Memorandum

Subject	Impact assessment of Winu mining activities on the Wallal Aquifer and environmental receptors		
Date	8 May 2026		
To	Emma McGivern	From	Luke Cowley
CC			Gerhard Jacobs
Project No	311012-01475	Doc No	311012-01475-HG-TM-048
File Loc	Documents - 311012-01475 Winu Hydrogeology and Hydrology Study\7. Reports and Memos\ 48.Response to ERD Submission\Memo		
Project	Winu Hydrogeology Impact Assessment – Wallal Aquifer		

Introduction

This memorandum presents an assessment of the effects of groundwater extraction associated with mining activities during the construction, operation, and post-mining phases of the proposed Winu copper-gold mine on the Canning-Wallal aquifer, Mandora Marsh, and other environmental receptors including Eighty Mile Beach Ramsar Wetland.

1. Regional conceptualisation

1.1 Proposed mine infrastructure

The Winu project will incorporate both mining and mineral processing on site. The conceptual layout for mining infrastructure is shown in Figure 1-1, including of tailings storage facility, separate clean- water management systems, re-use of processing water, infiltration ponds, and managed aquifer recharge (MAR) locations.

The Winu pit is predicted to be a sink after mine closure and groundwater gradients underneath the Tailings Storage Facility (TSF) suggest that any potential contamination from seepage will be directed towards the pit (Figure 1-1).

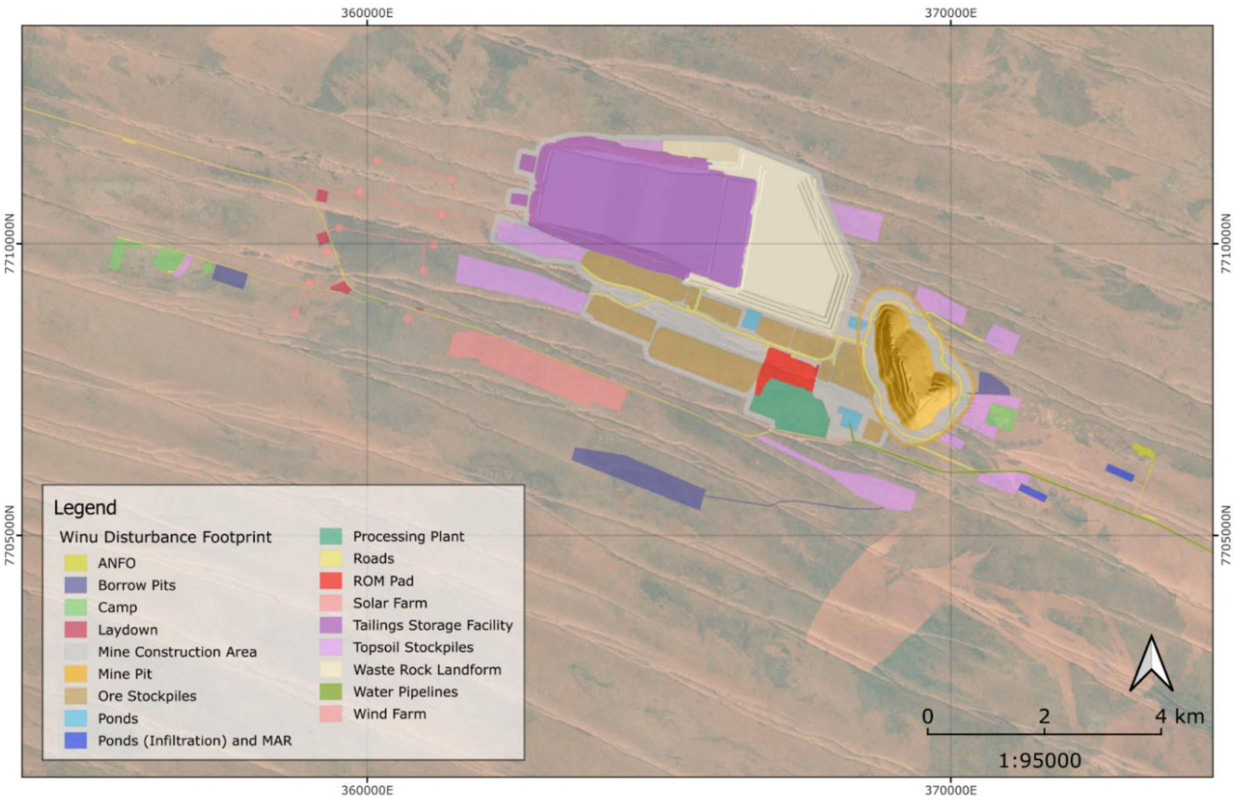

Figure 1-1 Winu proposed mining infrastructure

1.2 Regional Geology

The Winu mine area is situated within the Anketell Shelf subdivision of the Canning Basin (which is a basement high, separated to the west from the stratigraphic units of the Barnicarndy Graben (previously named Waukarlycarly Embayment by GSWA (2021)) and the exposed Yeneena Supergroup sediments to the SW, by the major NW-trending Anketell Fault. An unconfined Permian sandstone (Triwhite sandstone) aquifer and Proterozoic fractured rock aquifer is present at Winu.

The Wallal aquifer and potential receptors (Mandora Marsh and 80-Mile Beach) are situated in the West Canning Basin (WCB), a deep sedimentary basin deposited mainly during the Jurassic and Cretaceous period. The basement rock underlying the sedimentary sequence of the study area is Precambrian/Archaean and consists of igneous, ultramafic and mafic greenstones, granitoid, and basaltic components (DWER, 2016).

1.3 Hydrogeological review

The following documents and reports have been reviewed to support the hydrogeological conceptualisation for the Wallal area.

- Department of Biodiversity, Conservation and Attractions, 2018. Hydrological Conceptualisation of the Walyarta Mound Springs.
- Department of Water and Environmental Regulation (DWER), 2016. West Canning Basin – Sandfire Hydrogeological Conceptualisation Report (Draft).
- NTEC Environmental Technology (NTEC), 2012. West Canning Basing Groundwater Model: Northstar Magnetite Project.
- Pells Sullivan Meynink (PSM), 2017. West Canning Basin Groundwater Model Report.
- CSIRO, 2021. Groundwater baseline review of the Canning Basin, Western Australia. A technical report from CSIRO to GISERA

The hydrogeological conceptualisation of Winu is described in:

- Worley, 2025a. H3 Hydrogeological Assessment. Winu Project Area. Report No. 311012-01475-REP-HG-032 Rev 1

Other reports used in water quantity assessments described in:

- Worley, 2025b. Mine Access Road H2 Assessment, Report ref: 311012-01475-REP-HG-042-Rev0
- Worley, 2025c. Water Balance Model Update 2025. Report Ref. 311012-01475-REP-WB-039-Rev0
- Worley, 2025d. Recovery Model Memo_Addendum to H3. Report Ref. 311012-01475-TM-HG-045-RevB

1.4 Important hydrostratigraphic units

From the regional conceptualisation of the Winu area and that of the WCB (area including the Mandora Marsh and other potential receptors), five important aquifer systems are summarised in Table 1- 1 and Figure 1-2.

Table 1- 1 Aquifer systems identified

Aquifer	Importance	Description
Broome aquifer	WCB, in connection with the Mandora Marsh and 80-mile Beach	Unconfined sandstone aquifer consisting of poorly consolidated interbedded and cross-bedded sequences. Up to 120 m thick close to the coast and thins out to the east. Groundwater flow in the Broome aquifer is from east to west, from the hinterlands toward the coast, with isopotentials occurring sub-parallel to the coastline. The Broome aquifer becomes unsaturated to the east of the WCB.
Wallal aquifer (confined)	WCB, potentially connected to the Mandora Marsh and 80-mile Beach	Comprises poorly consolidated fine to very coarse sandstone, beige to light grey in colour, with a regional thickness of up to 425 m onshore, and up to 750 m offshore. Laterally continuous gravel to pebble sized conglomerates have been reported towards the base of the formation (Aquaterra, 2010). The Wallal aquifer is confined in areas where the Jarlemai Formation is present and groundwater flow in the Wallal aquifer is from the east-southeast to west-northwest
Lower Callawa/ Unconfined Wallal	Potential recharge zone to the WCB system in areas of saturation Unsaturated at the proposed Winu area	Underlying the Broome Aquifer is the Lower Cretaceous Lower Callawa Formation, which comprises a lightly coloured sandy, clayey, siltstone, deposited within a lacustrine or near-shore marine to littoral environment. The Lower Callawa Formation is partially saturated in the east of the WCB and forms part of the unconfined Wallal aquifer. It is currently conceptualised by PSM (2017) that areas to the east and south contribute to groundwater recharge into the Wallal aquifer. The Lower Callawa Formation overlies the Winu area as a very fine silcrete-dominated layer, approximately 20 m thick and completely unsaturated.
Winu Permian Sandstone aquifer (Triwhite sandstone)	Intersected during the proposed open pit mine at Winu and acts as a locally unconfined aquifer, disconnected from the Wallal aquifer	Unconfined sandstone aquifer comprising of well cemented calcareous sandstone, with fine to coarse grained particles overlaying the Permian age mudstone. It has low bulk permeability and is only partially saturated (<5 m) in the Winu study area, with water levels recorded at approximately 200 m AHD
Proterozoic metasediment aquifer	Main aquifer intersected during proposed mining	Proterozoic metasediments include metasiltstone and metasandstone, typically thicker than 300 m, classified as a fractured rock aquifer. It includes both an upper 'weathered' and lower 'fresh' (unweathered) profiles. Secondary porosity and permeability occur in the metasediments due to weathering, fracturing, and faulting. Mafic intrusive units encountered at several locations are considered relatively sparsely distributed. Locally, they may function as partially impermeable flow barriers and partly compartmentalise groundwater flow.

1.5 Groundwater levels and flow directions

42. ESD requirement 45

a. Confirm if the proposal area occurs in the Wallal aquifer recharge catchment. This could include expanding isotope testing to determine if the proposal area occurs in the Wallal aquifer recharge catchment.

43. ESD requirement 46

a. As for ESD requirement 45, clearly define the location of the proposal with regard to the Wallal aquifer recharge catchment.

Groundwater levels imply regional groundwater flow in the WCB is from the east-southeast to west-northwest, turning perpendicular to the coast. This means that the direction of natural groundwater flow from Winu mine area, west-northwest towards the coast does not intercept Mandora Marsh which is further to the east (Figure 1-2).

West Canning Basin System beneath Mandora Marsh

- Within the unconfined systems **Broome, Lower Callawa and unconfined Wallal** aquifers (west and northwest of Winu, but not in the Winu area), the hydraulic gradient is relatively low at approximately **0.0005** (equivalent to 0.5 metres of potentiometric head decline per 1,000 metres of horizontal distance).
- The **confined Wallal aquifer** (not present at Winu) exhibits a flatter gradient of approximately **0.00017**.

Winu System

- The **partially saturated sandstone aquifer** at Winu (likely part of the Triwhite Sandstone) has a hydraulic gradient of approximately **0.0003**.
- The Proterozoic **metasediment fractured rock aquifer** at Winu show a substantially steeper gradient of approximately **0.0016**.

Measured water levels show a groundwater level difference of approximately 124 metres over less than 40 kilometres between bores at Winu (WINU1313 in the Triwhite Sandstones and WINU0076 in the Proterozoic Metasediments) and bores screened in the Lower Callawa/Unconfined Wallal aquifer (WINU1320) nearer Mandora Marsh (Figure 1-3).

These observations strongly suggest the presence of a groundwater divide (geological control) or hydraulic obstruction between the Winu aquifer system and the regional aquifer system to the northeast of Winu (Broome and Wallal).

This relatively sharp change in hydraulic gradient implies restricted connectivity; with the unconfined sandstone aquifer at Winu and the deeper Proterozoic metasedimentary aquifer forming relatively isolated groundwater systems. This has important implications for both regional groundwater flow conceptualisation and for assessing the potential effects of groundwater abstraction or mine dewatering at Winu.

1.6 Potential groundwater changes at the Mandora Marsh based on conceptualisation

The relatively abrupt 124 metre difference in groundwater level implies limited connectivity between the unconfined sandstone and fractured rock aquifers at Winu and the metasedimentary sequence underlying Mandora Marsh, and generally independent hydrogeological systems.

Regional conceptualisation and groundwater flow gradients suggest that there is a geological control (20-30 km northwest of Winu) between Winu and the Mandora Marsh causing a 124 m groundwater level drop.

The regional groundwater conceptualisation and cross sections between Winu and the Mandora Marsh are shown in Figure 1-2 and Figure 1-3.

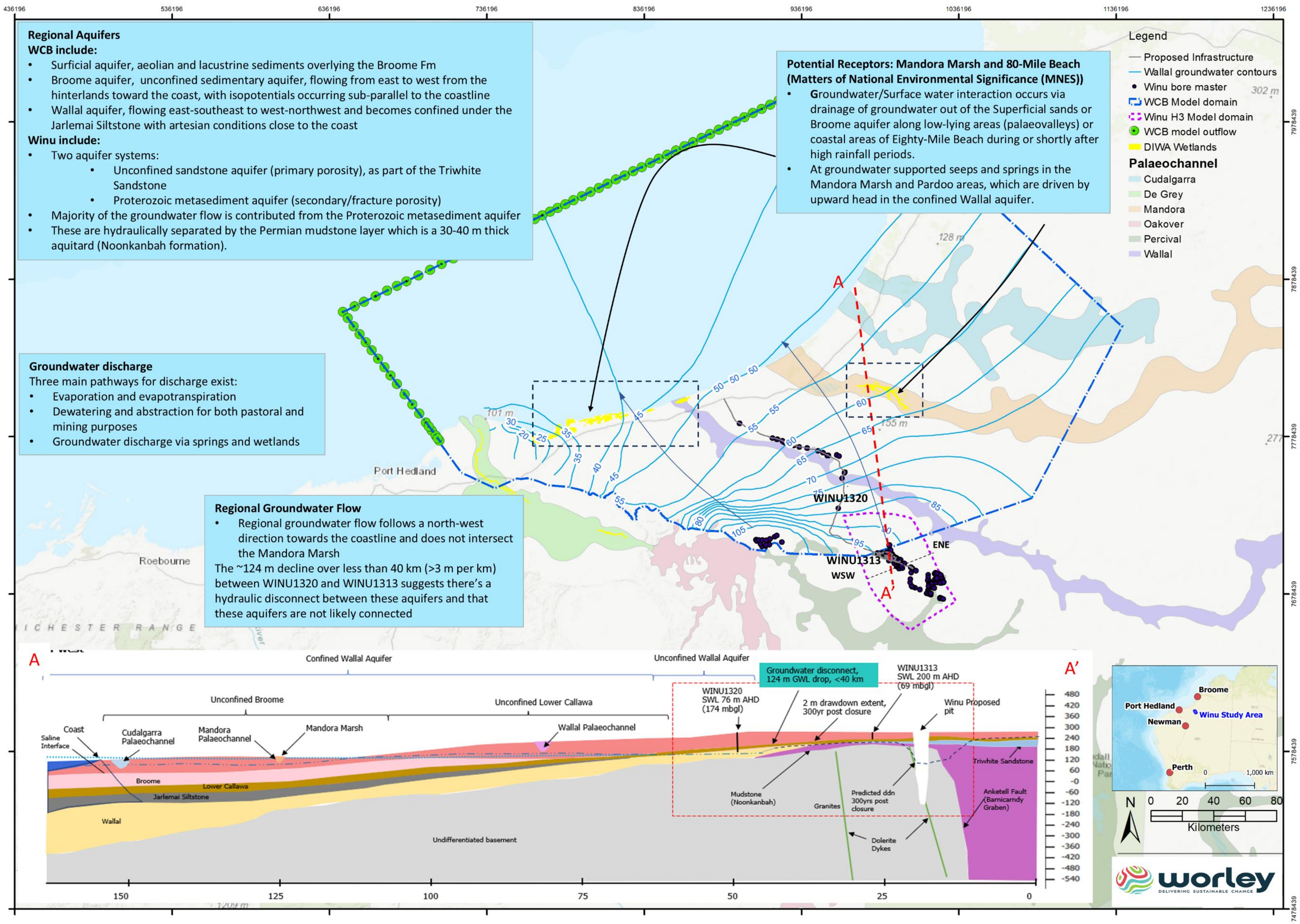

Figure 1-2 Regional Hydrogeology

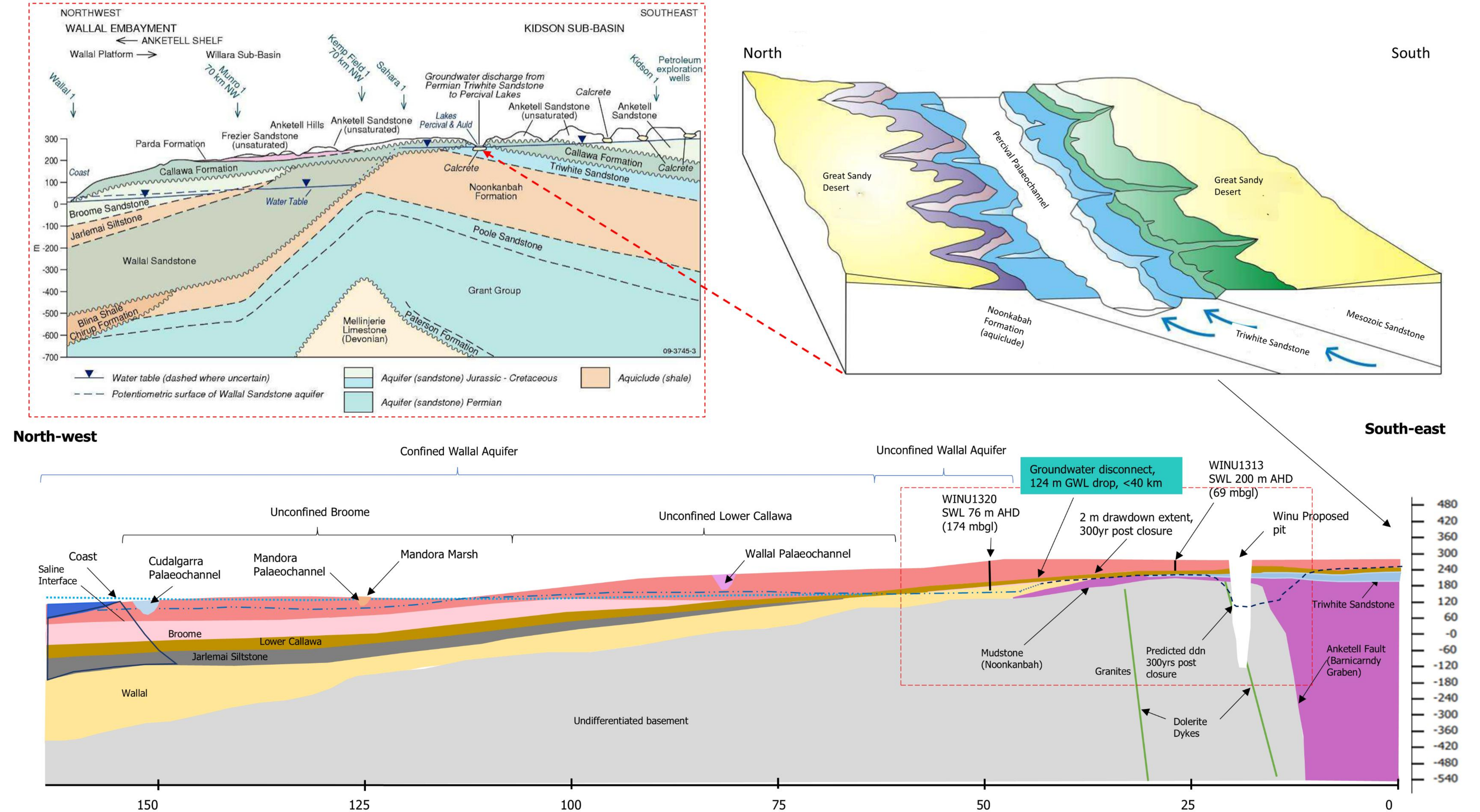

Figure 1-3 Cross sections of the hydrogeological conceptualisation between Winu and the Mandora Marsh (Top Left: after Commander 1985; Laws 1991. Top Right: English, 2010)

2. Conservative (Worst-Case) assumptions

A conservative approach has been adopted to further assess the extent of drawdown from Winu by assuming the hypothetical and unlikely scenario of complete and direct hydraulic connectivity between Winu and the unconfined Wallal aquifer that underlies Mandora Marsh.

To further allow for conservative reporting a range of probabilistic numerical modelling results have been evaluated. These models are produced by applying plausible ranges of key hydrogeological parameters (including but not limited to: hydraulic conductivity, recharge rates, storage parameters (Sy, Ss), no-flow or partial flow barriers) informed by pumping test data and other field observations. This approach allows modelling of the more extreme scenarios using maximum and minimum ranges of the various model inputs to account for uncertainty in hydrogeological parameters. The resulting series of modelled outputs (pit inflows, drawdown and water balance) are collated and statistical probabilistic analysis conducted on the series of results to determine the likelihood that a modelled output will occur with ranked levels of confidence.

The terminology used for the uncertainty analysis results in this memo is presented using the risk-based terminology (Table 2-1) outlined in Middlemis & Peeters (2018).

Table 2-1: Probabilistic uncertainty terminology (from Peeters and Middlemis, 2023)

Terminology	Percentile	Probability	Description
P10	<10%	>90%	It is very likely that the outcome is larger than this value
P50	50%	50%	It is as likely as not that the outcome is larger than this value
P90	>90%	<10%	It is very unlikely that the outcome is larger than this value

A P50 modelling scenario represents the median (most likely) outcome derived from the series of modelled simulations where there is a 50% probability that the actual results will exceed the P50 estimate and a 50% probability that it would not be exceeded. P90 (very unlikely) results represent a conservative estimate such that there is less than 10% probability that actual drawdown or dewatering will exceed the predicted value based on the parameter ranges tested in the model.

For example the P90 model estimate for mine drawdown is derived from the series of model runs that adopted a higher range of hydraulic conductivities, no recharge and low storage parameters (Worley, 2025a). This results in a conservative high drawdown scenario determined by the range of values used.

This section considers the planned abstraction from Winu, Rimfire regional borefield and Mine Access Road construction.

2.1 Proposed groundwater abstraction

A combination of P90 (unlikely) scenarios was used to assess the potential worst-case peak predicted abstraction rates and associated drawdown resulting from the combination of all worst-case assumptions.

The scenarios assessed are described below:

- Maximum predicted dewatering and water supply for the Winu mine (Winu Groundwater model) predicted an abstraction values up to 7.82 GL/a. This assumes peak abstraction rates up to 248 L/s in the highest water use years (Worley, 2025a).
- The Rimfire groundwater model adopted a conservative approach by applying the highest annual peak flow estimate from the P90 (unlikely) site-wide water balance model (2.8 GL in year 23, (Worley, 2025c)) continuously over the entire mine life, from Year 1 to LoM.
  - Based on the P50 (likely) site-wide water balance the regional make-up water demand from the Rimfire regional borefield is predicted to commence in Year 17 (Figure 2-1).
- Winu mine access road construction has a peak demand of 1.0 GL/a (first two years of construction, Section 2.1.2)

The above volumes are peak abstraction and Winu would likely average at ~ 5 GL/a from all sources. The variability in water demand is shown in the water balance in Figure 2-1.

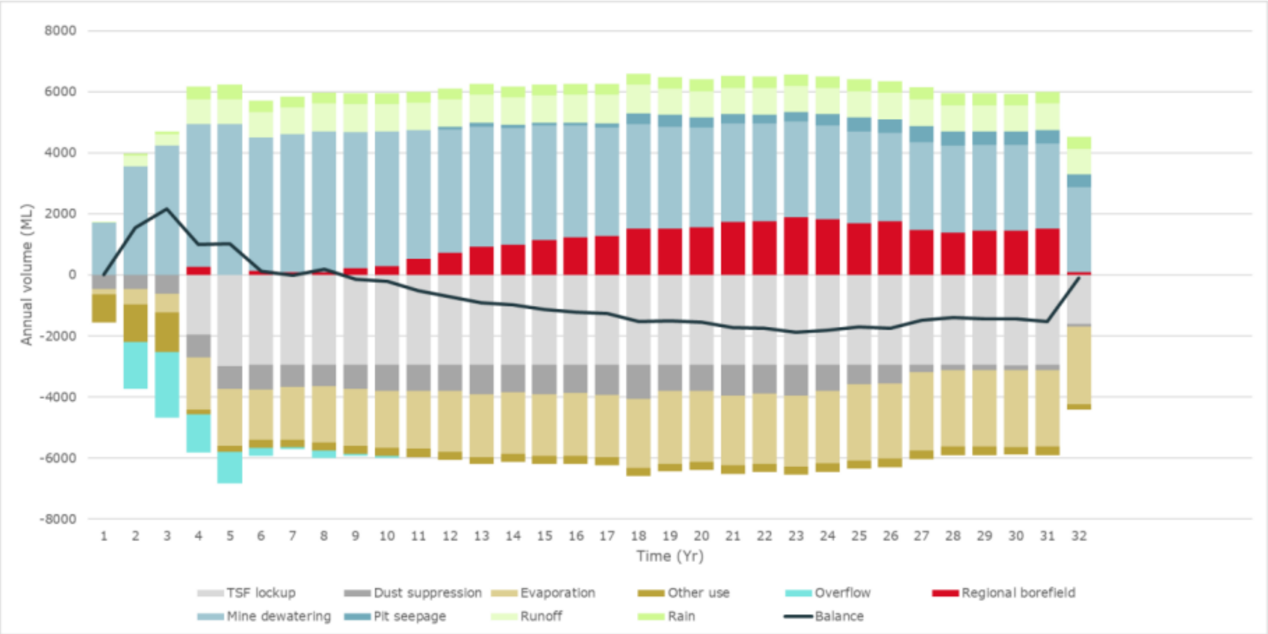

Figure 2-1 Site-wide water balance (Goldsim) considering a decrease in dewatering volumes (higher regional make-up water demand) (ML/year)

2.1.1 Modelling Winu and Rimfire

43. ESD requirement 46

c. Provide information that explicitly demonstrates that Eighty Mile Beach Ramsar Wetland will not be impacted, including a drawdown figure that shows the predicted drawdown extent for all operations (MIA and Rimfire), location of the Eighty Mile Beach Ramsar Wetland

Numerical groundwater modelling has been completed for planned abstraction at Winu, as described in the Winu H3 document (Worley, 2025a)

The P90 (very unlikely) predicted drawdown at Life of Mine (LoM) from Winu suggests that the 2-metre drawdown extends ~15 km from the mine pit.

Numerical groundwater modelling has also been completed for the proposed Rimfire regional borefield, based on long term (32 year/LoM) forward predictions of groundwater abstraction at a continuous 2.8 GL/a.

> *"The likely demand from Rimfire will be less than the simulated abstraction of 2.8 GL/a continuously for LoM. The 2.8 GL/a demand is the worst-case prediction of peak annual demand from the site-wide water balance and occurs only in year 23. The most likely (P50) forecast demand for the Rimfire regional borefield commences after year 17, and peaks at 1.5 GL/a in Year 26, declining to 1.2 GL/a for LoM (*Figure 2-1*)."*

Figure 2-2 presents the predicted drawdown at LoM from both Winu (P90, unlikely drawdown extends) and the Rimfire regional borefield (P90, unlikely water demand).

The predicted drawdown associated with the existing regional borefield (Rimfire) and the proposed dewatering at Winu do not spatially overlap. It is acknowledged that as the Rimfire regional borefield and Winu dewatering both draw groundwater from similar geological units, there is a possibility that groundwater abstracted from Rimfire will reduce throughflow in the aquifers at Winu (Figure 2-2).

To adopt a precautionary approach, the drawdown contours from both sources have been superimposed and assume a hypothetical extension of the 2-metre drawdown envelopes until they intersect. This represents a conservative "worst-case" scenario that deliberately overstates potential interaction.

Even under this conservative P90 assumption, the predicted extent of drawdown remains confined to the Proterozoic metasediment aquifer.

Importantly, the furthest extent of the 2-metre drawdown contour is ~90 km south of the Mandora Marsh (Figure 2-2).

Therefore, predicted drawdowns do not extend to Mandora Marsh or Eighty Mile Beach and are unlikely to have an influence on them.

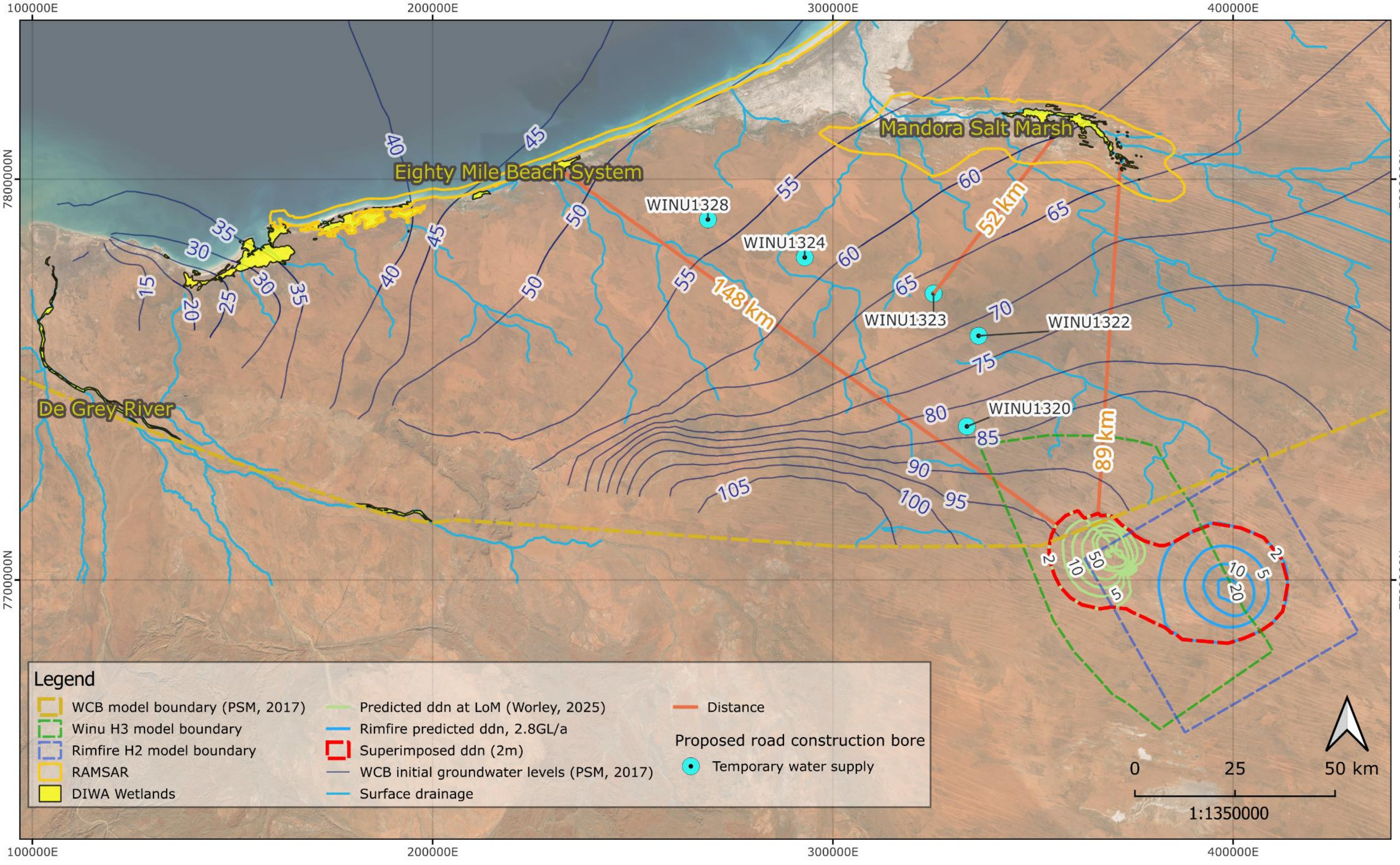

Figure 2-2 P90 Predicted drawdown of Winu and Rimfire borefield at LoM, including a 2 m superimposed drawdown contour (red)

2.1.2 Mine access road abstraction

A separate H2 level assessment (Worley, 2025b) has been completed for bores along the proposed mine access road.

Abstraction from five production bores is proposed (WINU1320, WINU1322, WINU1323, WINU1324 and WINU1328) along the access road alignment to support construction of the access road and for dust suppression and road maintenance. Rio Tinto Winu will be seeking a temporary 5C groundwater abstraction license for 1.0 GL per annum (approximately 32 L/s) over a two-year period.

Each bore will be utilised for an approximate duration of 6 months, with a total borefield operational period of no longer than 24 months across all bores.

Based on the drawdown estimation results obtained from the analytic analysis and forward predictions of groundwater abstraction:

- 0.4 GL/a from the Broome Aquifer and Lower Callawa Formation above the Jarlemai Siltstone can be sustained with no effect on identified receptors.
- 0.6 GL/a from the Lower Callawa and Unconfined Wallal aquifer where the Jarlemai Siltstone is absent can be sustained with no effect on identified receptors.

The following assessment is provided:

- Drawdowns extend less than 200 m from proposed bores, with the closest bore (WINU1323) approximately 52 km from the Mandora Marsh.
- Sensitive receptors including Mandora Marsh and any other Ramsar sites **will not be affected** by any water level drawdowns induced by pumping from proposed production bores for road construction.
- Water levels and water pressure at the environmental receptors **will not be affected** by any water level drawdowns induced by pumping from proposed production bores for road construction.

2.2 MAR options and potential effects on groundwater

Surplus water management and a full-scale assessment is described in "311012-01475-REP-HG-038-Rev0-Surplus Water Management" (Worley, 2025c).

The proposed volume of surplus water for re-injection was derived from the site-wide water balance (Worley, 2025c), and represents excess mine dewatering that cannot be utilised for either process or non-processing requirements. This water requires disposal through the infiltration ponds and/or MAR bores. The magnitude and timing of site water excess as derived from the site-wide water balance is shown in Figure 2-3, including the P10 (very likely), P50 (likely) and P90 (very unlikely) scenarios.

For the purpose of this assessment, the P90 (very unlikely) case, adopting the scenario with the largest volume of excess water for LoM was used. This scenario is very unlikely and represents a conservative scenario.

The likely excess water should be notably less, and short lived. The median (P50, likely) case predicts that excess water only occurs in the first few years (year 1 to year 14) of mining, after which regional water supply will be required.

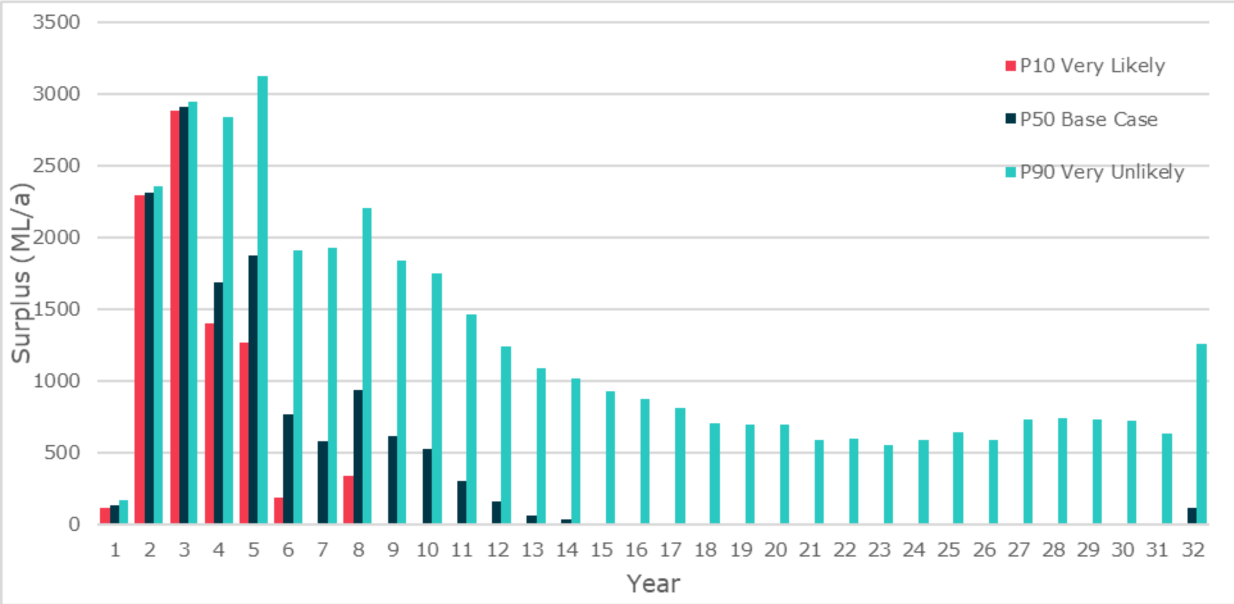

Figure 2-3 Predicted excess water for Winu (P10, P50 and P90)

A numerical solute transport model was developed (Worley, 2025c), to simulate the mounding and plume migration, associated with surplus water from either the ponds and/or MAR bores within the sandstone aquifer, and its partial capture by the mining pit (Figure 2-4). Probabilistic uncertainty analysis was carried out to capture uncertainty in parameter ranges and to predict potential solute transport movement based on a range of aquifer properties.

The following groundwater quality assumptions were applied to develop the solute transport simulation:

- Two infiltration options were considered: infiltration ponds (Pond option) and injection through MAR bores into the sandstone aquifer (MAR option).
- Concentration of the infiltrated water was specified to be 3,740 mg/L. This value is based on pumping test data in close proximity to the proposed pit at WINU0917 (November 2023). It is understood the input concentration can, in reality, vary in time in response to dewatering, drawing water of different qualities.
- Initial concentration of the receiving sandstone aquifer system is specified to be 290 mg/L based on groundwater sampling of WIDI0020 (local Sandstone aquifer).

2.2.1 Results

The results of numerical modelling support an assessment of the potential risks posed by the infiltration ponds and MAR management options, on mining operations and environmental and heritage values at Winu.

Potential mounding and groundwater quality modelling suggests:

- The Pond option presents a small potential risk of occasional prolonged periods (local) with occurrences of near surface groundwater and establishment of associated groundwater dependent ecosystems (GDEs), or if connectivity between sands and the sandstone aquifer is partly compromised.
- The MAR option injects the water into the sandstone aquifer. Modelling suggests this will not result in groundwater mounding within the surficial sand layer

(above the silcrete aquitard) and therefore does not present a risk of establishment of groundwater dependent vegetation at the surface.

- Contaminant plume modelling of the two surplus water management systems, presented in Figure 2-4, predicts there will be no contamination of the Mandora Marsh or Eighty Mile Beach. The possible contaminant plume is not expected to reach within 85km of Mandora Marsh.
- Both the Pond and MAR options can be constructed without directly impacting on the dunes.

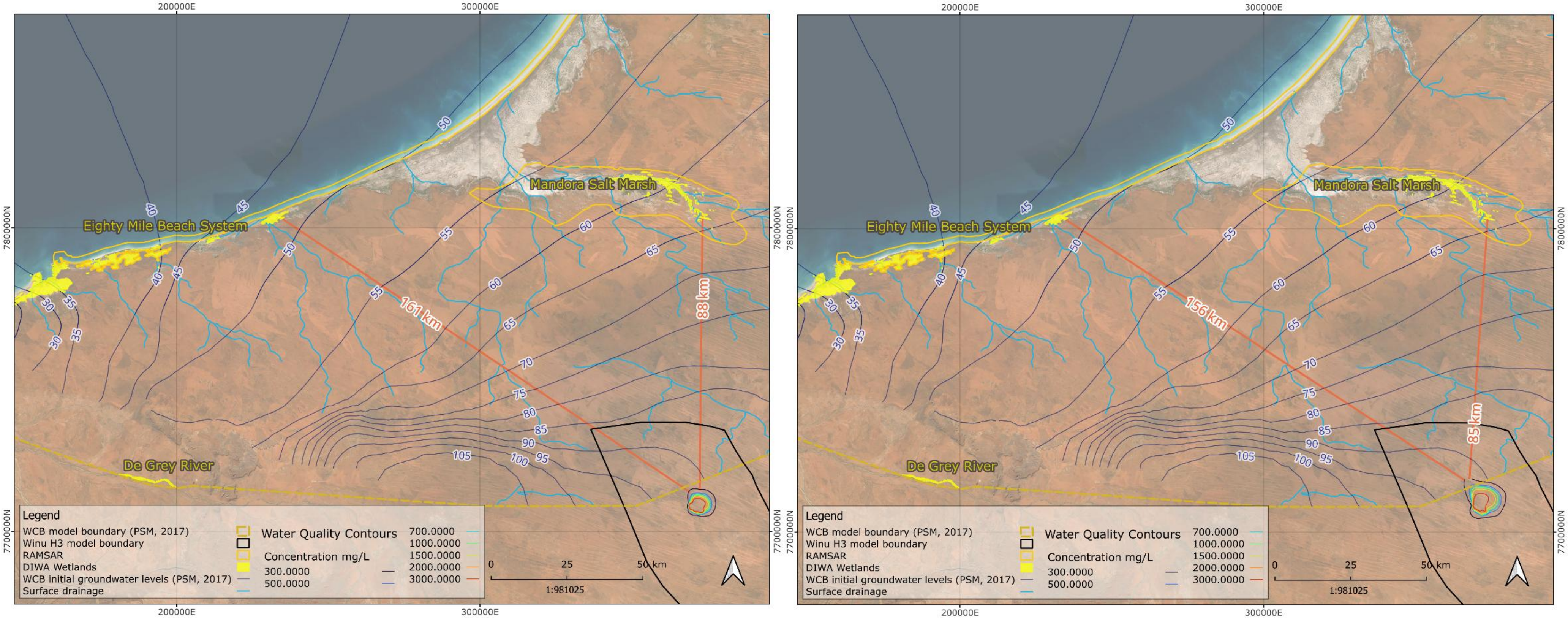

Figure 2-4 Pond option (left), MAR option (right) - Predicted surplus plume concentrations in sandstone aquifer at P90 levels

Predicted groundwater changes are downstream and locally confined to the Winu project area and will dissipate back to pre-mining conditions once mining ceases.

Even under the worst-case scenario, no permanent groundwater changes are predicted to the regional groundwater flow regime, the proposed reinjection study suggests that effects will be local and downstream of the proposed pit.

Therefore, there are no predicted effects on the known sensitive receptors.

2.3 Potential for contamination of Ramsar sites

Section 2.2 describes the assessed potential for contamination and changes to water quality of the Ramsar site at 80 Mile Beach.

The Winu pit is predicted to form a sink after mine closure and groundwater gradients underneath the TSF and waste management systems suggest that any potential contamination from seepage will be directed towards the pit **and therefore, concludes that there is no predicted contamination from Winu on known receptors.**

2.4 Mine Closure

Groundwater recovery and potential groundwater change post mining closure is described in "311012-01475-TM-HG-045-RevB Recovery Model Memo Addendum to H3" (Worley, 2025d).

The open pit is proposed to transition into a pit lake at closure. Initial GoldSim modelling of the post-closure lake recovery was conducted by Golder Associates in 2021 with subsequent model updates by Advisian in 2023 and HydroGeoLogica (HGL) in 2024 and 2025.

The Winu H3 numerical groundwater model (Worley, 2025a) formed the basis for estimating groundwater inflow at specified elevation for the GoldSim pit lake recovery model. The pit lake recovery curve developed by HydroGeoLogica was incorporated back into the groundwater model to assess the long-term recovery of the regional groundwater system post closure. Post closure modelling was extended to 300 years beyond mine closure.

For this assessment we have assumed a high permeability scenario, with partial flow barriers, allowing groundwater drawdown to propagate further.

Under this scenario, the 2 m residual drawdown extends up to approximately 14 km at Year 50, 20 km at Year 100 and 22 km at Year 300 Figure 2-5, which is still some 75 km from the Mandora Marsh.

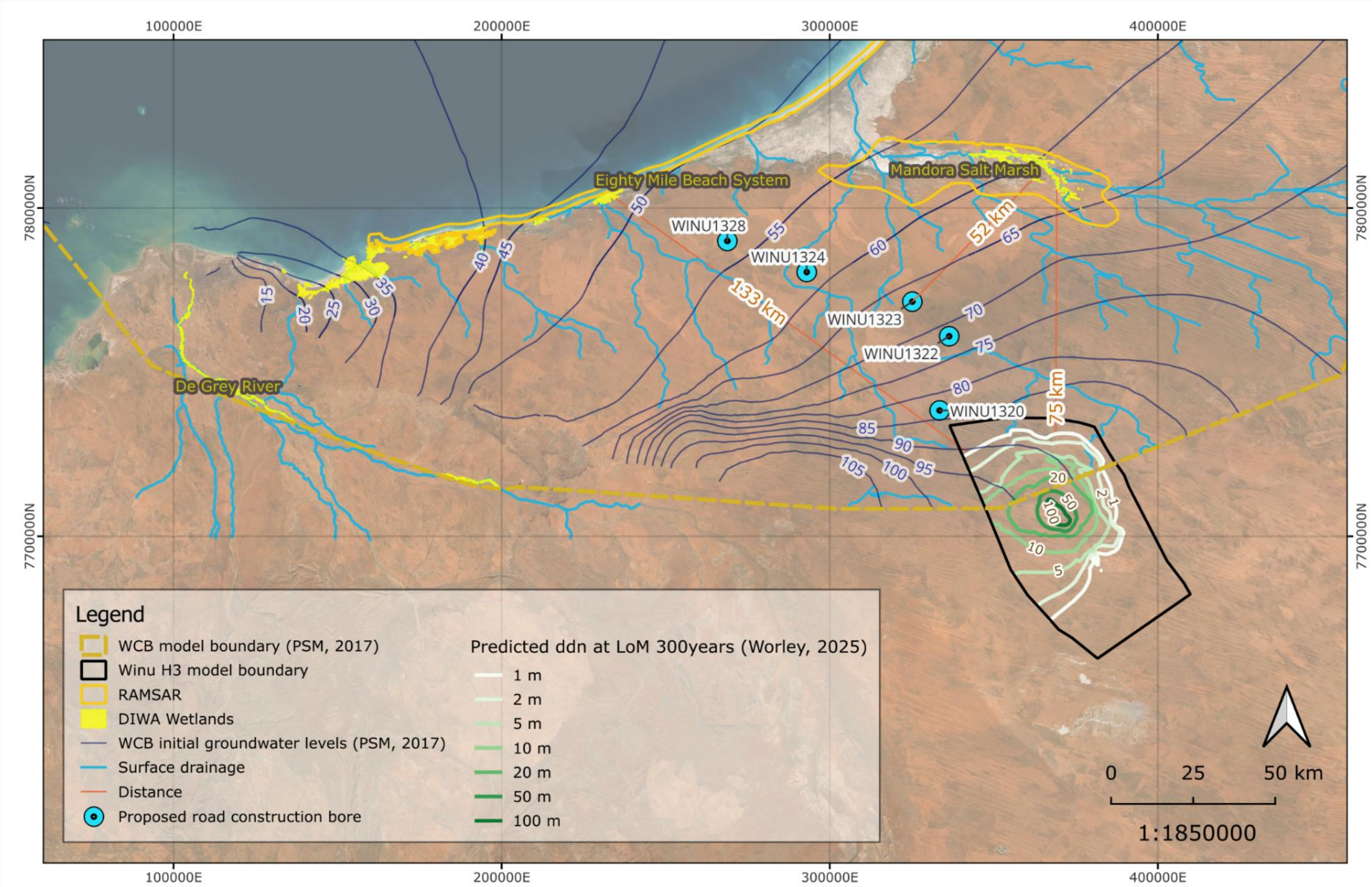

Figure 2-5 Predicted residual drawdown at year 300 post-closure

2.5 Potential impact to Wallal Aquifer

42. ESD requirement 45.

b. If the proposal area is identified as a recharge zone to the Wallal aquifer, quantify the potential change in Wallal aquifer groundwater recharge catchment area during operations and closure.

49. ESD requirement 56

a. Given the creation of a permanent pit lake with continued propagation of groundwater drawdown (pg. 214, pg. 234) if the proposal occurs within the Wallal aquifer recharge zone (ESD requirement 45, 46), quantify the extent of the recharge catchment that may be impacted, and impacts to any Wallal aquifer receptors (if any).

Assuming the project area is within the Wallal aquifer recharge catchment and a direct hydraulic connection between Winu and the unconfined Wallal aquifer exists, a simple water balance calculation was performed. This calculation estimates the potential effects on the recharge volumes that will reach the unconfined Wallal aquifer.

Potential recharge rates to the WCB were adopted from the regional groundwater model report by Pells Sullivan Meynink (Pells Sullivan Meynink, (PSM), 2017).

- Predicted drawdown during operation does not extend into the conceptual recharge area of the unconfined Wallal aquifer, therefore, no impacts to recharge is predicted during the operational phase.
- However, the potential impacts over closure are assessed as:
  - The total predicted pit inflow during closure is 2,855 Kl/d (Worley, 2025d).
  - Based on the extent of predicted residual drawdown, and assuming that 50% of the inflow (1,428 kL/d) originates from the unconfined Wallal aquifer recharge zone north of the proposed pit, this represents a potential reduction in recharge of 1,428 kL/d (0.5 GL/a).
  - The WCB model (Pells Sullivan Meynink, (PSM), 2017) estimates the total annual recharge at 375 GL/a.

Accordingly, even under an unlikely worst-case scenario, the potential reduction in annual recharge to the WCB would be less than 0.14% after closure.

Modelled groundwater gradients and depth to water in this area indicate the drawdown contours will have a localised reduction of the GW gradient and have no impact on the unconfined Wallal aquifer's water balance.

Groundwater modelling and water balance calculations even after assuming a worst-case scenario for all conditions do not predict any effects on the groundwater flow regime in the WCB. Therefore, no effects on the Mandora Marsh and/or 80-Mile Beach are predicted.

2.6 Conclusion

As described in this memorandum, mining and water abstraction for Winu is predicted to have no impact on the Canning-Wallal aquifer, Mandora Marsh, Eighty Mile Beach Ramsar Wetland or any other environmental receptors.

Key assessment outcomes are:

- There is limited connection between the unconfined sandstone and fractured aquifers underlying Winu and the Wallal aquifer.
- The direction of natural groundwater flow from Winu mine area, west-northwest towards the coast, does not intercept Mandora Marsh which is further to the east.
- The maximum prediction extent of drawdown from abstraction at Winu and Rimfire regional borefield is 90 km from Mandora Marsh and 80-Mile Beach. The localised reduction in groundwater level will have no impact on the unconfined Wallal aquifers water balance.
- The Winu pit is predicted to be a sink after mine closure and groundwater gradients, including under the Tailings Storage Facility (TSF), suggest that any seepage will report to the relict pit shell.
- The Mine access road construction bore abstraction will draw from the Broome and Lower Callawa aquifers for the period of construction (24 months) but the extent of drawdown from each proposed bore is less than 200 metres.