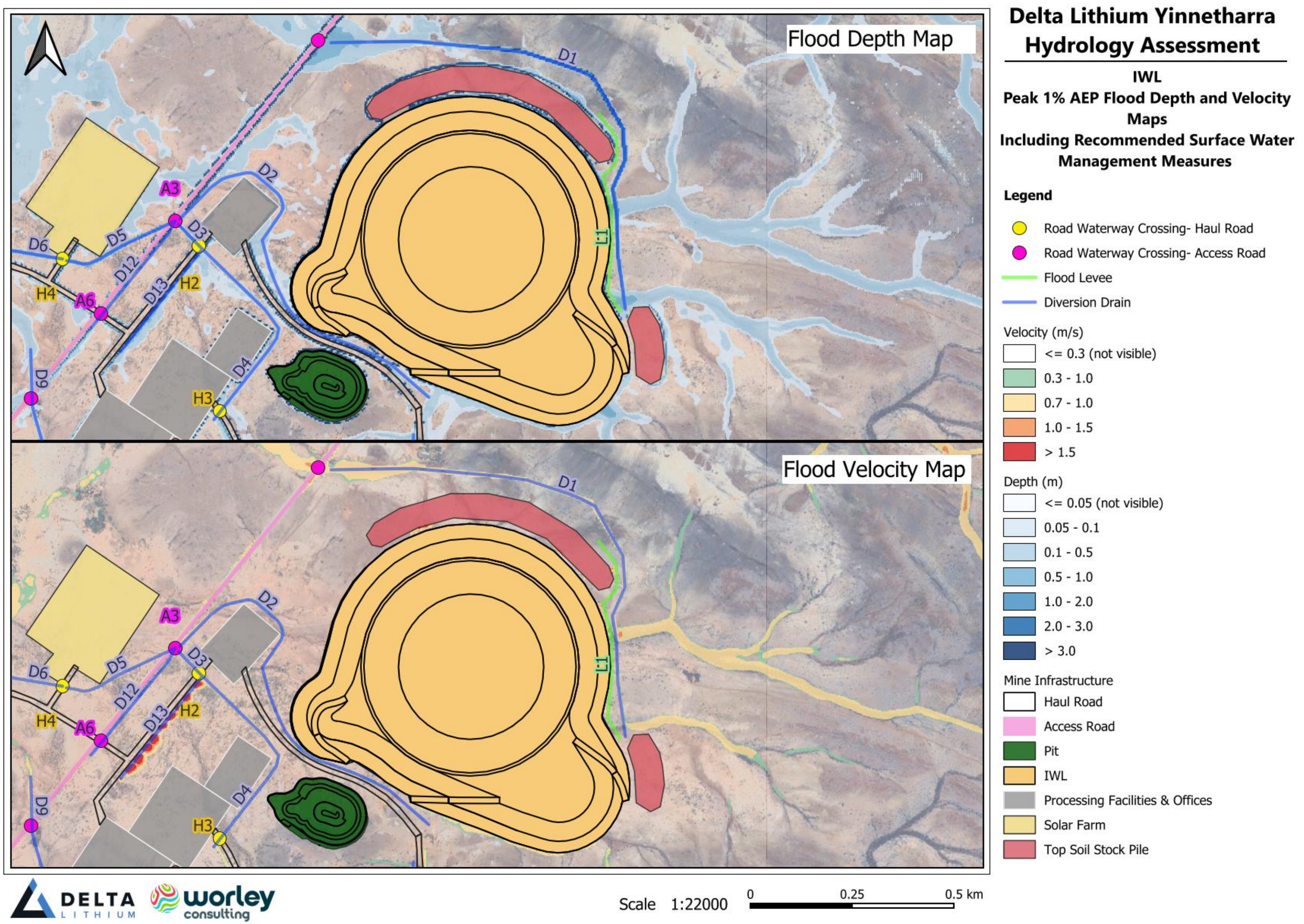

Figure 4-10. Integrated Waste Landform (IWL): Peak 1% AEP flood depth and velocity maps for Operational Conditions including recommended surface water management measures

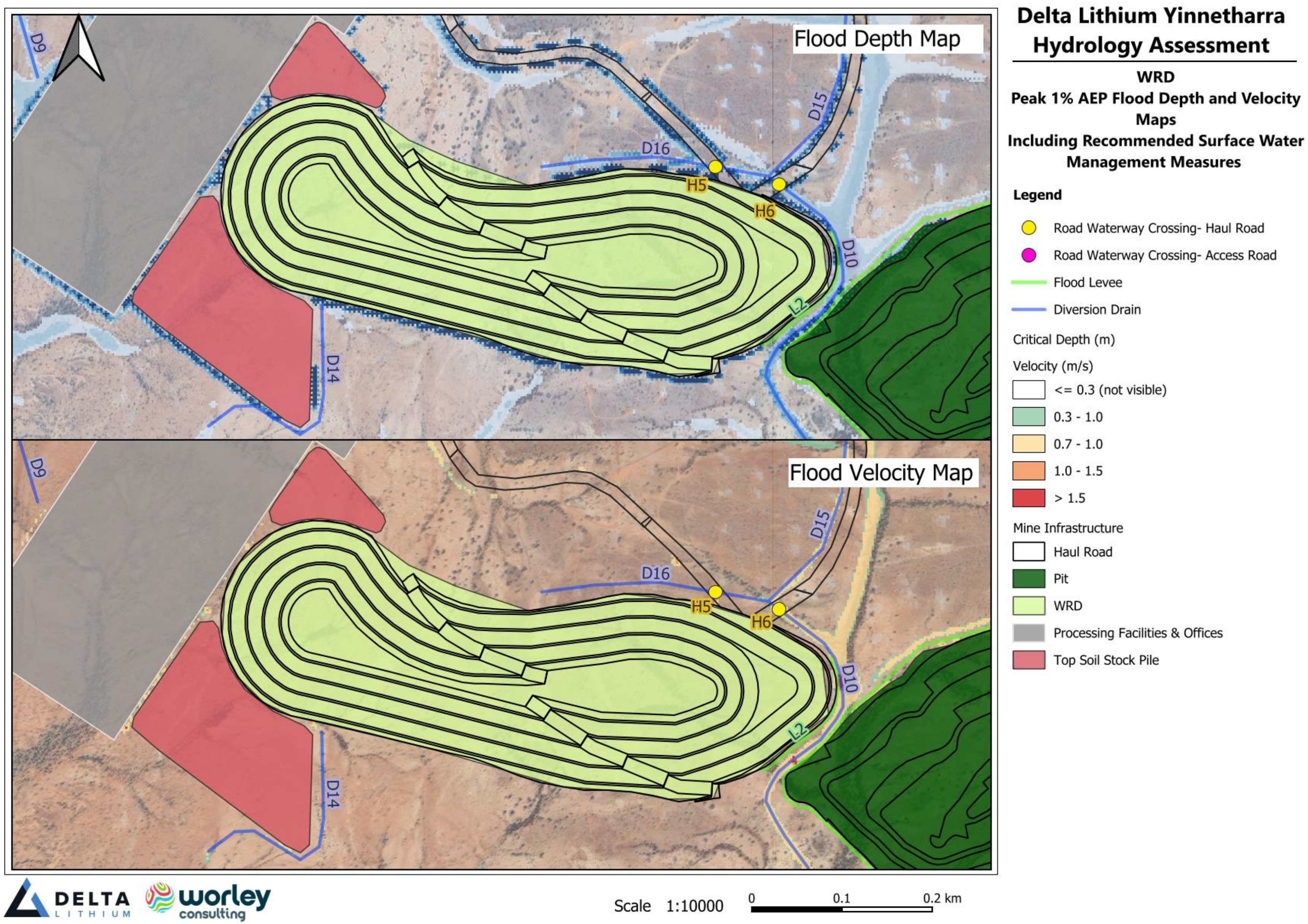

Figure 4-11. Waste Rock Dump (WRD): Peak 1% AEP flood depth and velocity maps for Operational Conditions including recommended surface water management measures

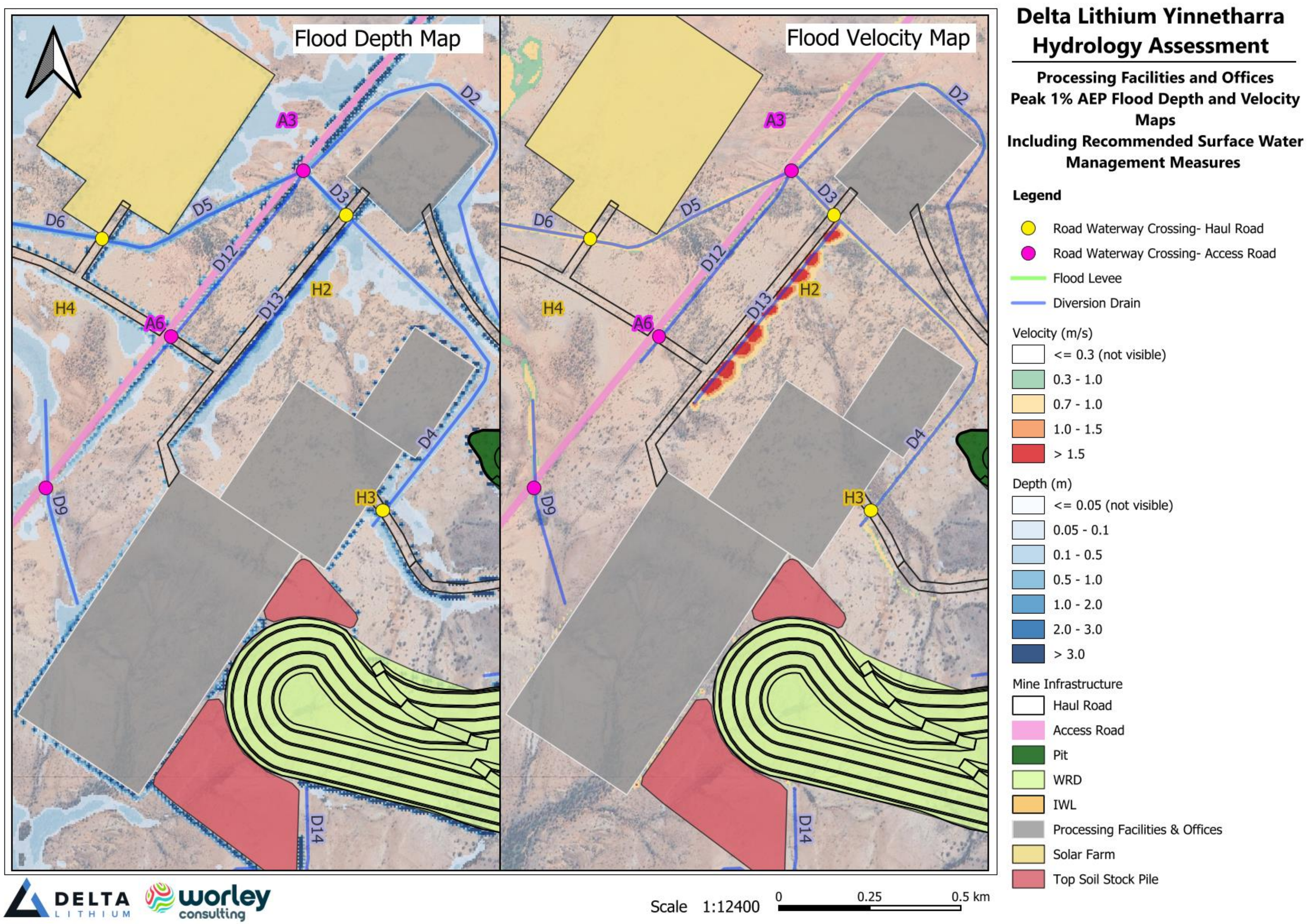

Figure 4-12. Processing Facilities and Offices: Peak 1% AEP flood depth and velocity maps for Operational Conditions including recommended surface water management measures

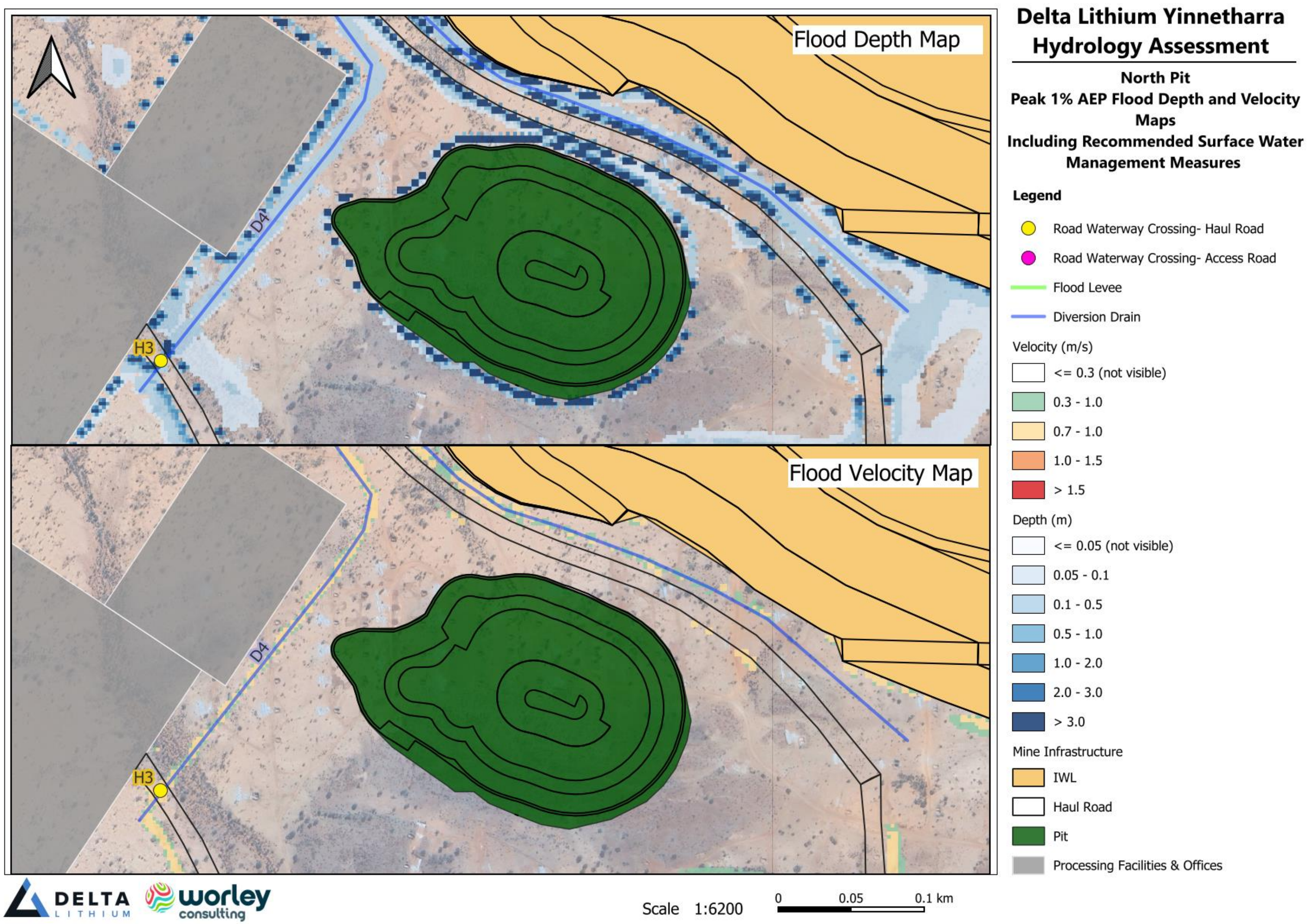

Figure 4-13. North Pit: Peak 1% AEP flood depth and velocity maps for Operational Conditions including recommended surface water management measures

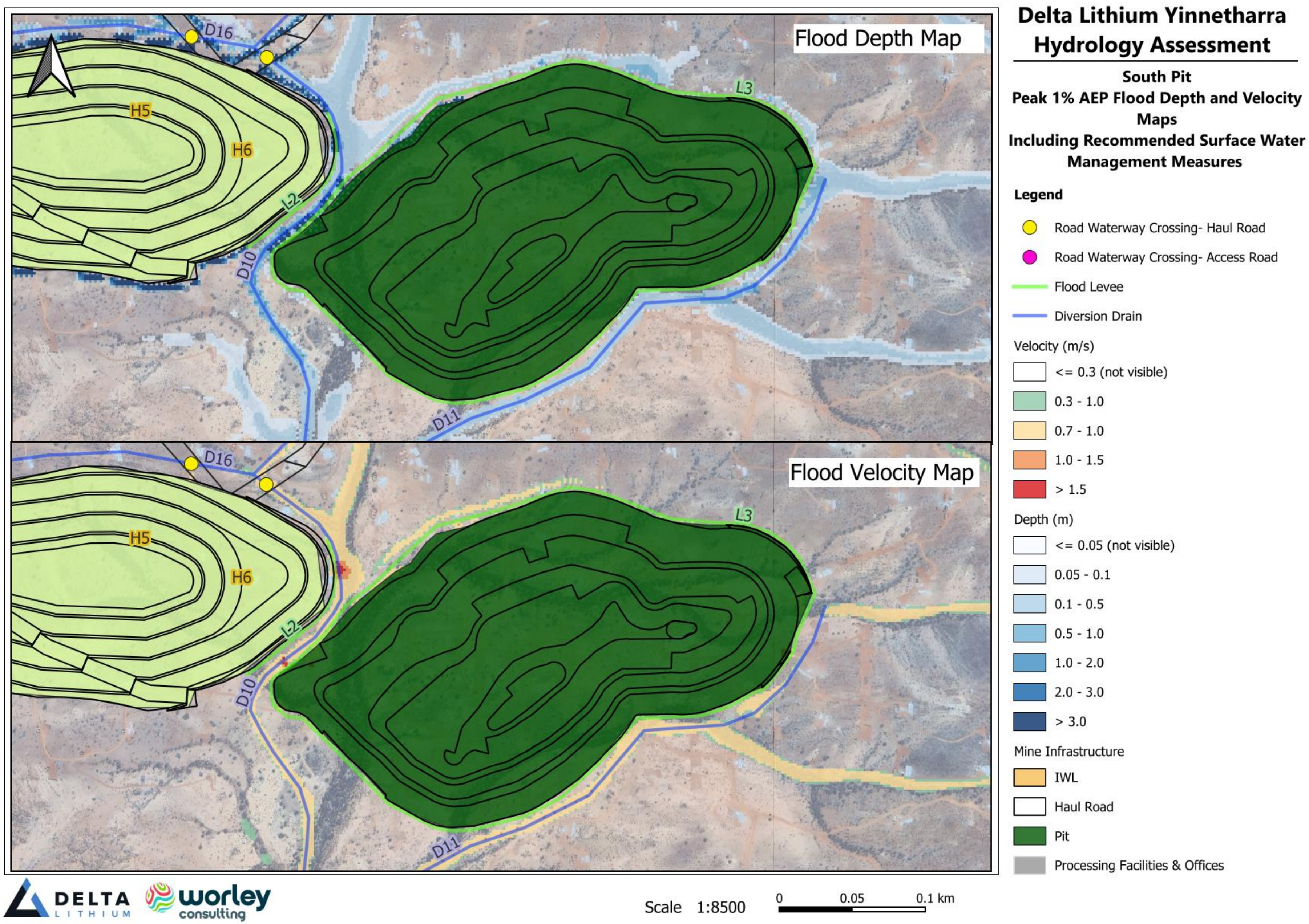

Figure 4-14. South Pit: Peak 1% AEP flood depth and velocity maps for Operational Conditions including recommended surface water management measures

4.3 Mine Closure

4.3.1 Model Set Up

At mine closure, the IWL, WRD and pit voids will remain and be rehabilitated, while all other mine infrastructure removed to reinstate pre-development topographic conditions across the mine site. The operational conditions TUFLOW model was updated to reflect these changes and the PMF event simulated. The results were used to identify surface water management measures needed to ensure the final landform design is safe, stable and non-polluting following mine closure. Appendix C shows the PMF flood depth and velocity around the mine development at closure.

4.3.2 Results

The results of PMF modelling are summarised below with reference to Figure 4-15 and Figure Figure 4-16:

- **North Pit:** PMF modelling shows peak flood depths of up to 0.9 m adjacent flood levee L4 (Figure 4-15), which is required to prevent uncontrolled ingress of floodwater into the pit following mine closure. The peak velocities in Figure 4-15 are generally less than 2 m/s except along the northern side of the pit, where peak velocities are approximately 2m/sec. Therefore, it is recommended that facing class rock is applied to the northern section of levee L4 as shown in Figure 4-15.

- **IWL:** PMF modelling shows peak flood depths of up to 3 m on the eastern side of the rehabilitated IWL, with peak velocities up to 2/m/sec (Figure 4-15). Therefore, it is recommended that facing class rock is applied to the eastern side of the IWL, as shown in Figure 4-15, to a height of 3m, to protect from scour and erosion. The peak PMF flood depths are up to 0.8 m on the southern side of the IWL, with peak velocities up to 2/m/sec (Figure 4-15). Therefore, it is recommended that facing class rock is applied to the southern side of the IWL, as shown in Figure 4-15, to a height of 2.3 m to protect from scour and erosion.

- **South Pit:** PMF modelling shows peak flood depths of up to 1.5 m adjacent to flood levee L3 (Figure 4-16), which is required to prevent uncontrolled ingress of floodwater into the pit following mine closure. The peak velocities adjacent to the levee are up to 2.1 m/s, and therefore facing class rock protection is required, at the locations shown in Figure 4-16, to protect from scour and erosion.

- **WRD:** PMF modelling shows peak flood depths of up to 1.3 m on the eastern side of the rehabilitated WRD, with peak velocities up to 2.4 m/s (Figure 4-16) and therefore facing class rock protection is required at the location shown in Figure 4-16 to protect from scour and erosion. Alternatively, the WRD design could be amended to provide additional space between the pit and WRD which would limit flow depths and velocities and associated rock protection requirements.

Table 4-8 provides the required levee heights and rock class for mine closure.

Table 4-8 Conceptual levee heights and rock class for mine closure

Levee No.	Levee height (m)	Rock Class
L3	1.5 m	Facing
L4	0.9 m	Facing

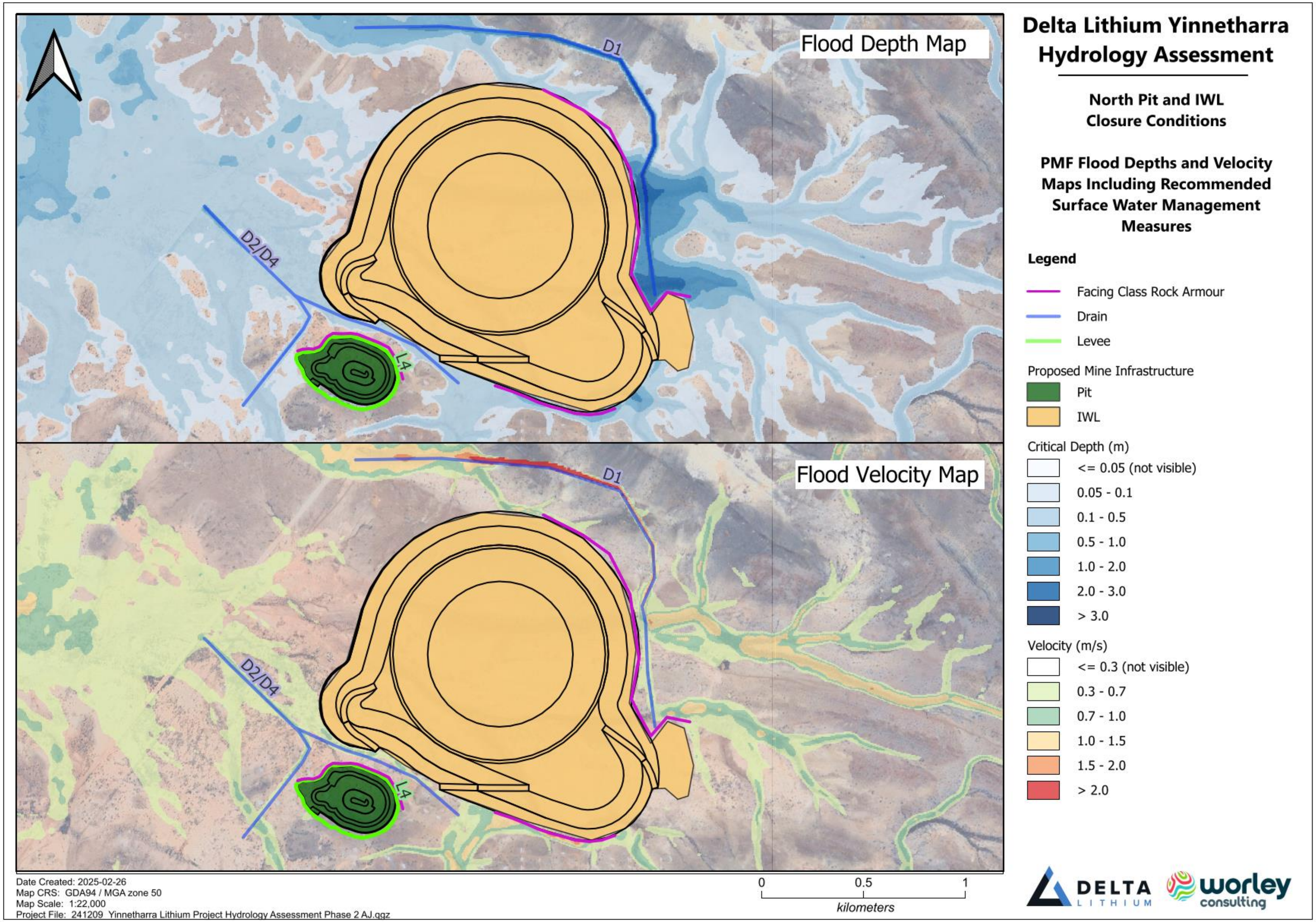

Figure 4-15. North Pit and IWL: PMF flood depths and velocities with recommended surface water management measures for mine closure

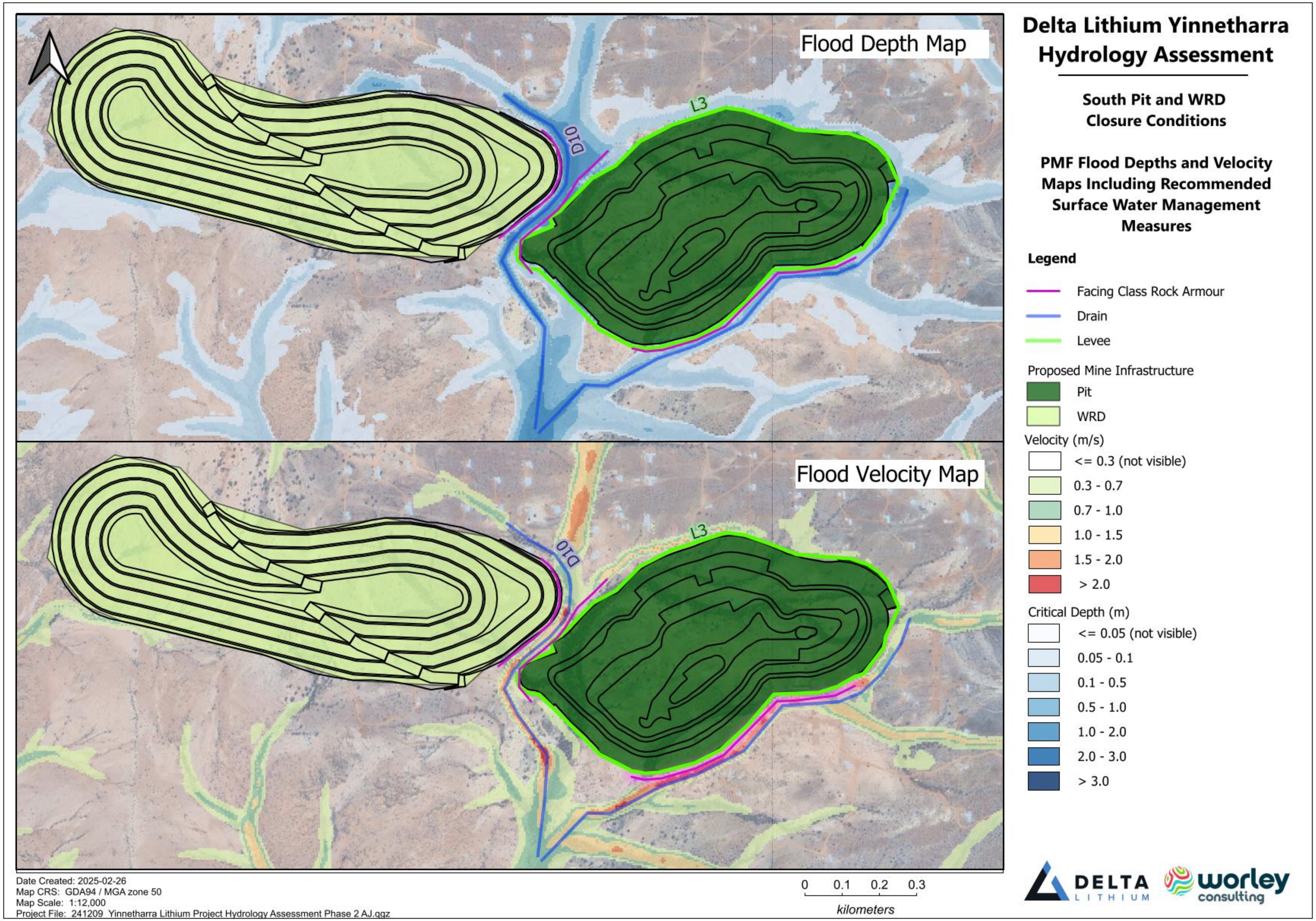

Figure 4-16. South Pit and WRD: PMF flood depths and velocities with recommended surface water management measures for mine closure

5. Surface Water Impact Assessment

The Environmental Factor Guidelines – Inland Waters (EPA, 2018) highlights the importance in predicting the potential hydrological impact from both a water quantity and quality perspective. To assess surface water impacts to potential downstream surface water receptors (refer Section 2.5), design flow hydrographs were extracted from the TUFLOW model at PO 3, PO 4 and PO 5 shown in Figure 4-5, for the 20%, 10% and 1% AEP events under existing and operational conditions and compared in Figure 5-1. These locations were selected as they are at the downstream extent of the catchment areas containing the proposed pits and mine infrastructure.

A 1% AEP depth afflux maps, shown in Appendix B, shows the changes in flood depth due to the mine development.

The results suggest the following:

- There are some areas with minor increases and reductions in peak flood depth across the mine site, however most of change is less than +/-0.2m on average, which is minor.
- Peak 1% AEP velocities across the site are less than 2 m/sec under existing and operational conditions so the proposed mine development poses no significant risk of increased scour, erosion and sediment loads to downstream receptors.
- There are small reductions in peak flow at PO 3 and PO 4 under operational conditions, which is due to the pits and WRD resulting in an overall reduction in catchment area reporting to the PO lines immediately downgradient of the mine area.
- There is no significant difference between the existing and operational conditions peak flows and hydrographs at PO 5, which is due to the mine area comprising a very small percentage of the overall catchment reporting to PO 5.

The use of diversions to prevent ponding, means the overall volume of runoff under existing and operational conditions are similar. Therefore, the proposed mine development is expected to result in only minor changes in peak flows, flow volumes, flood depths and velocities and no significant impact to surface water receptors in the study area.

It is recommended that the following surface water quality control measures are included in the mine infrastructure design during future phases of the project to mitigate potential impacts to downstream water quality:

- All runoff from disturbed areas to be directed to sedimentation ponds to remove suspended sediment prior to discharge to the environment,
- Installation of creek diversions and bunds to redirect clean water around disturbed areas and prevent mixing of clean and dirty runoff, and
- Containment of hydrocarbon storage and refuelling areas.

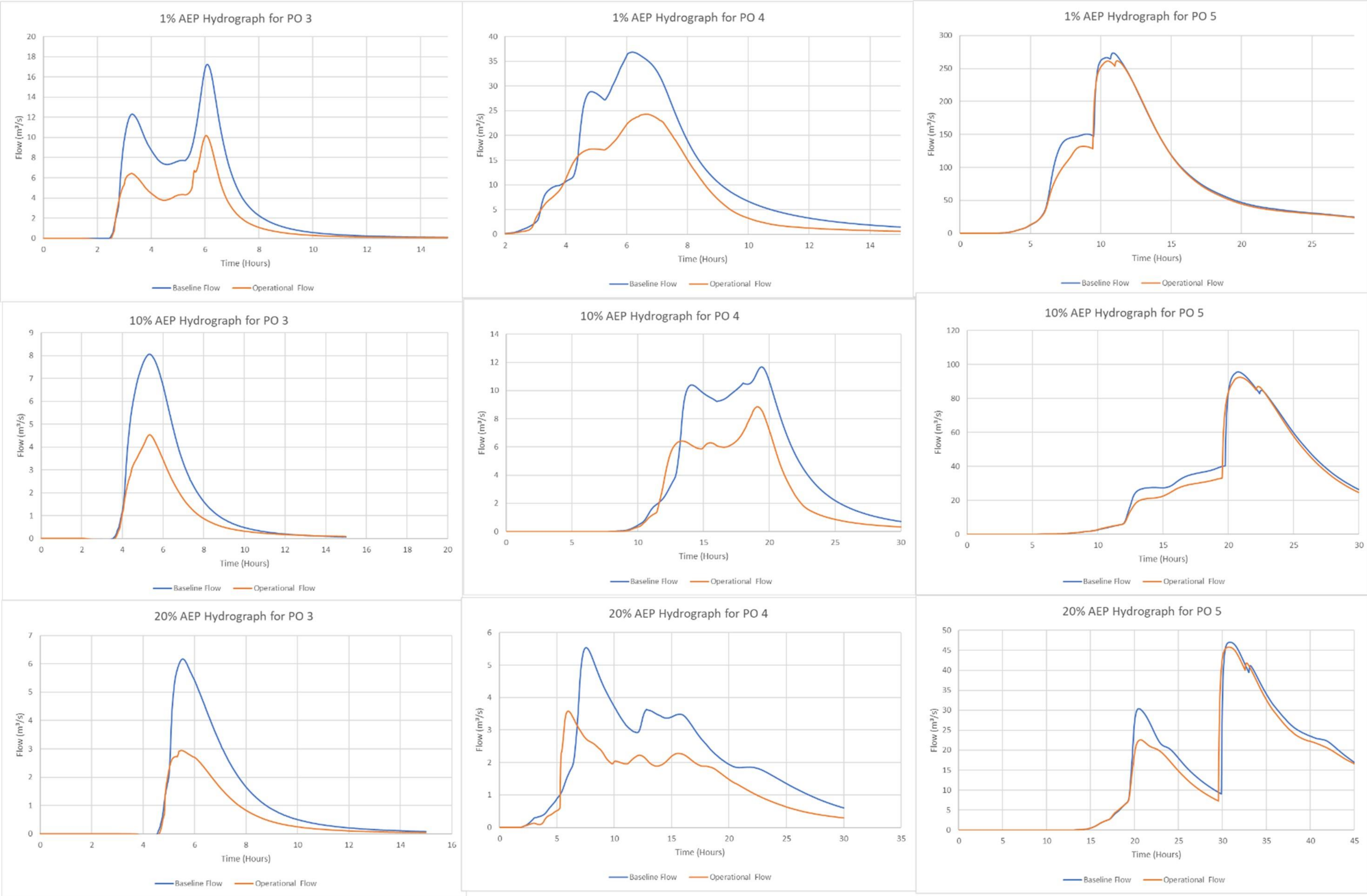

Figure 5-1. Existing and Operational Flow Hydrographs for PO 3, 4 & 5 under 1%, 10% & 20% AEP conditions

6. Recommendations

The following recommendations are made for the next phase of the project:

- The accuracy of the modelled flood depths and velocities is dependent on the resolution of the available topographic survey data (10m LandGate data). The topographic survey data and results presented in this report are considered suitable for conceptual level assessment and design only. It is recommended that LiDAR data be captured for the study area and used to inform the next phase of assessment and design.
- Geotechnical data will need to be collected on site to inform the next phase of assessment and design of surface water management measures.

7. References

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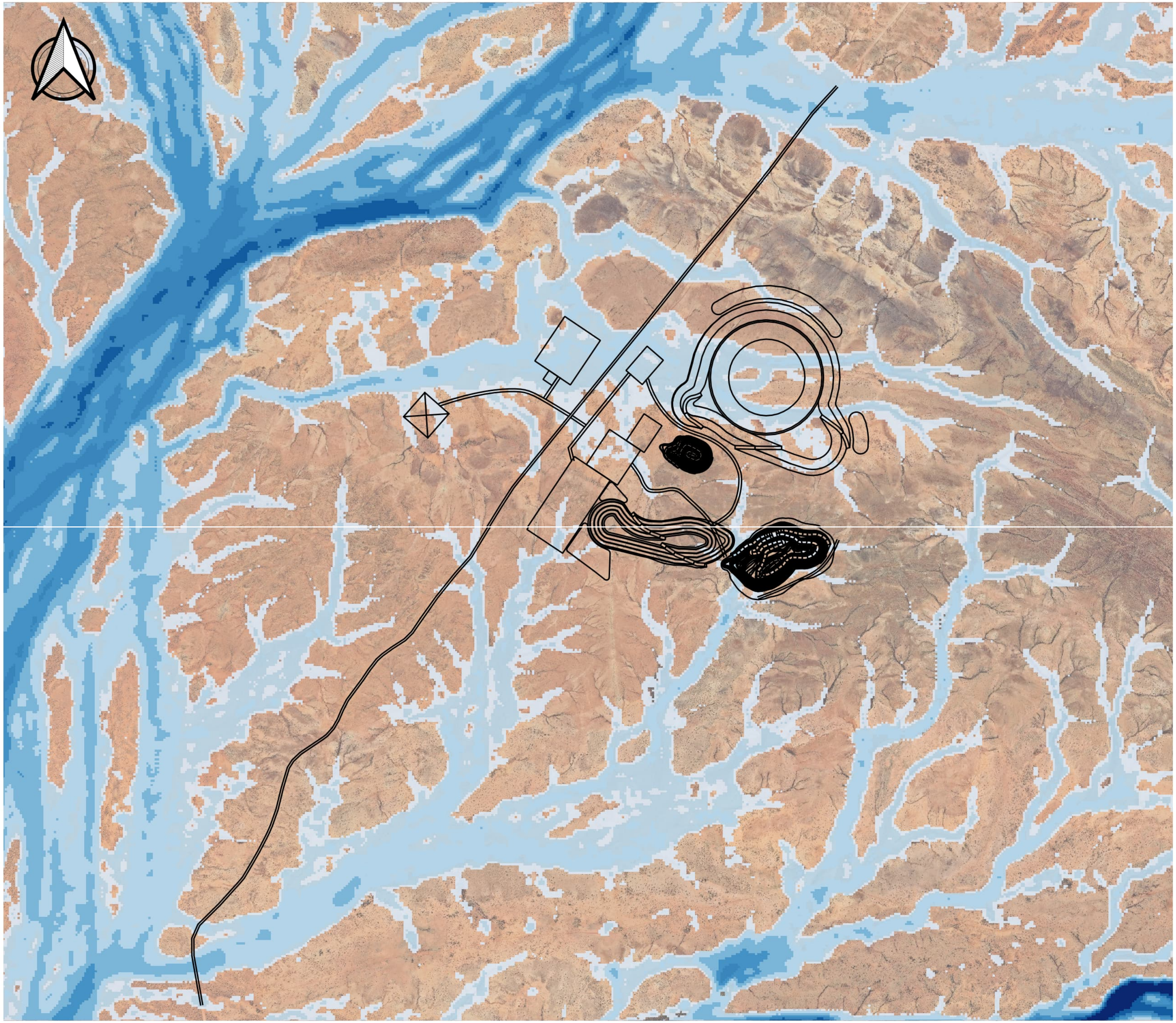
Appendix A: Existing Conditions Flood Maps



PEAK FLOOD DEPTH 1% AEP

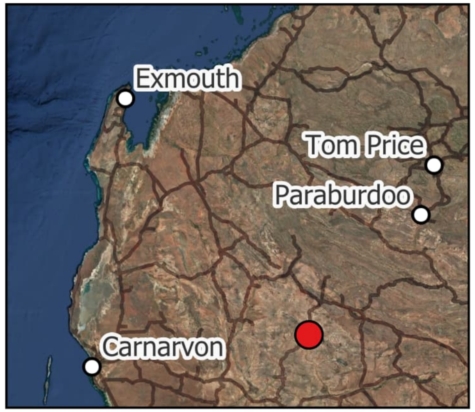
EXSISTING CONDITIONS

Legend

Mining Infrastructure Outline (not included in flood model)

Depth (m)

- <= 0.05 (not visible)
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- > 3.0



DELTA LITHIUM

worley consulting

Date Created: 2025-02-25
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:50,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 1 2 km

Scale 1:50000

PEAK FLOOD DEPTH 10% AEP

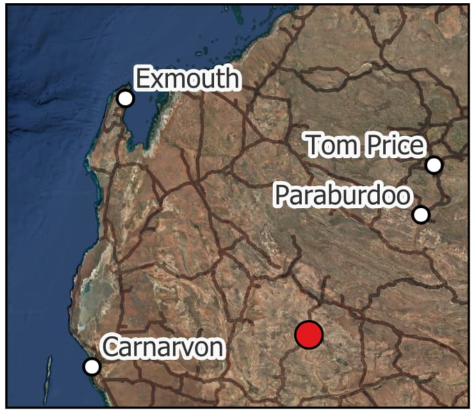
EXSISTING CONDITIONS

Legend

Mining Infrastructure Outline (not included in flood model)

Depth (m)

- <= 0.05 (not visible)
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- > 3.0



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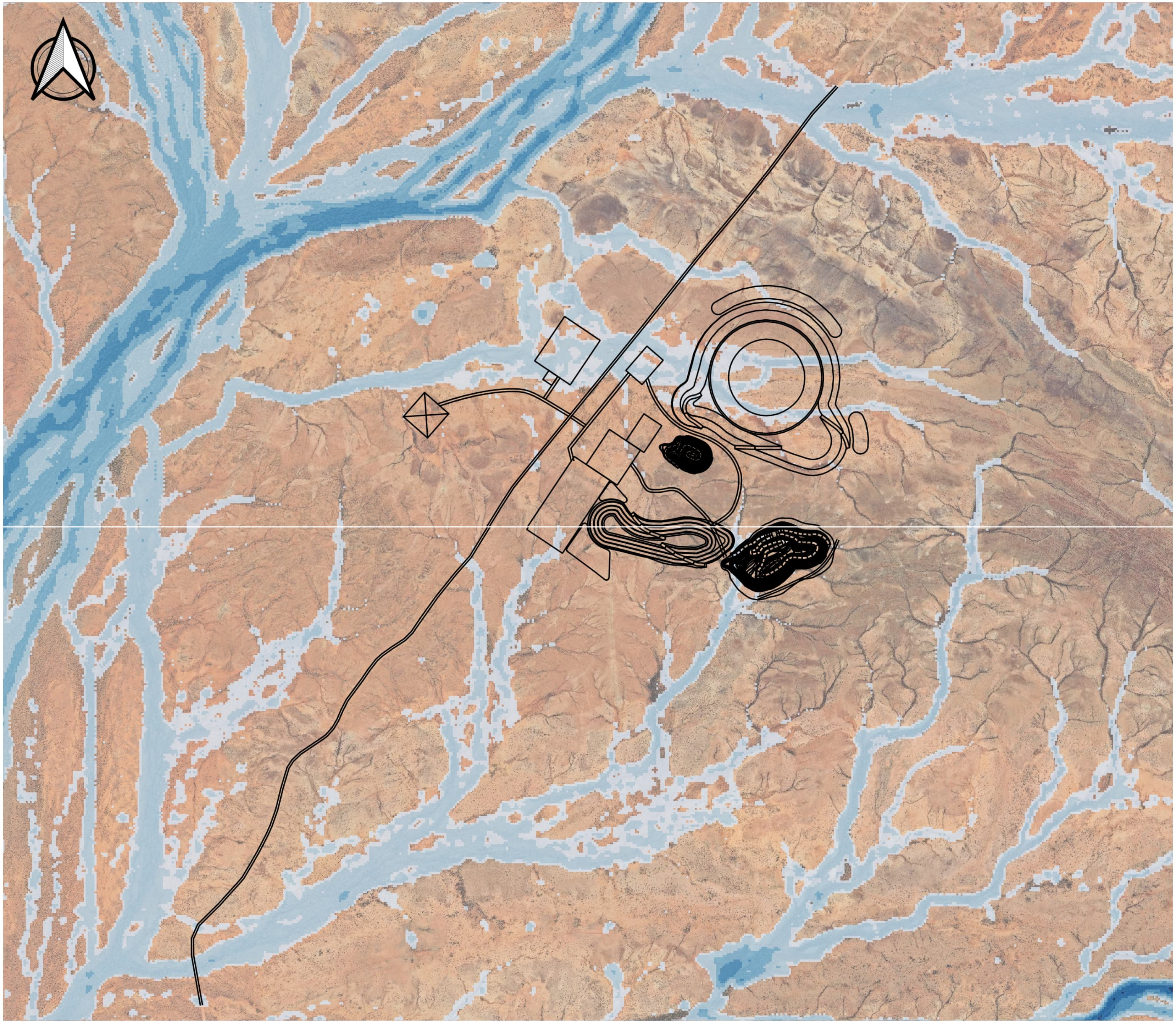


PEAK FLOOD DEPTH 20% AEP

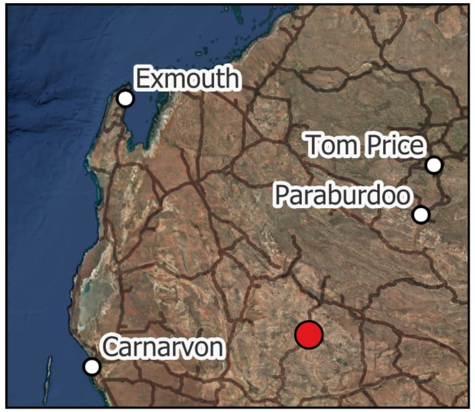
EXSISTING CONDITIONS

Legend

Mining Infrastructure Outline (not included in flood model)

Depth (m)

- <= 0.05 (not visible)
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- > 3.0



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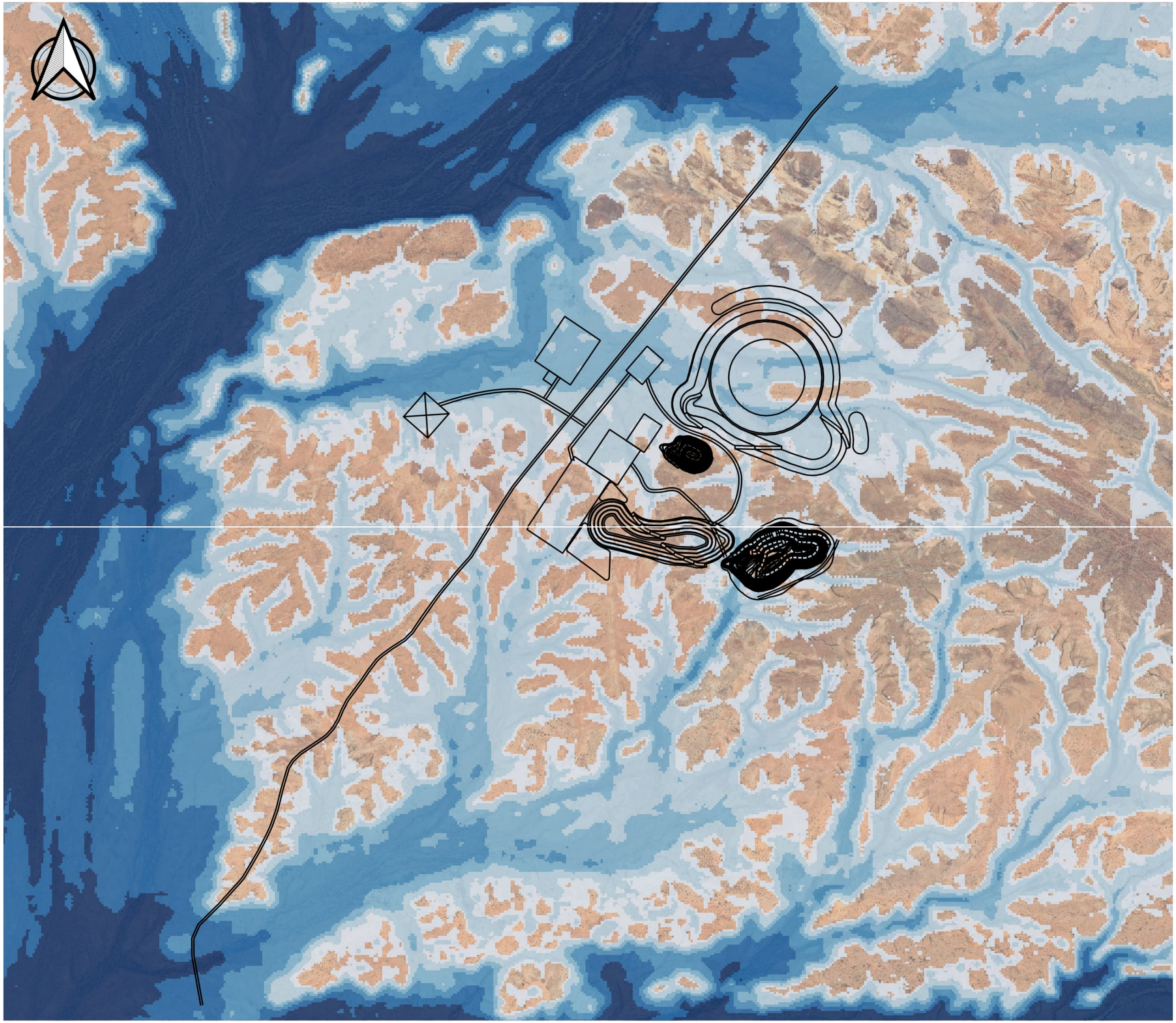
DELTA LITHIUM

worley consulting

PEAK FLOOD DEPTH FOR PMF

EXSISTING CONDITIONS

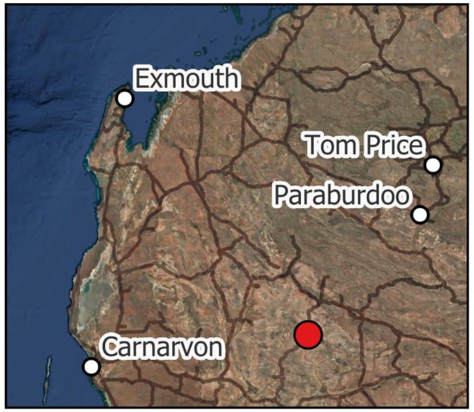


Legend

(outline)	Mining Infrastructure Outline (not included in flood model)

Depth (m)

- <= 0.05 (not visible)
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- > 3.0



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Scale 1:50000

Date Created: 2025-02-25
Map CRS: GDA94 / MGA zone 50
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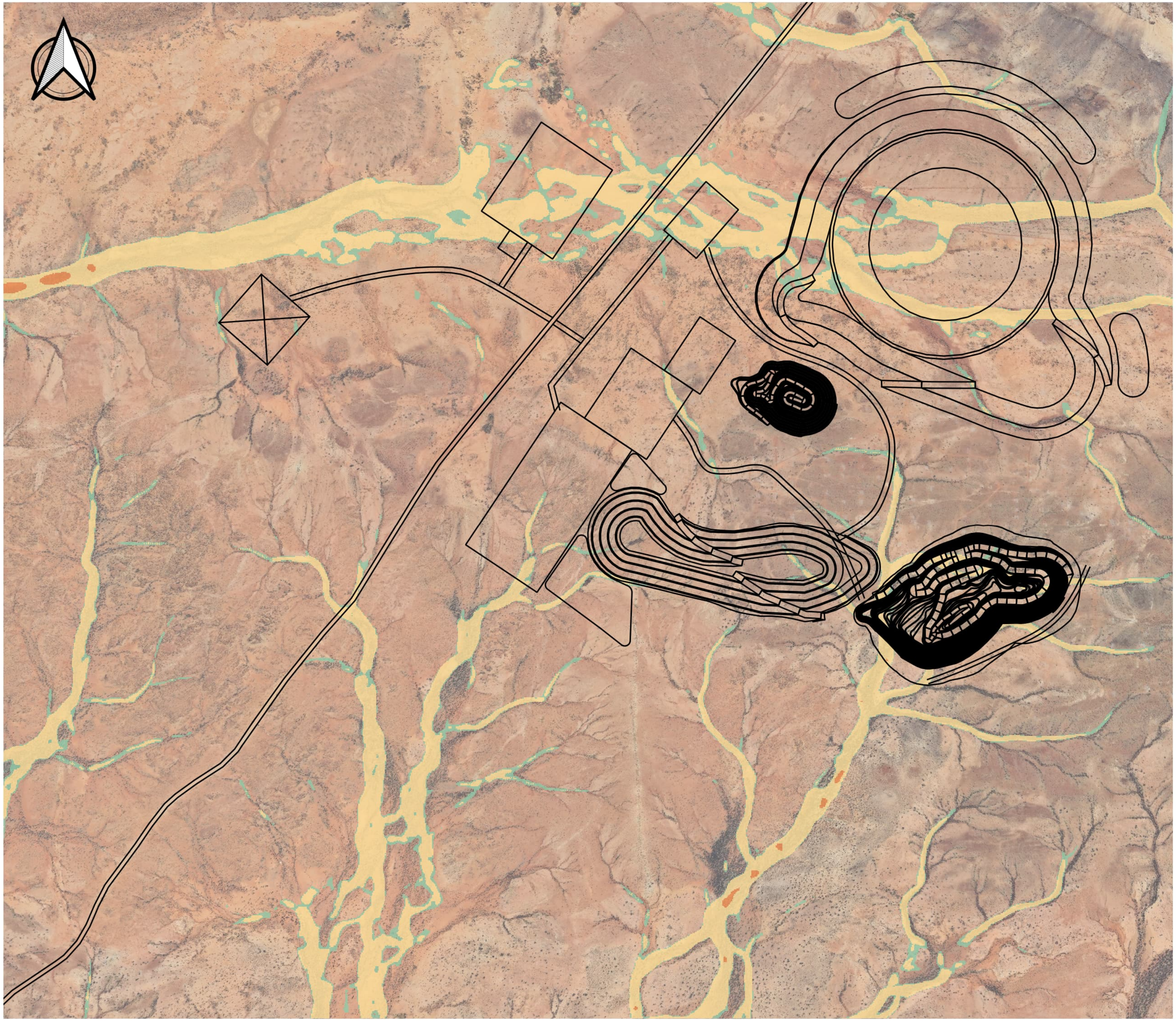
PEAK FLOOD VELOCITY 1% AEP

EXSISTING CONDITIONS



Legend

- Mining Infrastructure Outline (not included in flood model)

Velocity (m/s)

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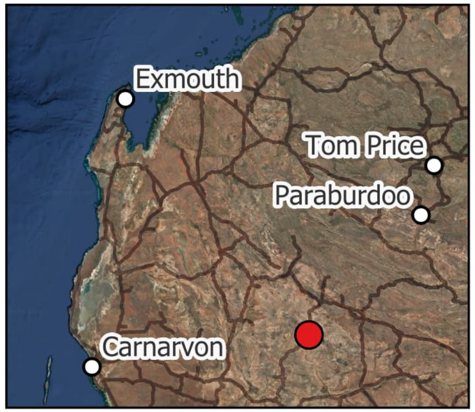
- 0.3 - 1.0
- 0.7 - 1.0
- 1.0 - 1.5
- > 1.5



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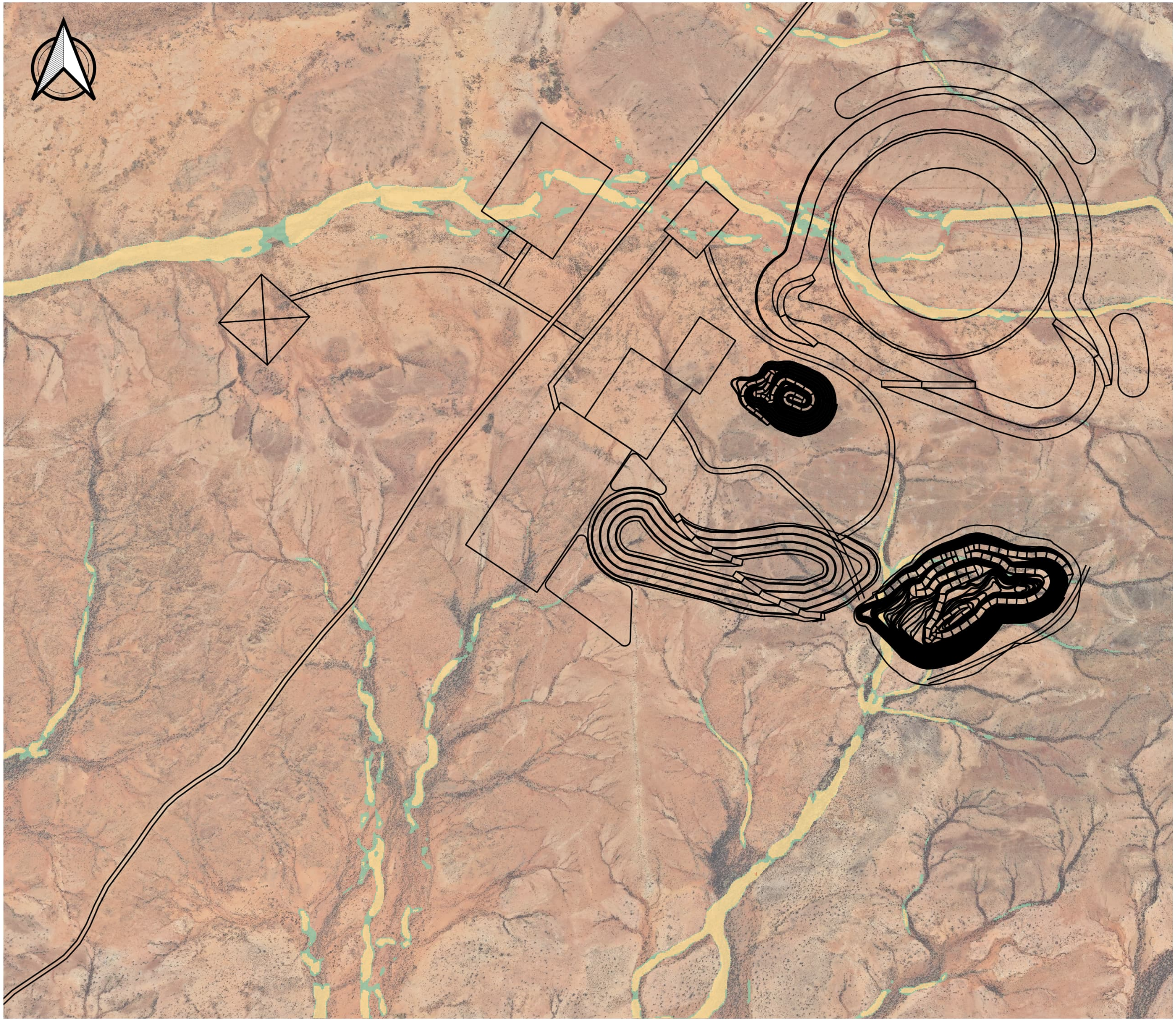

PEAK FLOOD VELOCITY 10% AEP

EXSISTING CONDITIONS

Legend

Outline	Mining Infrastructure Outline (not included in flood model)

Velocity (m/s)

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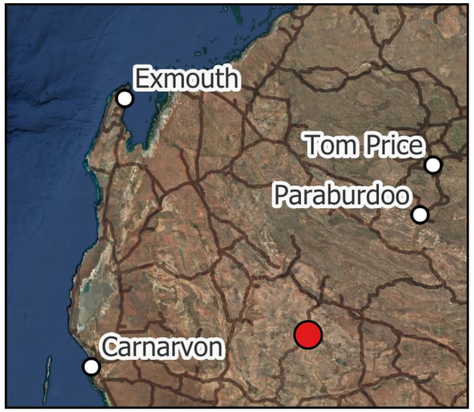
Green	0.3 - 1.0
Yellow	0.7 - 1.0
Orange	1.0 - 1.5
Red	> 1.5



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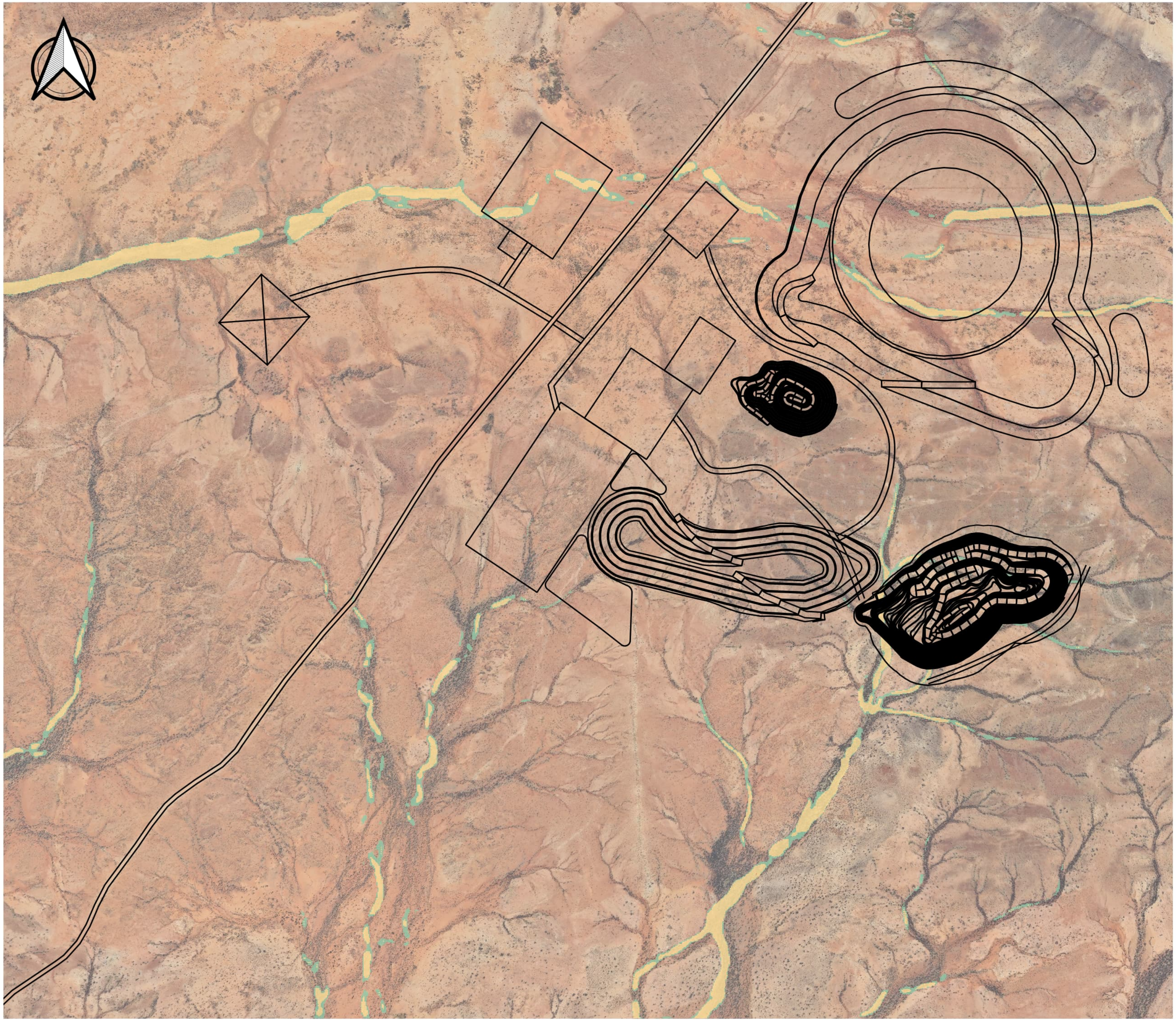
DELTA LITHIUM worley consulting



PEAK FLOOD VELOCITY 20% AEP

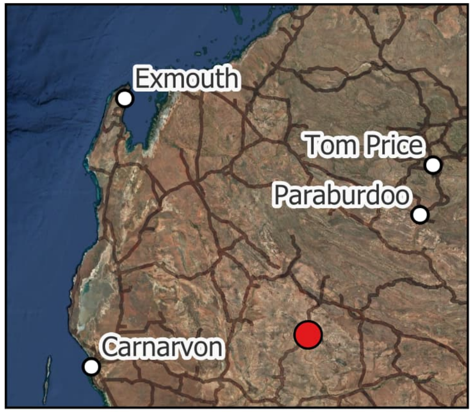
EXSISTING CONDITIONS

Legend

Mining Infrastructure Outline (not included in flood model)

Velocity (m/s)

- <= 0.3 (not visible)
- 0.3 - 1.0
- 0.7 - 1.0
- 1.0 - 1.5
- > 1.5



DELTA LITHIUM

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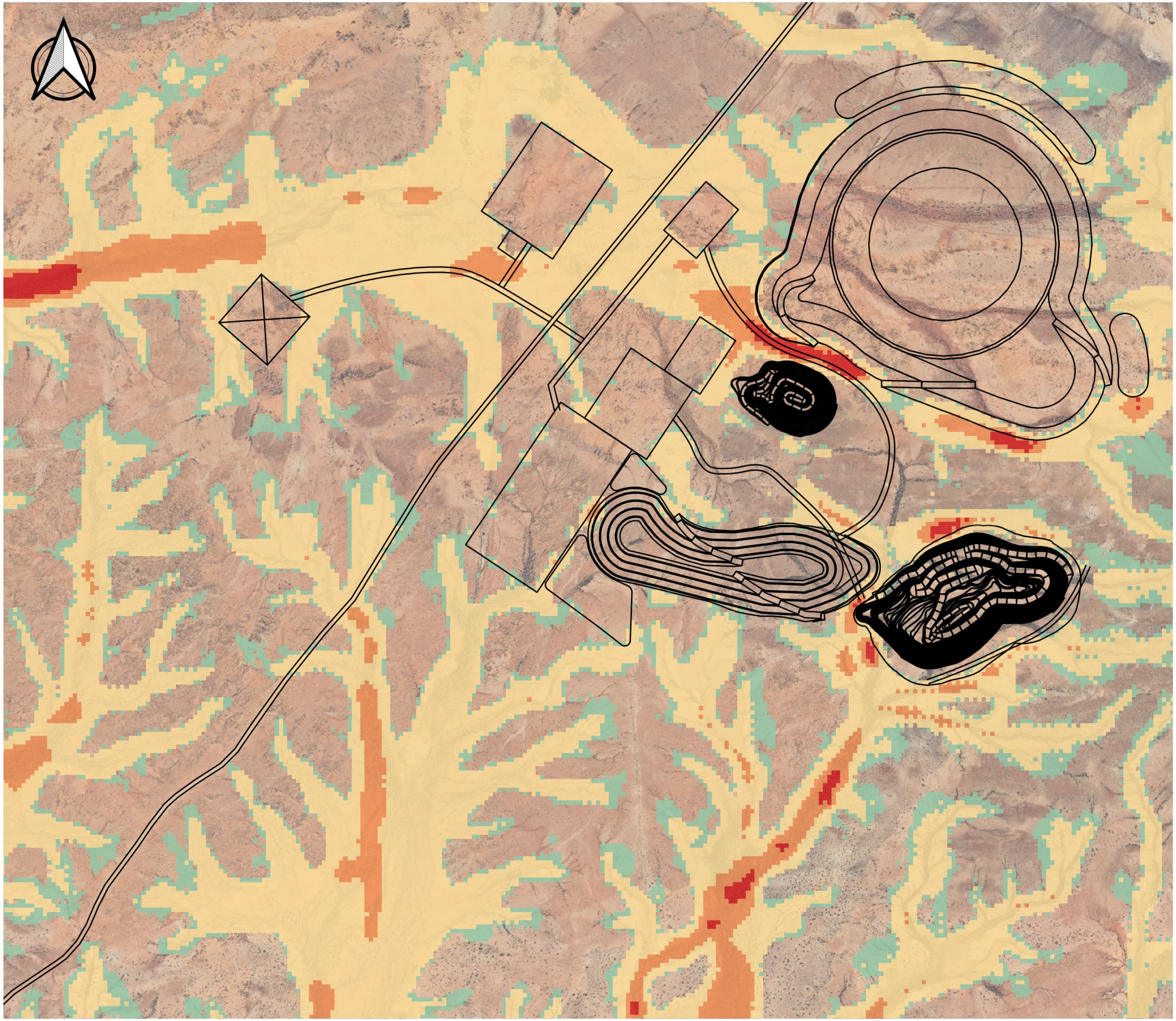
Date Created: 2025-02-25
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 1 2 km

Scale 1:25000



PEAK FLOOD VELOCITY FOR PMF

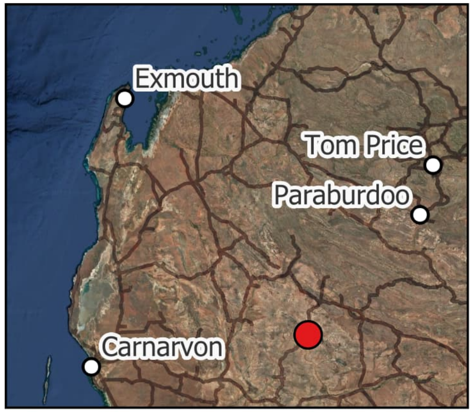
EXSISTING CONDITIONS

Legend

Mining Infrastructure Outline (not included in flood model)

Velocity (m/s)

- <= 0.3 (not visible)
- 0.3 - 1.0
- 0.7 - 1.0
- 1.0 - 1.5
- > 1.5



Date Created: 2025-02-25
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 1 2 km

Scale 1:25000

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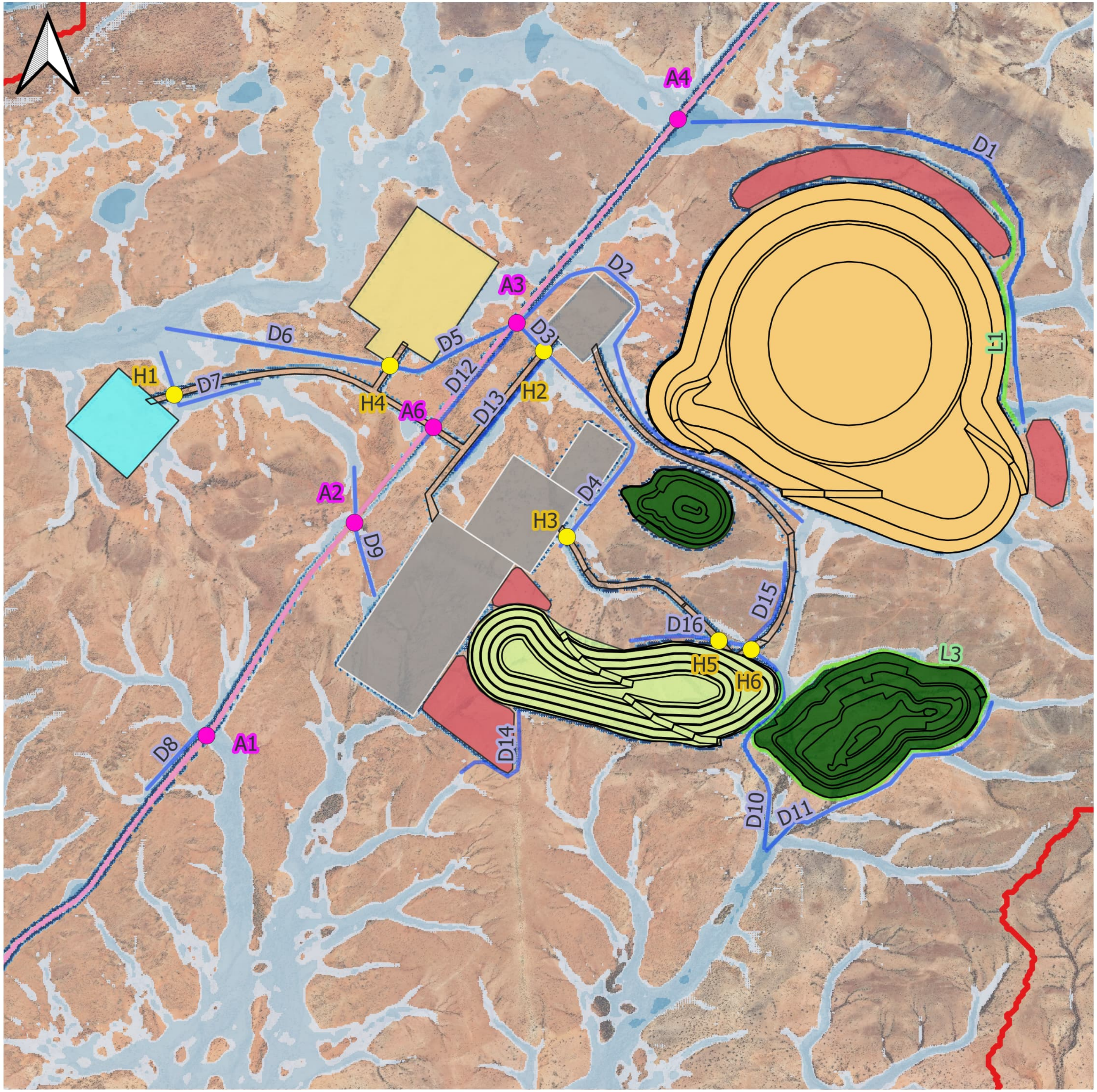
Appendix B: Operational Conditions Flood Maps



PEAK FLOOD DEPTH 1% AEP

OPERATIONAL DESIGN

Legend

Model Boundary

Mining Infrastructure Outline

Haul Road

Access Road

Pit

WRD

IWL

Processing Facilities & Offices

Solar Farm

Explosives Yard

Top Soil Stock Pile

Access Road Waterway Crossing

Haul Road Waterway Crossing

Diversion Drain

Flood Levee

Depth (m)

<= 0.05 (not visible)

0.05 - 0.1

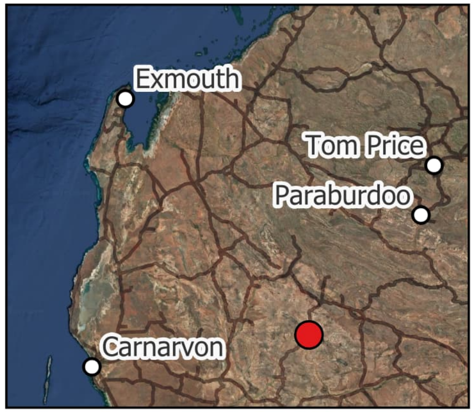
0.1 - 0.5

0.5 - 1.0

1.0 - 2.0

2.0 - 3.0

> 3.0



0 0.5 1 km

Scale 1:25000

Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

DELTA LITHIUM

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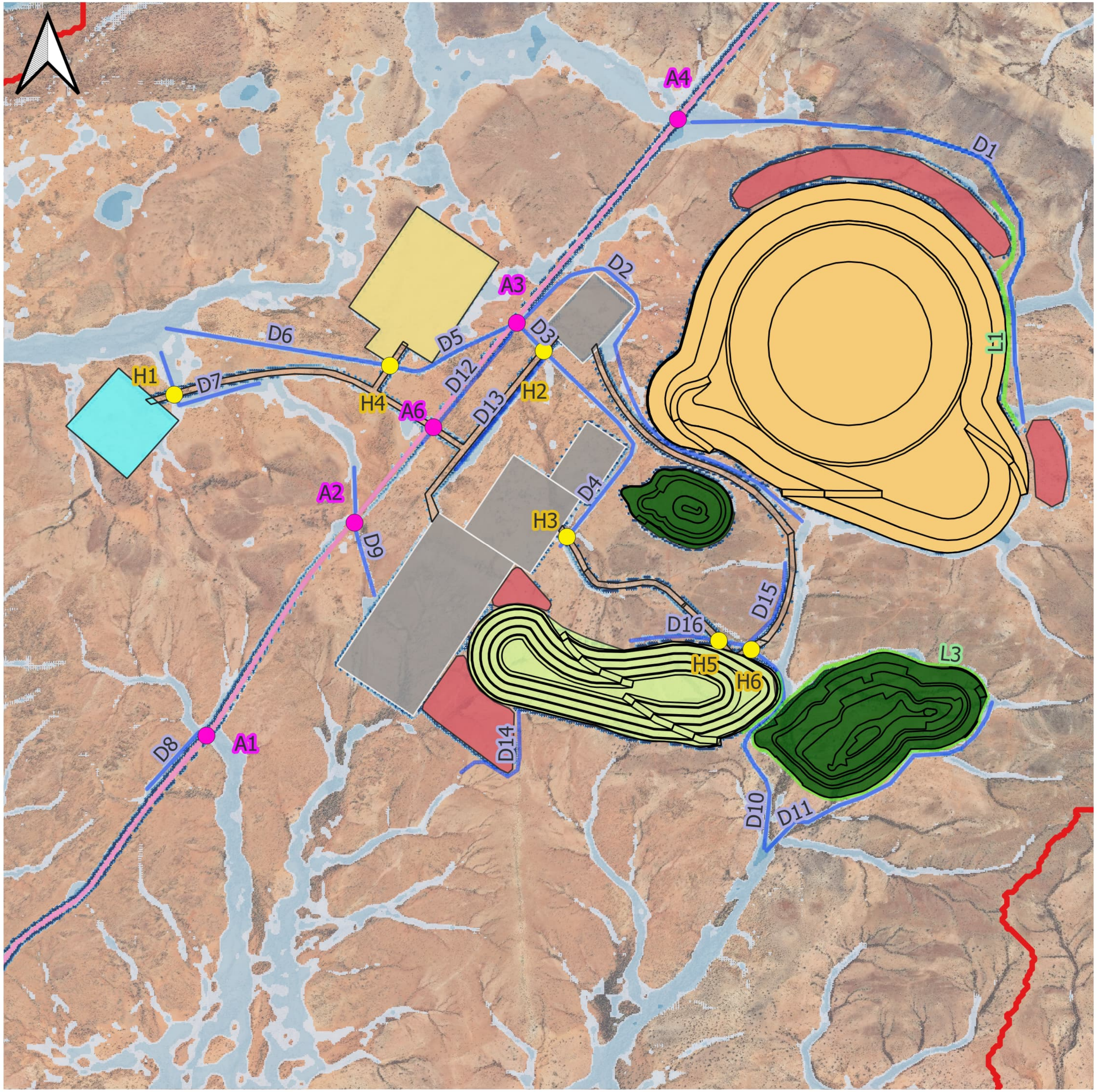
PEAK FLOOD DEPTH 10% AEP

OPERATIONAL DESIGN

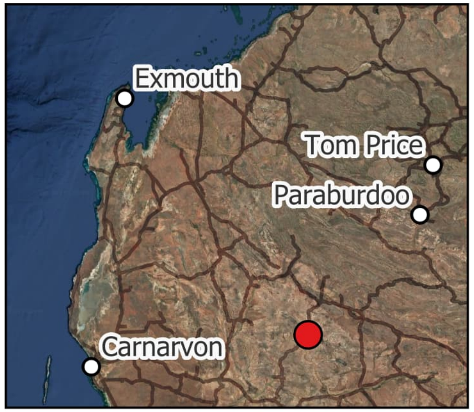


Legend

- Model Boundary
- Mining Infrastructure Outline
- Haul Road
- Access Road
- Pit
- WRD
- IWL
- Processing Facilities & Offices
- Solar Farm
- Explosives Yard
- Top Soil Stock Pile
- Access Road Waterway Crossing
- Haul Road Waterway Crossing
- Diversion Drain
- Flood Levee

Depth (m)

- <= 0.05 (not visible)
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- > 3.0



DELTA LITHIUM
worley consulting

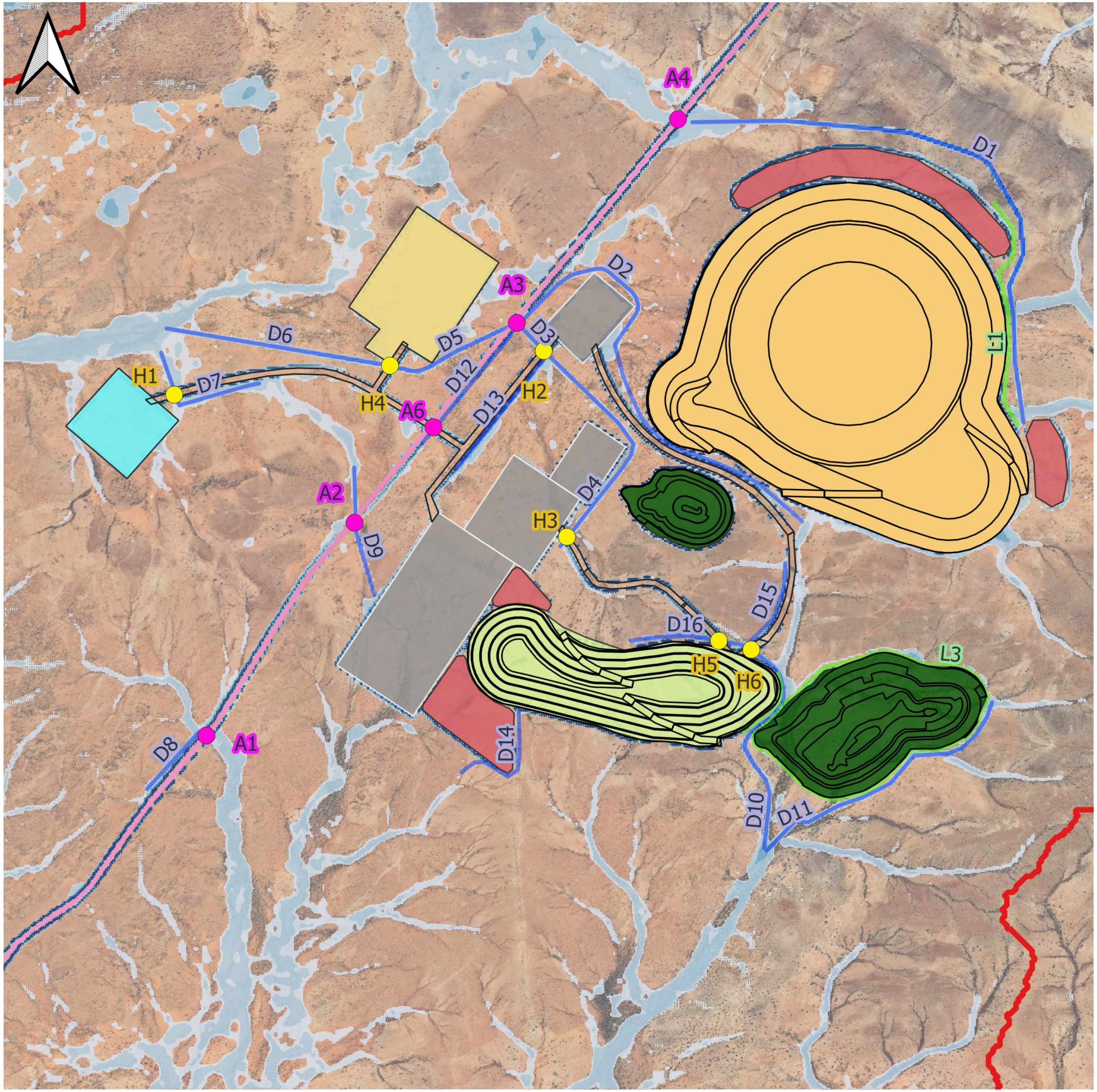
Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 0.5 1 km

Scale 1:25000

PEAK FLOOD DEPTH 20% AEP

OPERATIONAL DESIGN

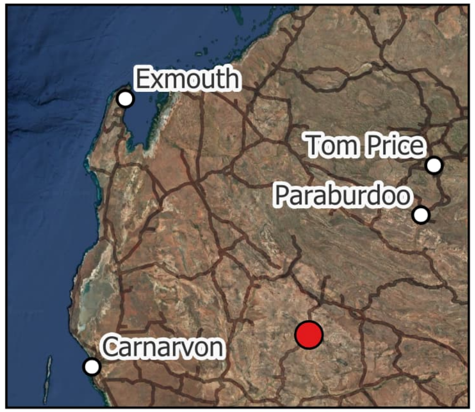


Legend

- Model Boundary
- Mining Infrastructure Outline
- Haul Road
- Access Road
- Pit
- WRD
- IWL
- Processing Facilities & Offices
- Solar Farm
- Explosives Yard
- Top Soil Stock Pile
- Access Road Waterway Crossing
- Haul Road Waterway Crossing
- Diversion Drain
- Flood Levee

Depth (m)

- <= 0.05 (not visible)
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- > 3.0



Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 0.5 1 km

Scale 1:25000

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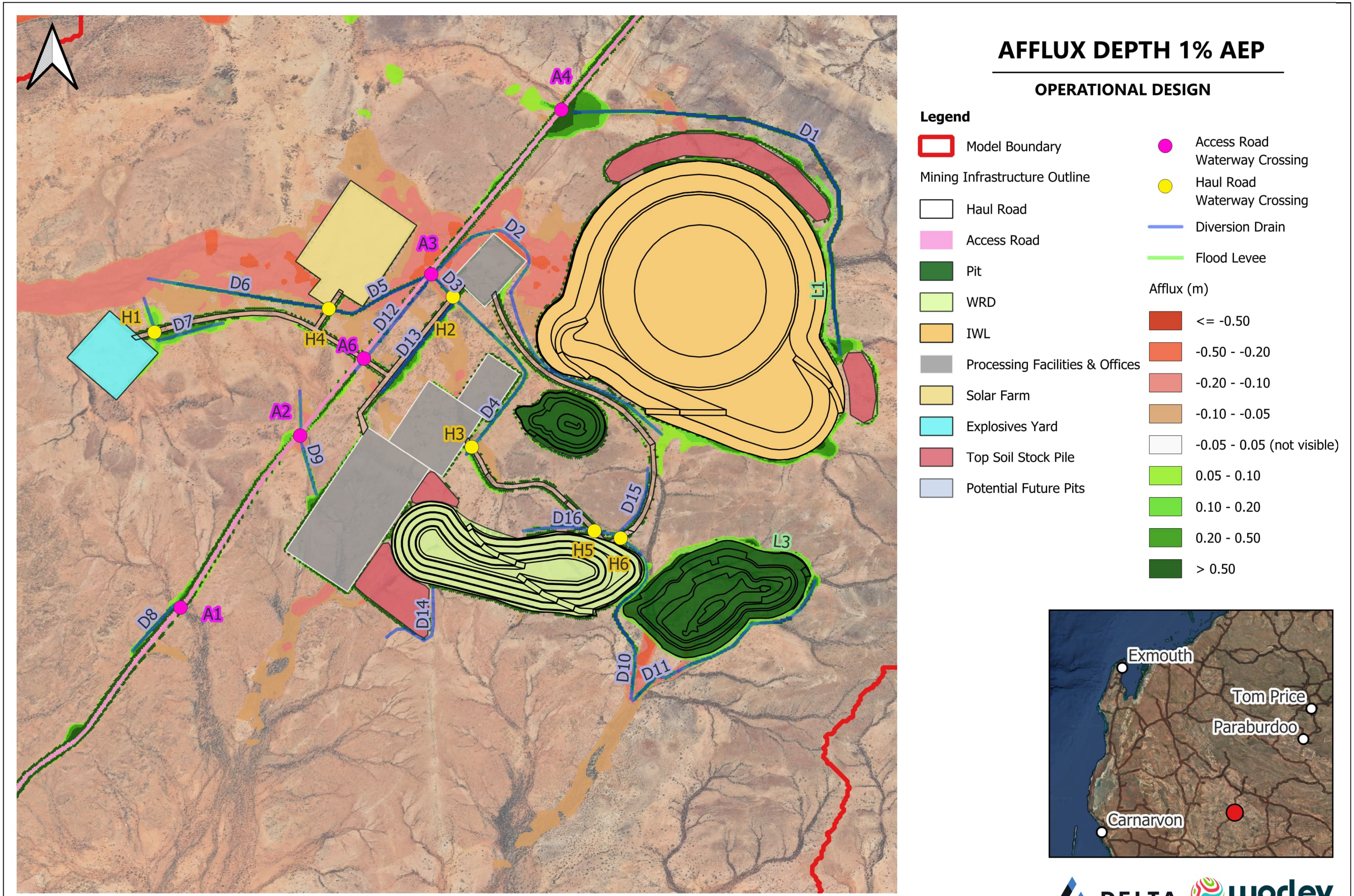
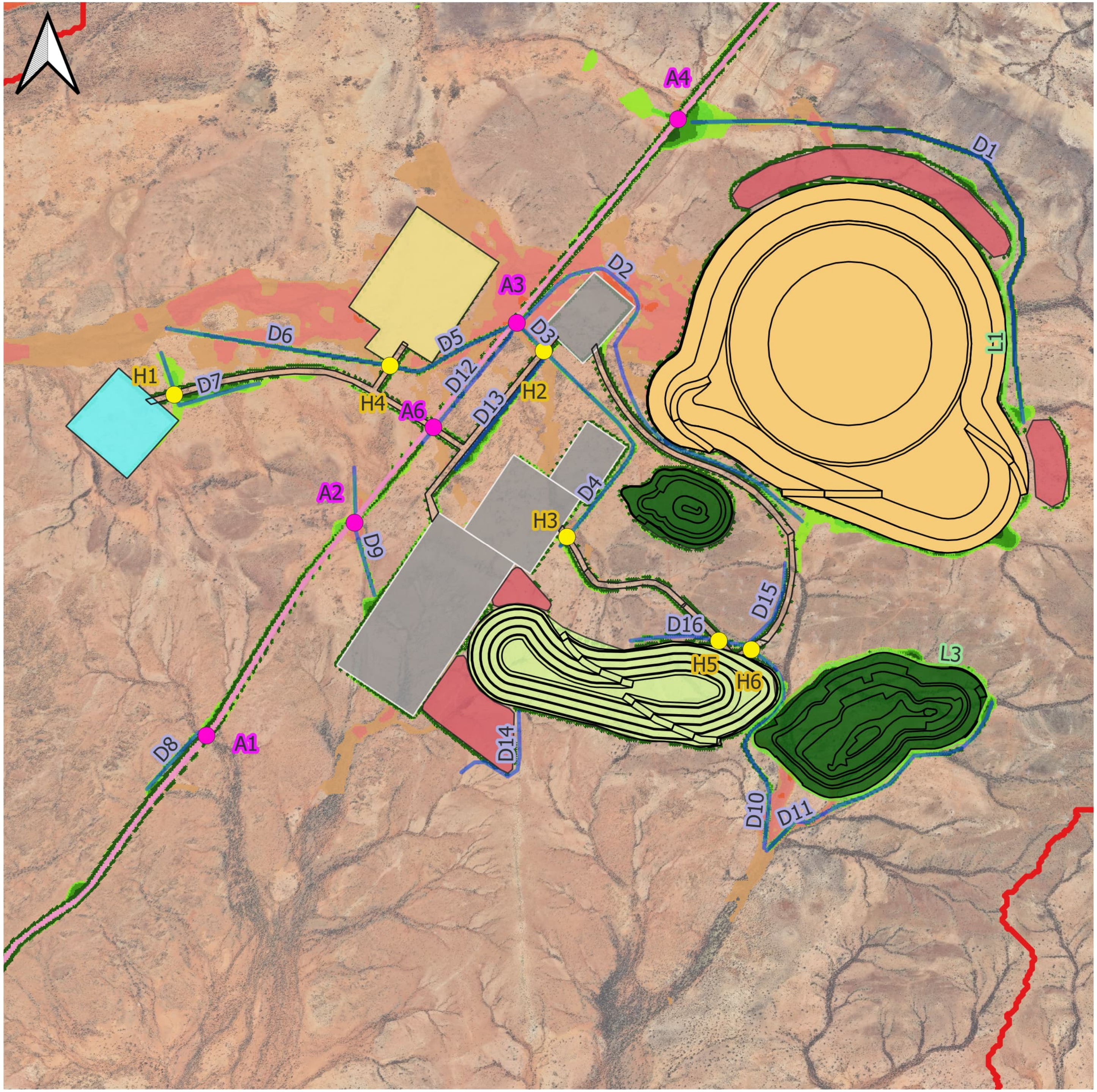


Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

AFFLUX DEPTH 10% AEP

OPERATIONAL DESIGN

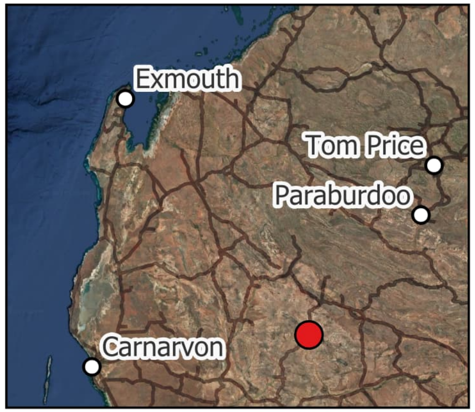


Legend

- Model Boundary
- Mining Infrastructure Outline
- Haul Road
- Access Road
- Pit
- WRD
- IWL
- Processing Facilities & Offices
- Solar Farm
- Explosives Yard
- Top Soil Stock Pile
- Potential Future Pits
- Access Road Waterway Crossing
- Haul Road Waterway Crossing
- Diversion Drain
- Flood Levee

Afflux (m)

- <= -0.50
- -0.50 - -0.20
- -0.20 - -0.10
- -0.10 - -0.05
- -0.05 - 0.05 (not visible)
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.50
- > 0.50



DELTA LITHIUM

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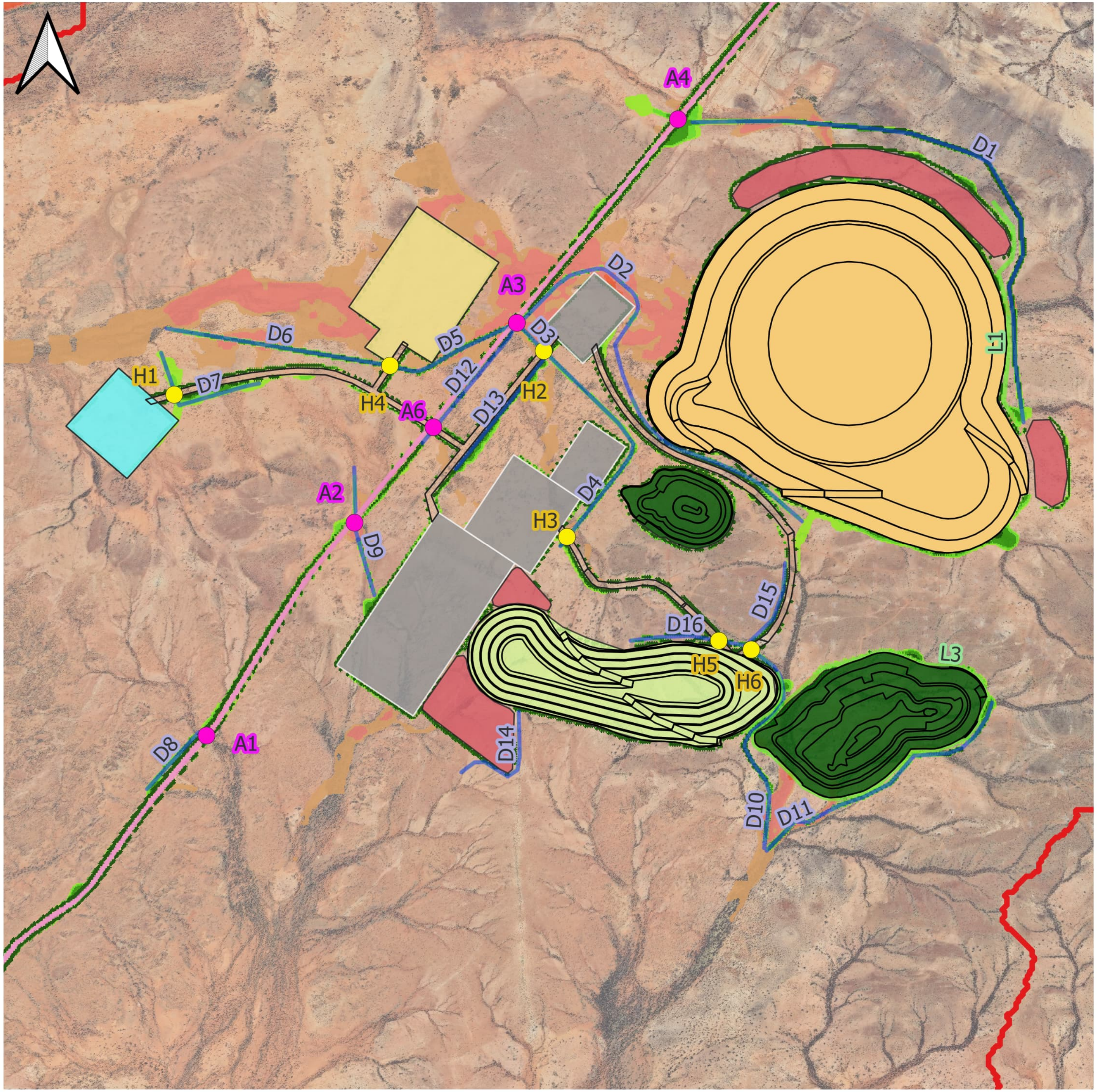
Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 0.5 1 km

Scale 1:25000

AFFLUX DEPTH 20% AEP

OPERATIONAL DESIGN

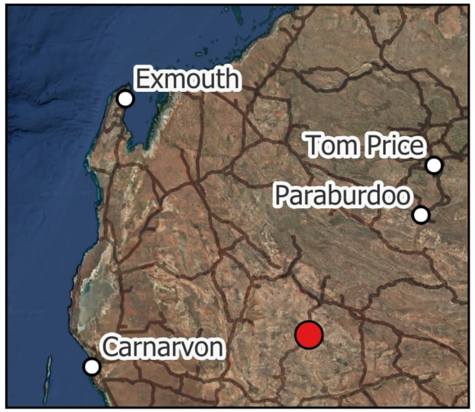


Legend

- Model Boundary
- Mining Infrastructure Outline
- Haul Road
- Access Road
- Pit
- WRD
- IWL
- Processing Facilities & Offices
- Solar Farm
- Explosives Yard
- Top Soil Stock Pile
- Potential Future Pits
- Access Road Waterway Crossing
- Haul Road Waterway Crossing
- Diversion Drain
- Flood Levee

Afflux (m)

- <= -0.50
- -0.50 - -0.20
- -0.20 - -0.10
- -0.10 - -0.05
- -0.05 - 0.05 (not visible)
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.50
- > 0.50



DELTA LITHIUM

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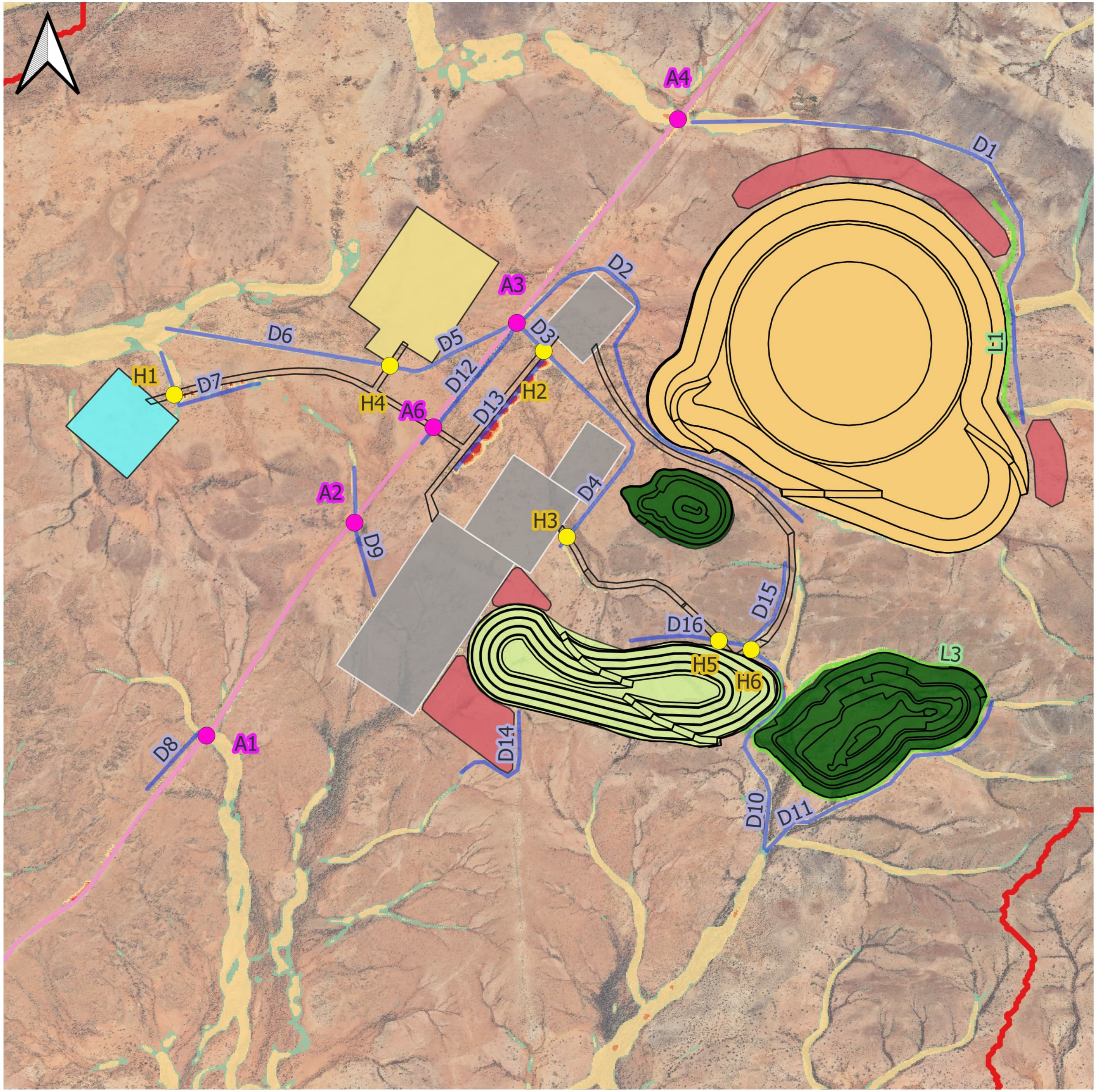
Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

0 0.5 1 km

Scale 1:25000

PEAK VELOCITY 1% AEP

OPERATIONAL DESIGN



Legend

Model Boundary

Mining Infrastructure Outline

Haul Road

Access Road

Pit

WRD

IWL

Processing Facilities & Offices

Solar Farm

Explosives Yard

Top Soil Stock Pile

Potential Future Pits

Access Road Waterway Crossing

Haul Road Waterway Crossing

Diversion Drain

Flood Levee

Velocity (m/s)

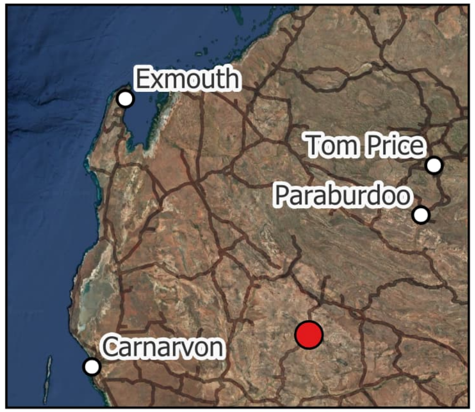
<= 0.3 (not visible)

0.3 - 1.0

0.7 - 1.0

1.0 - 1.5

> 1.5



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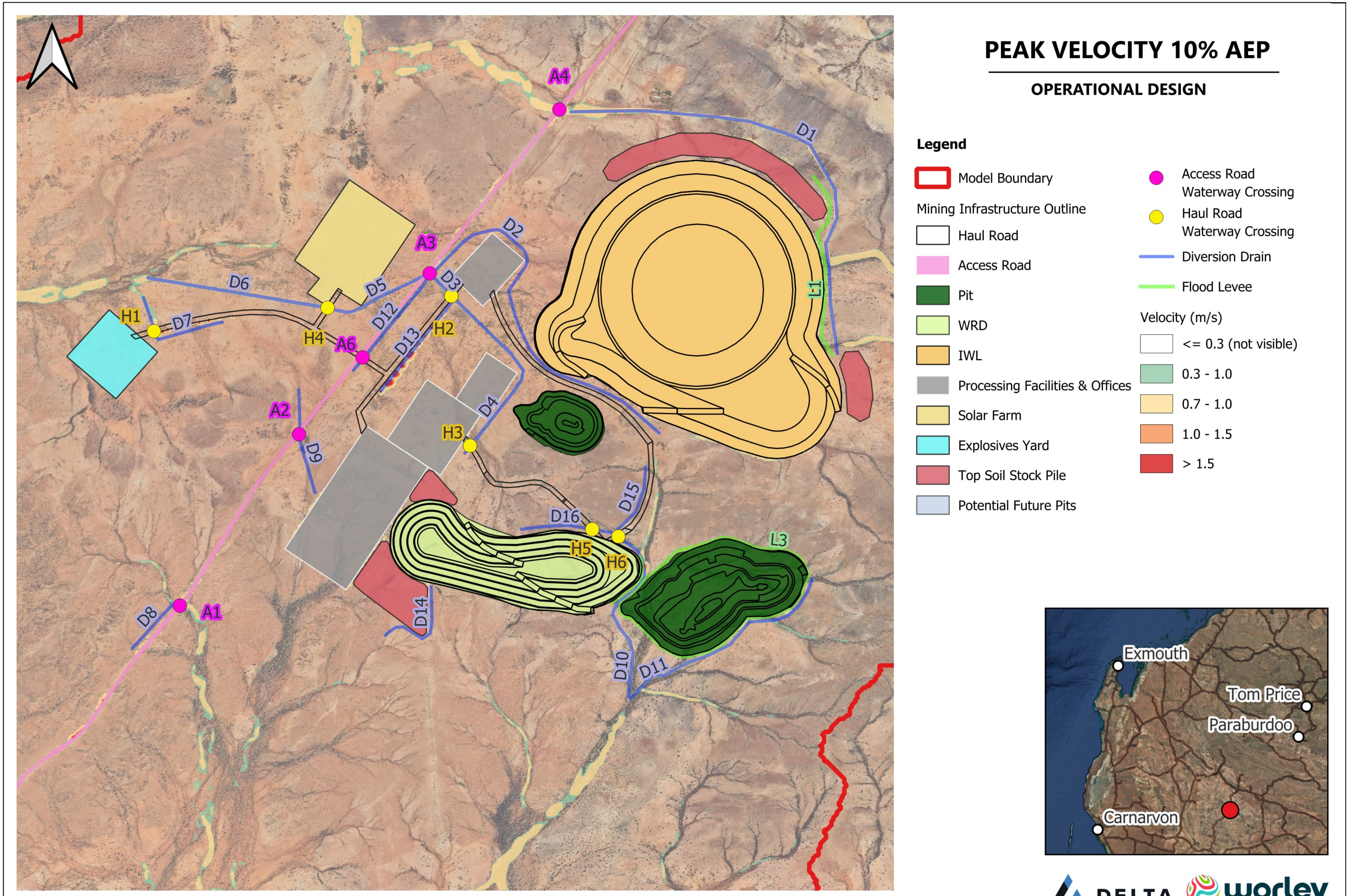
0 0.5 1 km

Scale 1:25000

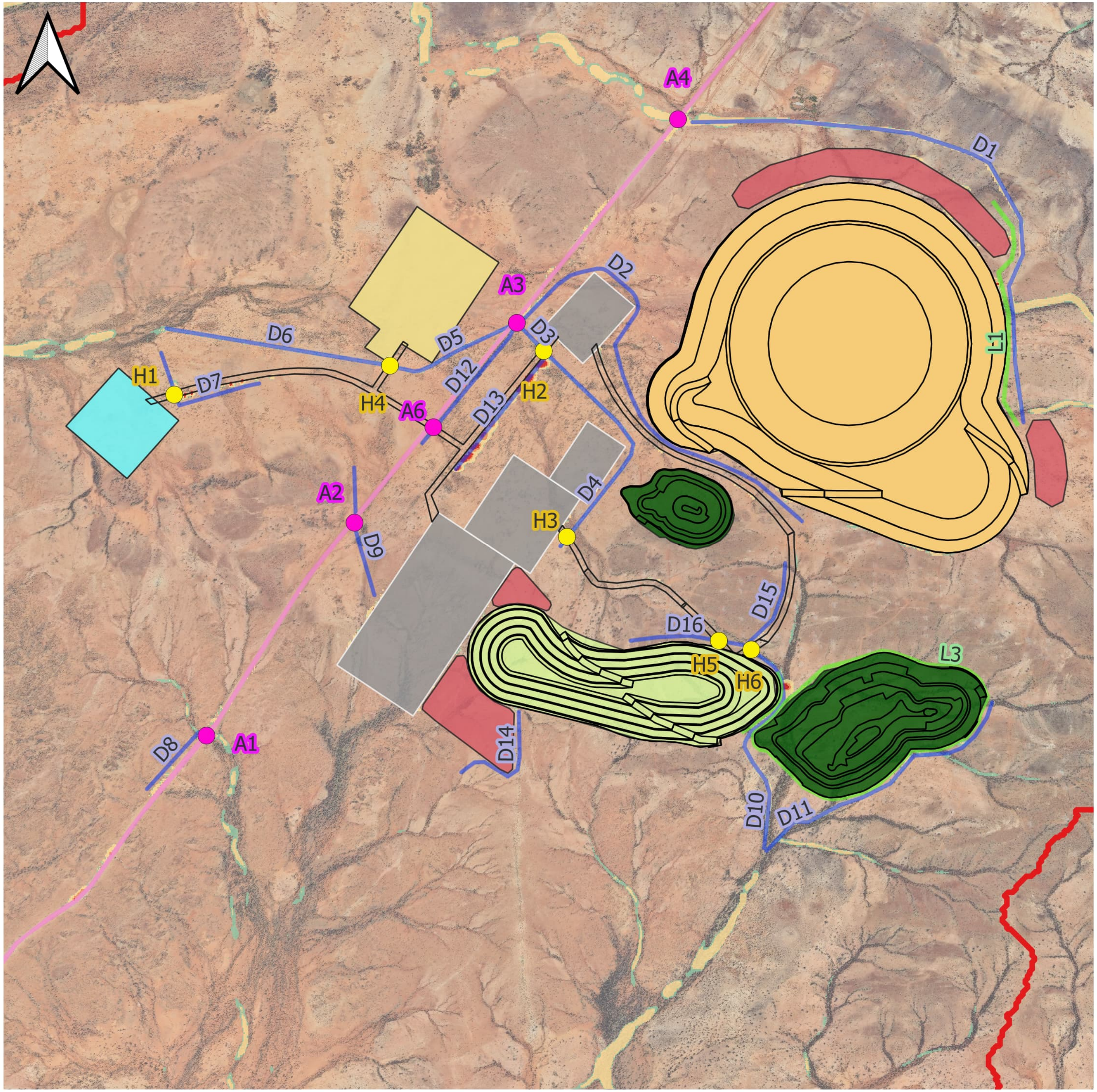
Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz



Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

PEAK VELOCITY 20% AEP

OPERATIONAL DESIGN



Legend

Model Boundary

Mining Infrastructure Outline
- Haul Road
- Access Road
- Pit
- WRD
- IWL
- Processing Facilities & Offices
- Solar Farm
- Explosives Yard
- Top Soil Stock Pile
- Potential Future Pits

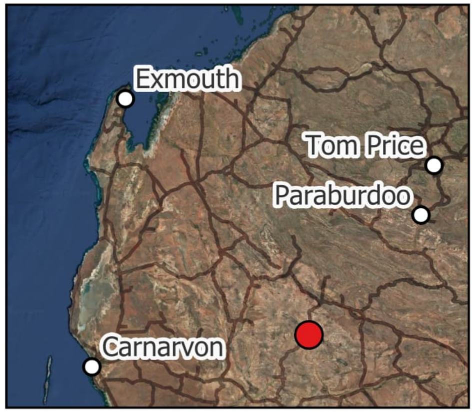
Access Road Waterway Crossing

Haul Road Waterway Crossing

Diversion Drain

Flood Levee

Velocity (m/s)
- <= 0.3 (not visible)
- 0.3 - 1.0
- 0.7 - 1.0
- 1.0 - 1.5
- > 1.5



0 0.5 1 km

Scale 1:25000

Date Created: 2025-03-10
Map CRS: GDA94 / MGA zone 50
Map Scale: 1:25,000
Project File: 241209_Yinnetharra Lithium Project Hydrology Assessment Phase 2 AJ.qgz

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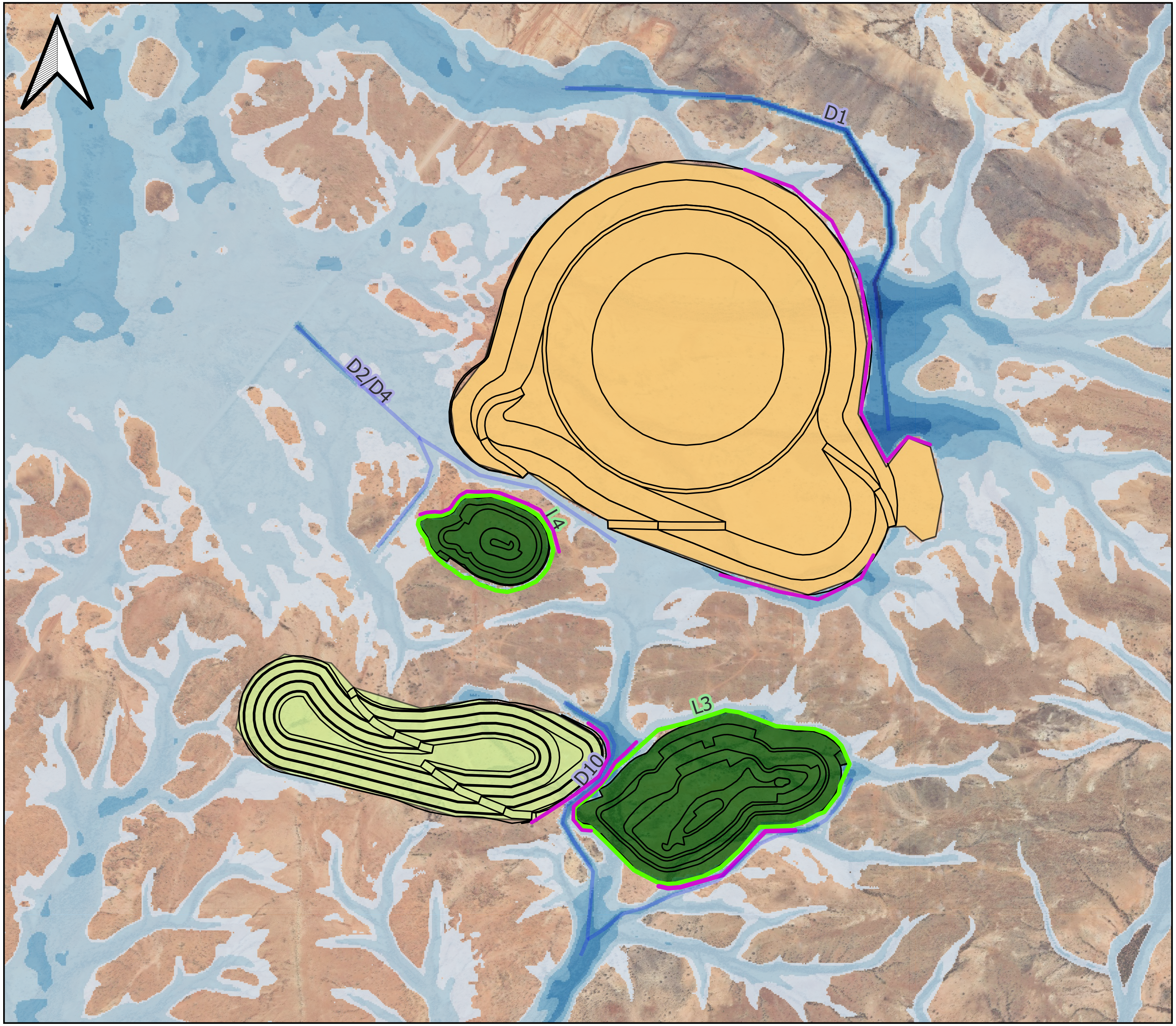
Appendix C: Closure Conditions Flood Maps

Delta Lithium Yinnetharra Hydrology Assessment

Closure PMF
Peak Flood Depth



Legend

Facing Class Rock Amour
Levee
Drain

Critical Depth (m)
<= 0.05
0.05 - 0.1
0.1 - 0.5
0.5 - 1.0
1.0 - 2.0
2.0 - 3.0
> 3.0

Proposed Mine Infrastructure
Pit
WRD
IWL

0 0.25 0.5 km

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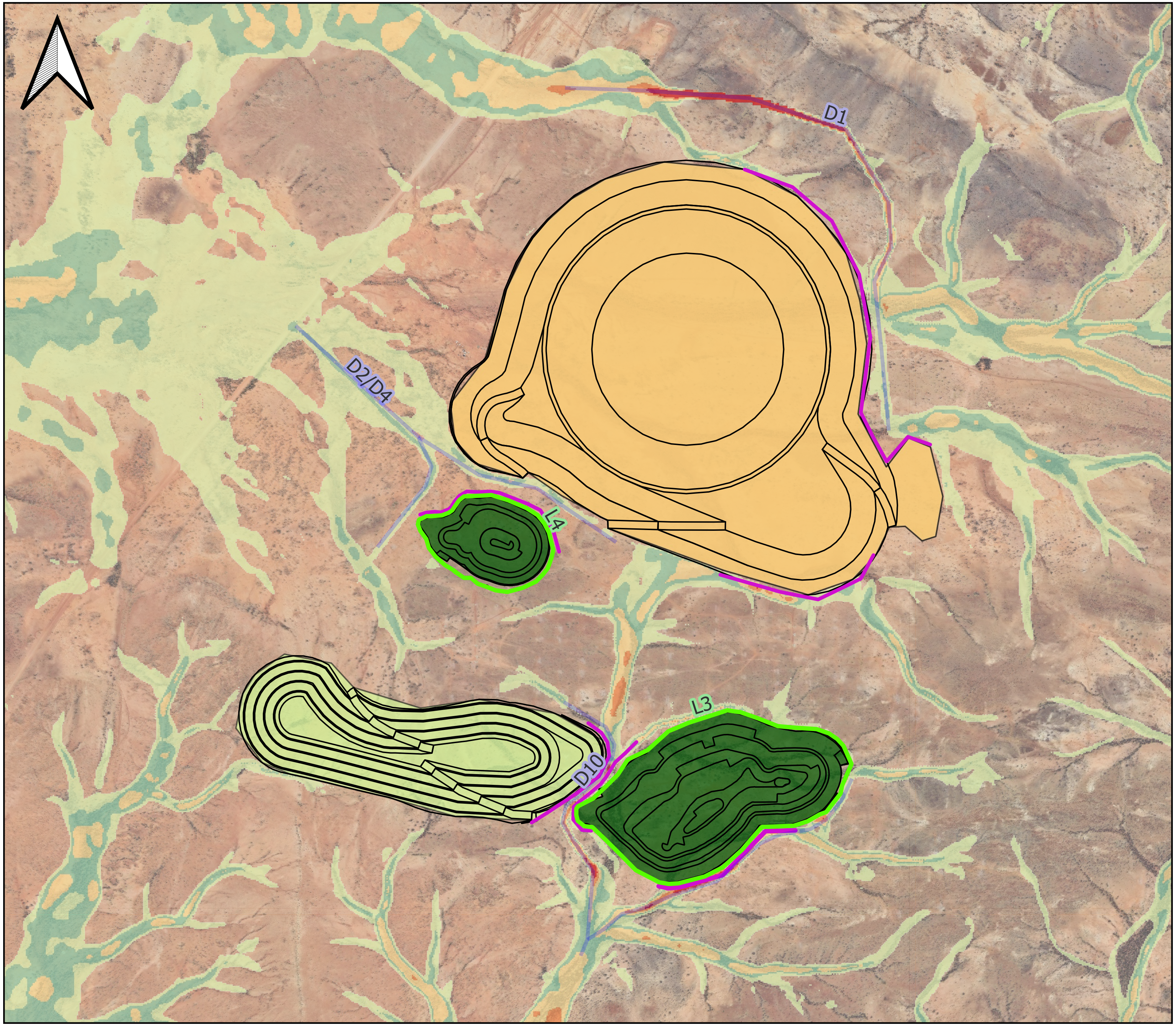
Delta Lithium Yinnetharra Hydrology Assessment

Closure PMF
Peak Velocity



Legend

- Facing Class Rock Amour
- Levee
- Drain

Proposed Mine Infrastructure

- Pit
- WRD
- IWL

Velocity (m/s)

- <= 0.3
- 0.3 - 0.7
- 0.7 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

0 0.25 0.5 km

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