



**SOUTHWEST OPERATIONS**  
**ANNUAL ENVIRONMENT REPORT**  
**YEAR ENDING 31 DECEMBER 2025**

**YOGANUP EXTENDED**

**Document Number: 001**

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## ACRONYMS AND ABBREVIATIONS

Term	Definition
AACR	Annual Audit Compliance Report
AHD	Australian Height Datum
BCM	Bulk cubic metres
CDP	Capel Dry Plant
CoPC	Contaminants of Potential Concern
DLGIRS	Department of Local Government, Industry Regulation and Safety
DMIRS	Department of Mines, Industry Regulation and Safety (now known as DLGIRS)
DMP	Department of Mines and Petroleum (now known as DLGIRS)
EARS	Environmental Assessment and Regulatory System
EC	Electrical Conductivity
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
HHERA	Human Health and Ecological Risk Assessment
Iluka	Iluka Resources Limited
LWC	Land and Water Consulting
MBGL	Metres below ground level
NCSM	North Capel Separation Mill
NCT	Non-conductor Tail
RCWA	Radiation Council of Western Australia
RMP	Radiation Management Plan
SDD	Solar Drying Dam
TA	Total Alkalinity
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
TTA	Total Titratable Acidity
YECWD	Yoganup Extended Clean Water Storage Dam (also known as CWD1)
YEDP	Yoganup Extended Discharge Point (also referred as W1)
YEUS	Yoganup Extended Upstream monitoring location
YERWD	Yoganup Extended Return Water Storage Dam (also known as CWD2)
YEWB	Yoganup Extended Weir Box Pre-Discharge monitoring location

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## INTRODUCTION

### 1.1 PROJECT SUMMARY

### 1.2 Brief History of the Operations

Iluka Resources Limited (Iluka) operated the Yoganup Extended mine site 11 km south-east of the town of Capel, approximately 200 km south of Perth up until January 2007. The site is located adjacent to Gavins Road to the north, Cain Rd to the west and State Forest 27 to the east.

**Figure 1** provides a regional perspective of the Yoganup Extended Mine. **Figure 2** provides a base map of the site. Yoganup Extended Mine produced Heavy Mineral Concentrate as feed for the North Capel Separation Mill and Capel Dry Plant. **Figure 3** contains an aerial map of the historical mining area and **Figure 4** contains an aerial map of the infrastructure that remains within the revised prescribed premise boundary.

Since 2007, the pit void (known as the 90ft Pit, see **Plate 1**) has been used as a back fill site for production wastes from the North Capel Synthetic Rutile operations, Capel Dry Plant, and rehabilitation sites. These wastes are delivered to the 90ft Pit void periodically as demand dictates. An *Environmental Protection Act* Licence (L6161) is in place and valid until 31 December 2035. The Licence was amended August 2024, reducing the premise boundary to reflect the active operational area of the 90ft Pit facility.



*Plate 1 - 90ft Waste Disposal Pit, February 2025.*

Management of all radioactive material is covered by the Iluka Radiation Management Plan (RMP) and approved by the Department of Local Government, Industry Regulation and Safety (DLGIRS, formerly DMIRS). An Annual Environmental Radiation Monitoring Report is also prepared each year for DLGIRS and the Radiation Council WA (RCWA).

Mining Leases include M70/93, M70/94, M70/105, M70/478, M70/866, M70/920, M70/410, M70/1106 and M70/1073 at the locations presented in **Figure 3**. Rehabilitation on M70/410, M70/920, M70/93, M70/105, and M70/1073 were signed off in 2016 and 2017.

The site holds a Licence to take water, under the Rights in *Water and Irrigation Act 1914* - GWL 181835, and the associated Operating Strategy; for dewatering purposed for mining activities, as well as dust suppression purposes. As the site has been rehabilitated to final landform design, and surface water flows have been reinstated to natural flows, no surface water flows through the discharge point were recorded. Iluka will review the ongoing requirement for the GWL in 2026 and mostly likely surrender it as no longer required.

A Human Health and Ecological Risk Assessment (HHERA) and associated groundwater model of the 90ft Pit was initiated in 2019 and prepared by consultants CDM Smith (CDM) in conjunction with Land and Water Consulting (LWC) and has been discussed in previous annual reports.

An extensive rehabilitation earthmoving project commenced in early 2021, which involved backfilling of voids and establishing pasture on open areas (excluding the 90ft Pit facility). The earthmoving project was predominantly completed in July of 2024. Further detail is provided in **Section 4**. The site will be monitored and assessments will be undertaken to determine future work activities. Native vegetation is planned for State Forest areas.

### 1.3 Site Activity Figures

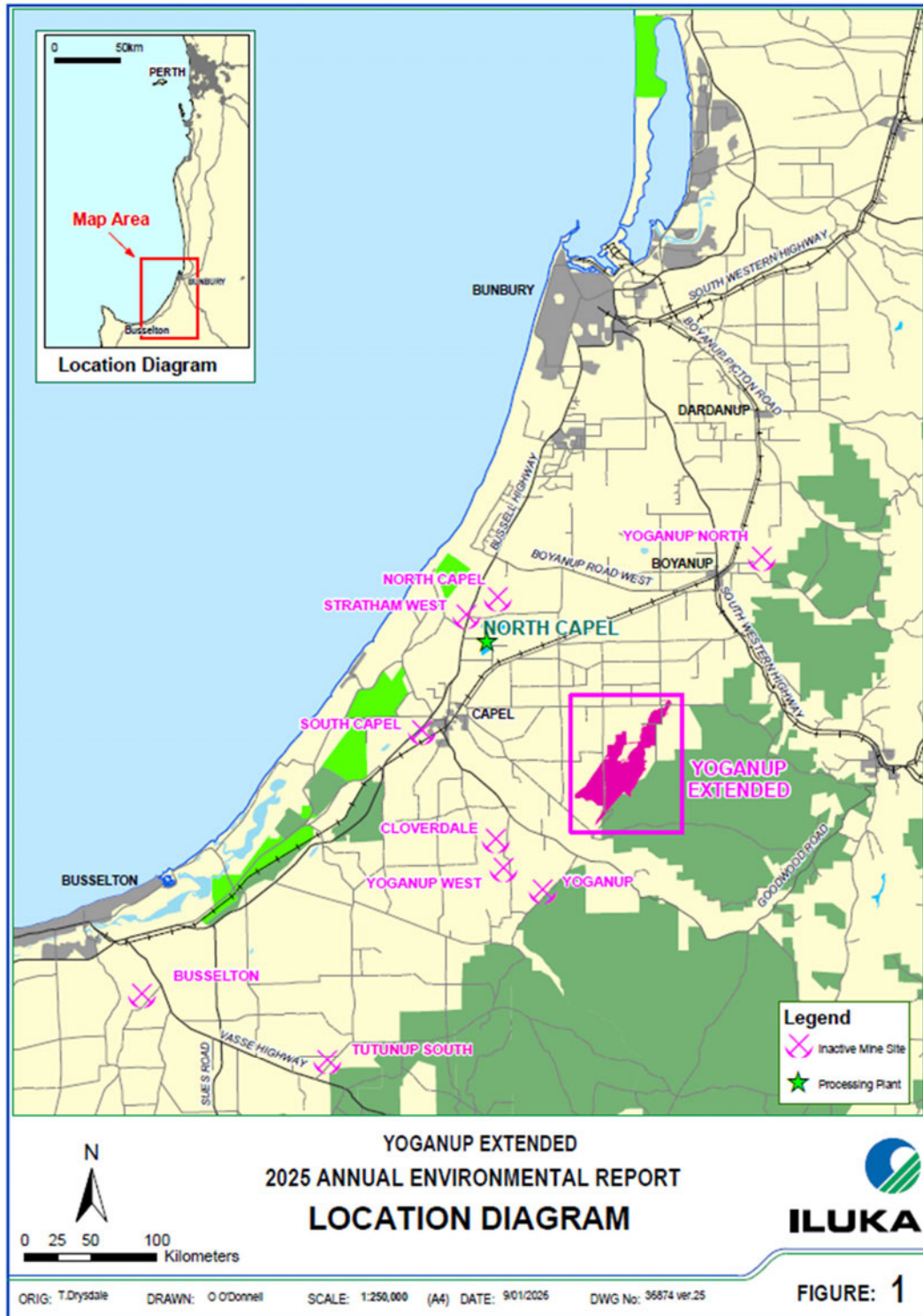


Figure 1 - Location Diagram

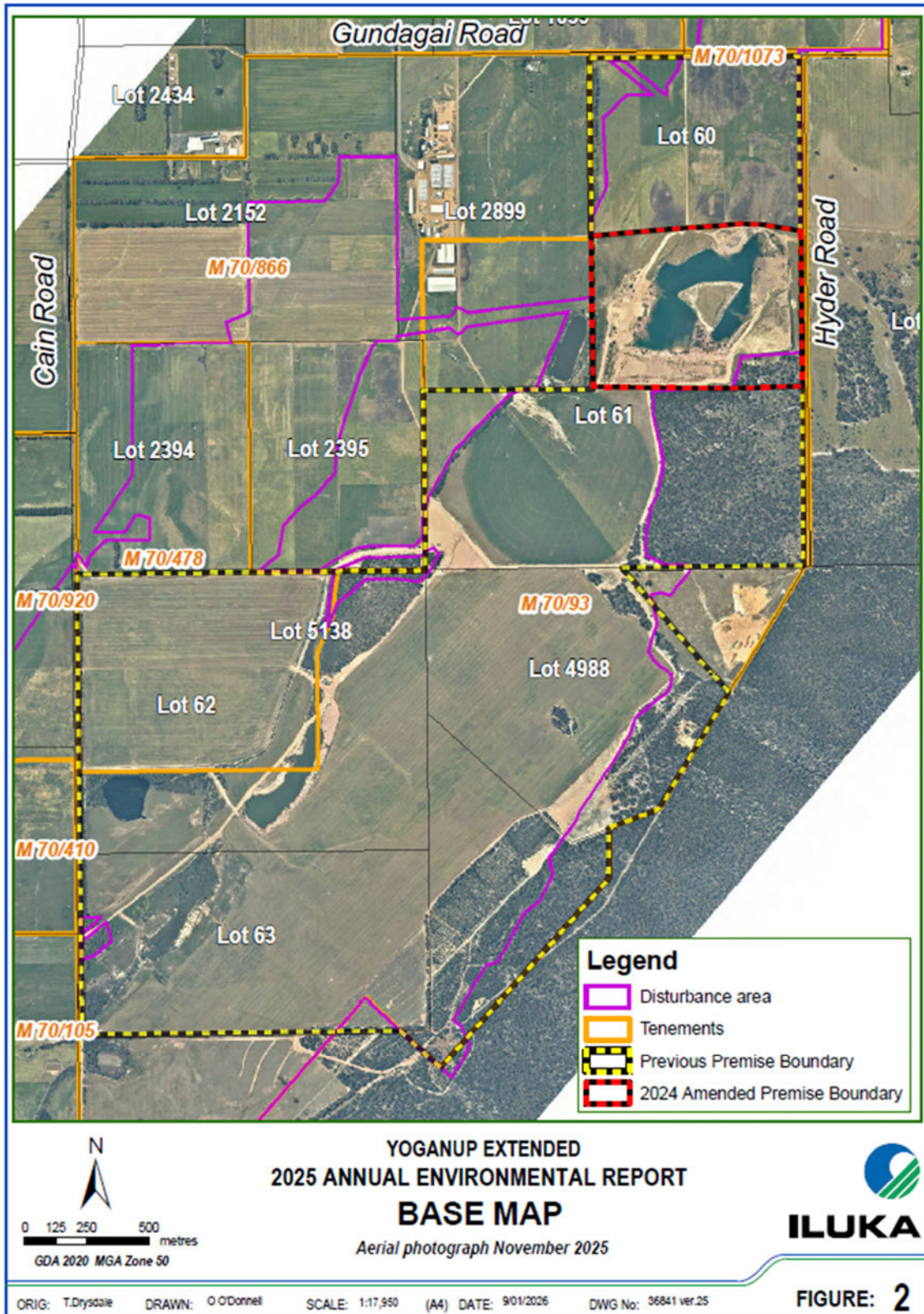


Figure 2 - Base Map

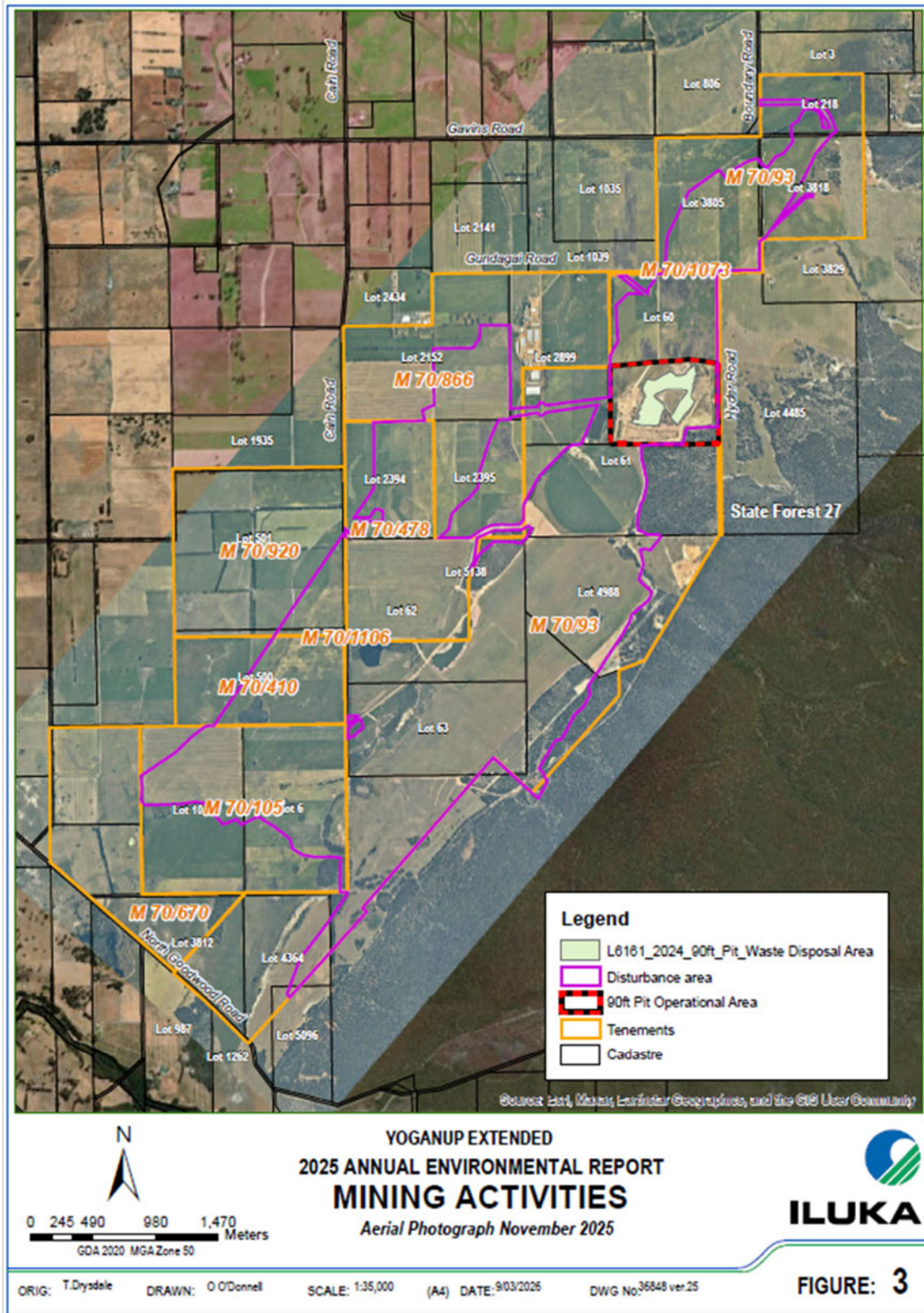


Figure 3 - Mining Activities

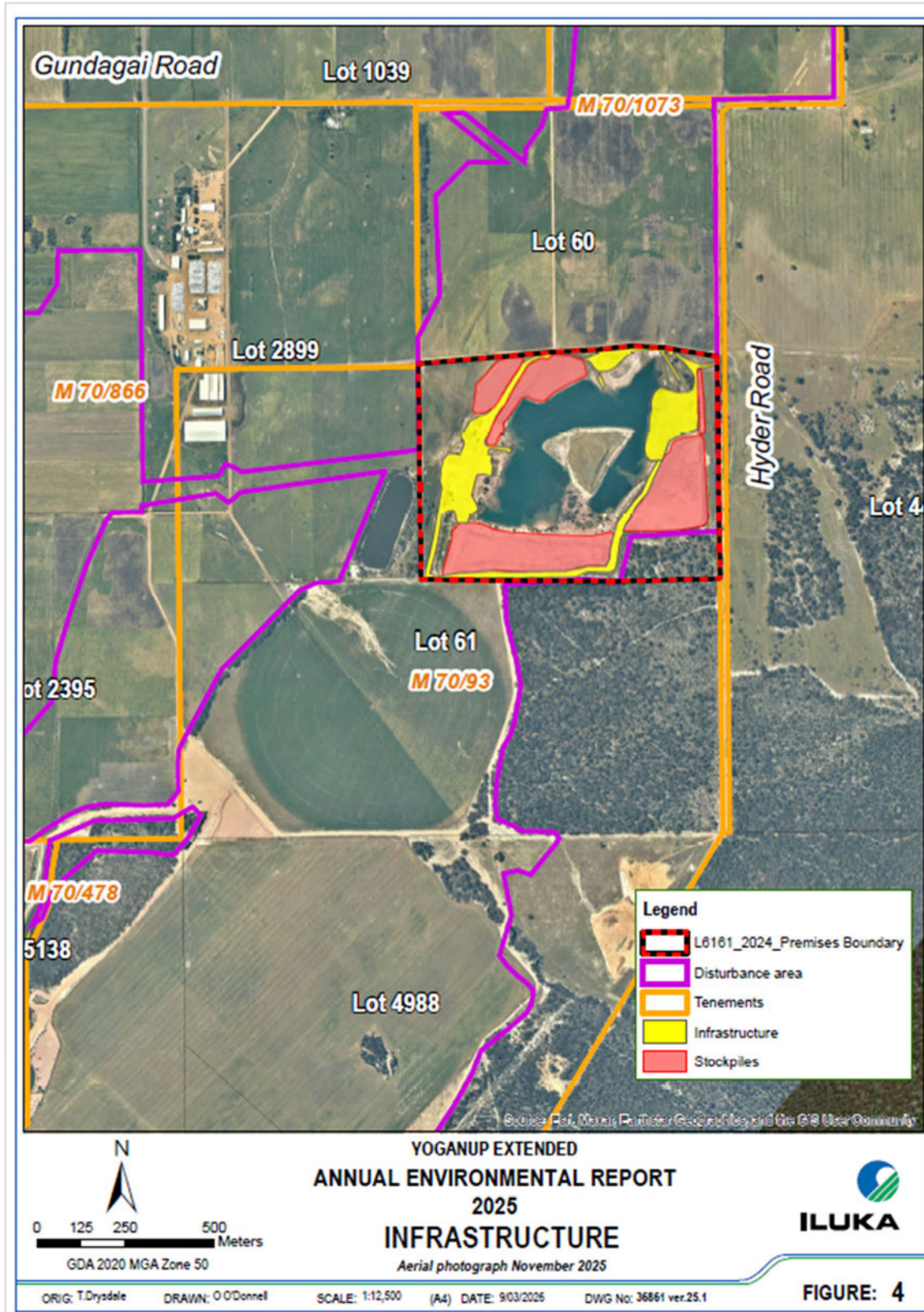


Figure 4 - Infrastructure

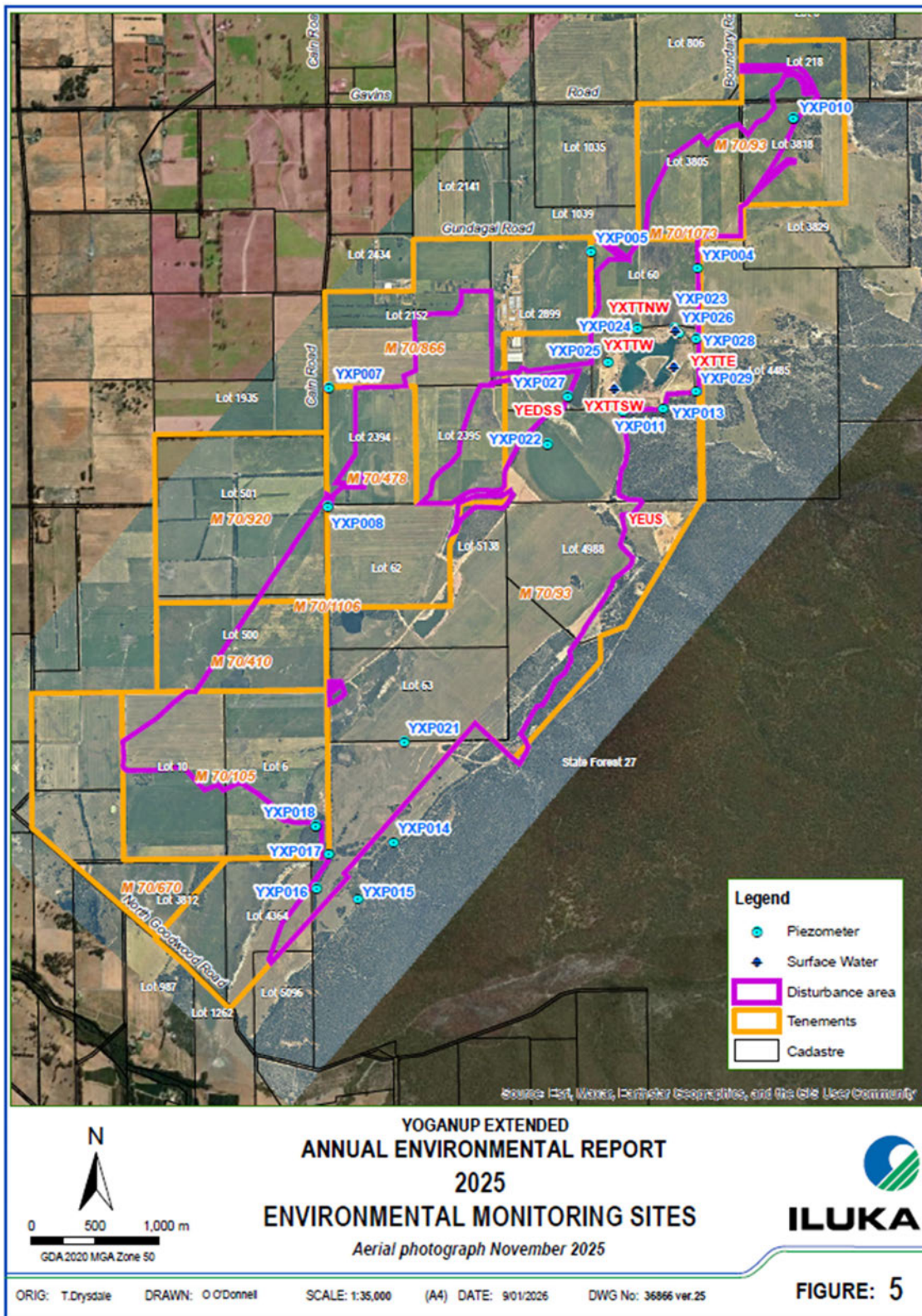


Figure 5 - Environmental Monitoring Sites

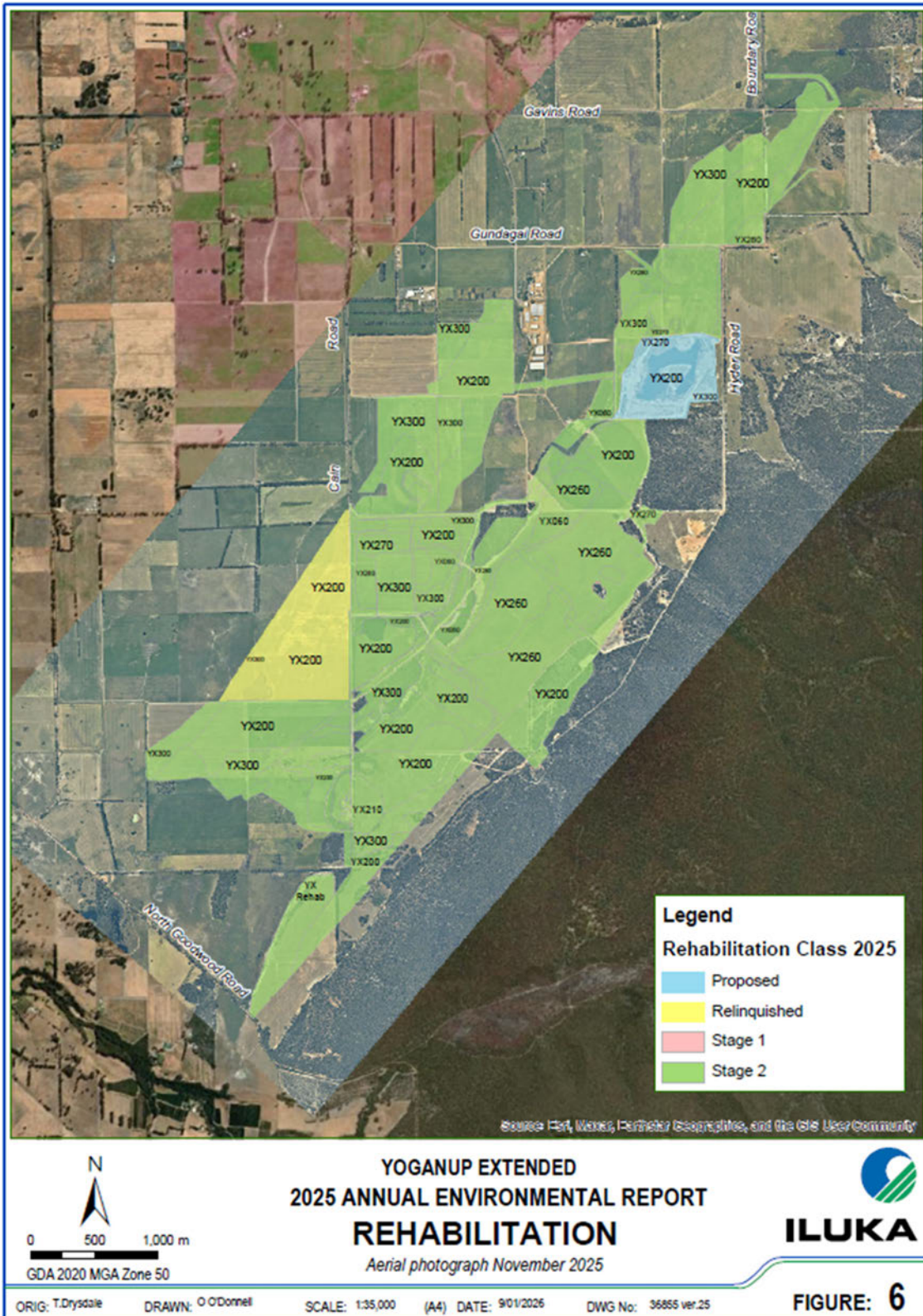


Figure 6 - Rehabilitation

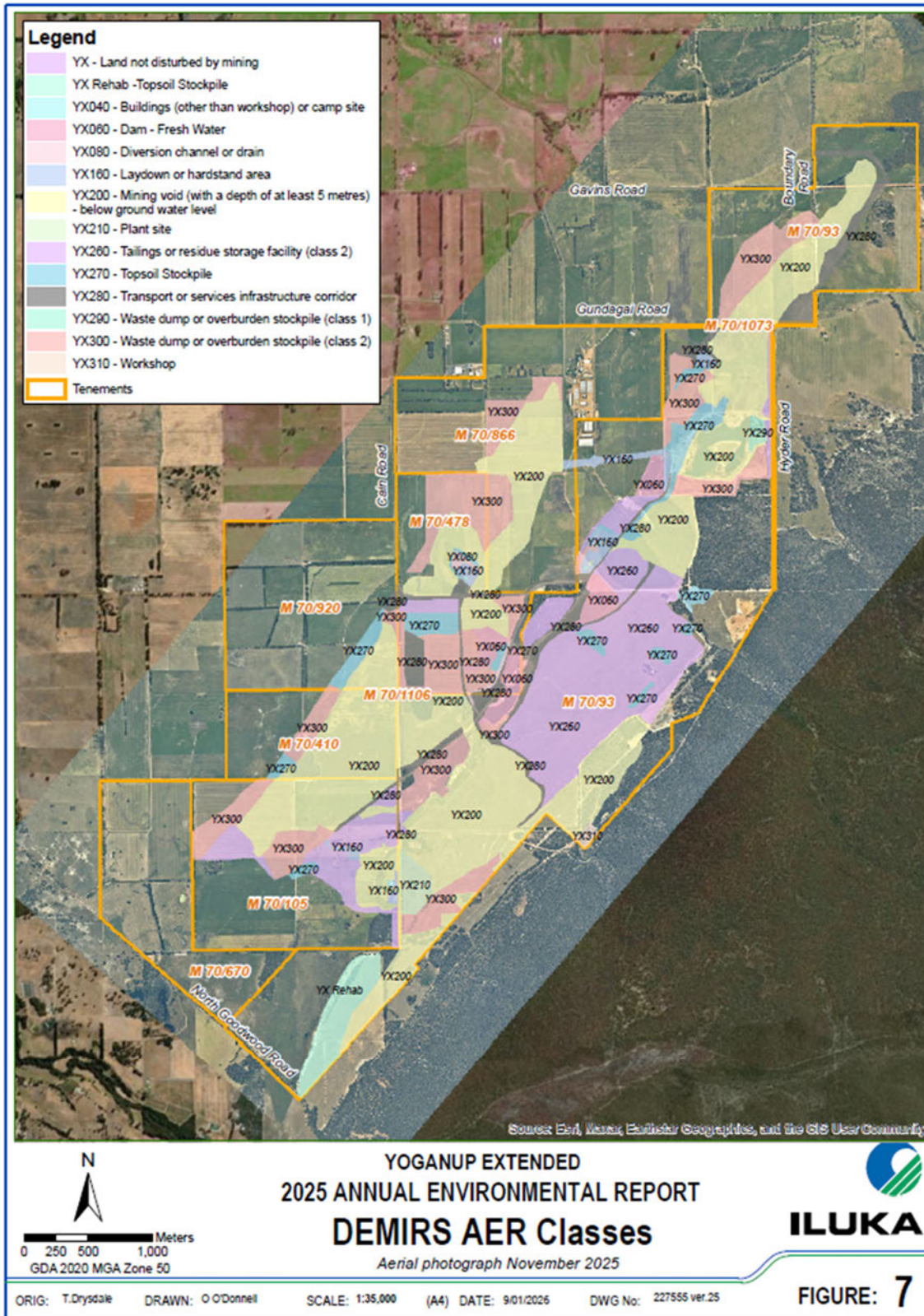


Figure 7 - DEMIRS AER Classes

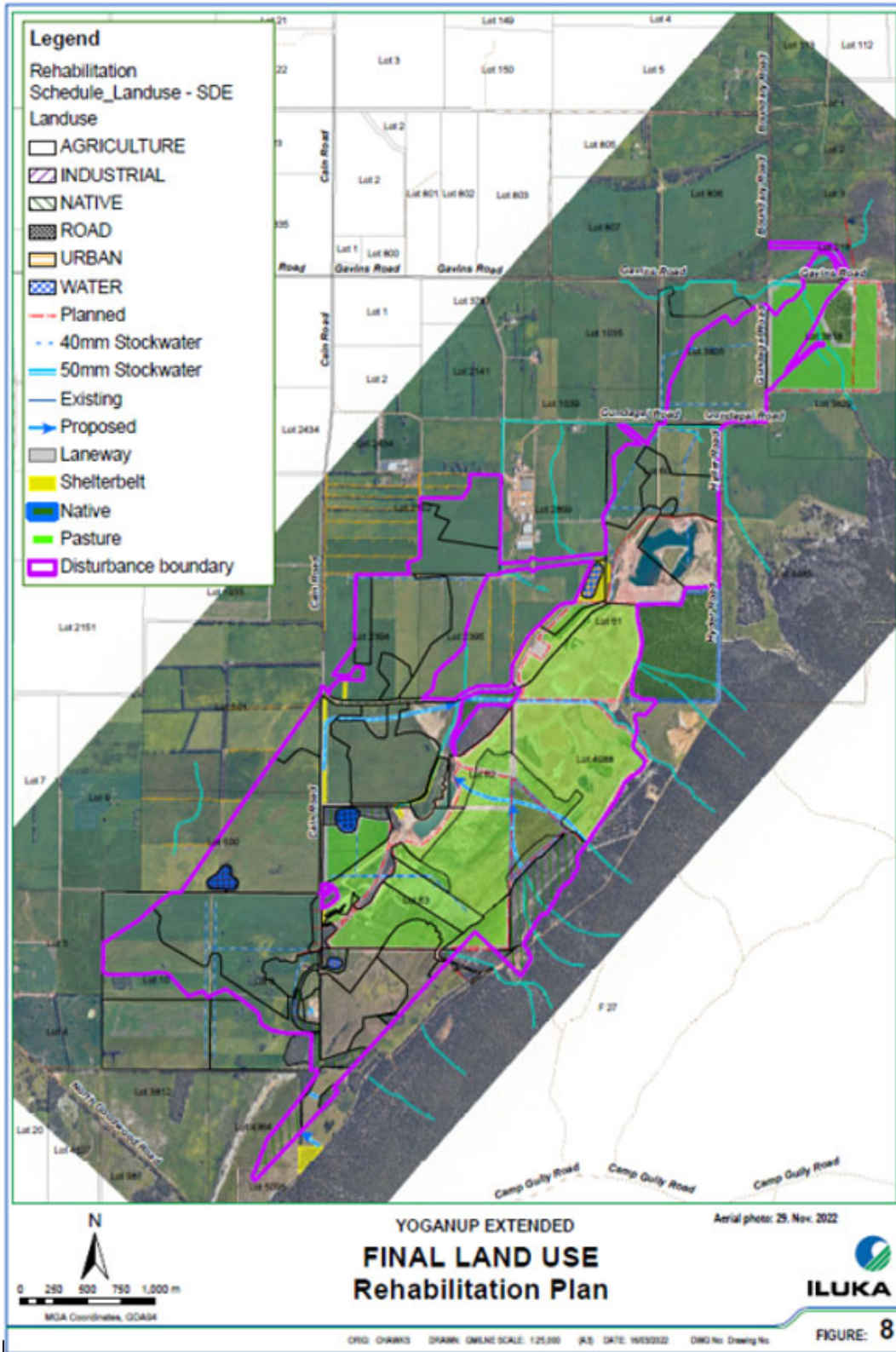


Figure 8 - Final Land use Rehabilitation Plan

## 2. COMPLIANCE

On the 6<sup>th</sup> of May 2024, Iluka submitted an application to amend Licence L6161/1988/13. Due to the progressive rehabilitation across disturbance areas, previously monitored surface water emissions points from the mine site no longer exist. The revised licence was granted by DWER on the 28<sup>th</sup> of August 2024, and included the following amendments:

- A reduction of the prescribed premise boundary for mining activities following significant rehabilitation project in 2024 (see **Figure 2**);
- A variation and expansion to the area (and volume) of the approved delineated waste disposal pit (“90-foot Pit”), to encompass the remaining void; and
- With the surface water returning to natural surface flows, the instruments and conditions relating to these emissions were removed from the Licence.

### 2.1 Regulatory Context - Environmental Protection Act Licence L6161/1988/13

*Table 1 - Licence Compliance*

Condition			Compliant (Yes/No)	Comment
<b>Premises operation</b>				
1. The licence holder must only dispose waste on the Premises if:			Yes	
(a) It is of a type listed in Table 1; and			Yes	
(b) The quantity is below any limit specified in Table 1; and			Yes	
(c) It meets the specifications in Table 1.			Yes	
<b>Table 1: Authorised waste types and processing table</b>				
Waste Type	Quantity limit (t/yr)	Specification		
Inert waste type 1	20,000		Yes	0t

Condition			Compliant (Yes/No)	Comment
	(combined)	Industrial, non-recyclable waste only, including process wastes (oversize, dust, scales, and other plant tailings, etc.), maintenance wastes (dust extraction filter bags, tank/pipe lining, plant equipment, etc.), construction and demolition wastes (building materials, non-recyclable packaging, etc.); <ul style="list-style-type: none"> <li>• Solid waste only;</li> <li>• Waste generated from Iluka Southwest Operations only (including historic processing and Cataby NCT);</li> <li>• Contaminants must comply with CT1 criteria.</li> <li>• Must only be disposed by burial within the '90-foot pit', as depicted in the map in Schedule 1; and</li> <li>• Material with a pH of &lt; 4.0 is not permitted for disposal within in the pit.</li> </ul>		
MSP final tailings	100,000		Yes	2,956t
<b>Monitoring (general)</b>				
2. The licence holder must ensure that:			Yes	
(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1				
(b) all surface water sampling is conducted in accordance with AS/NZS 5667.6;			Yes	
(c) all groundwater sampling is conducted in accordance with AS 2531 and AS/NZS 5667.11; and			Yes	
(d) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured, unless indicated otherwise in the relevant table.			Yes	
3. The licence holder must ensure that:			Yes	
(a) monthly monitoring is undertaken at least 15 days apart;				
(b) quarterly monitoring is undertaken at least 45 days apart;			Yes	
(c) 6-monthly monitoring is undertaken at least 4 5 months apart; and			Yes	
(d) annual monitoring is undertaken at least 9 months apart.			Yes	
4. The licence holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this licence is calibrated in accordance with the manufacturer's specifications.			Yes	

Condition					Compliant (Yes/No)	Comment
5. The licence holder must, where the requirements for calibrations cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.					Yes	
<b>Process monitoring</b>						
6. The licence holder must undertake monitoring of the parameters for the process listed in Table 2, in the corresponding units and the frequency specified in that table.					Yes	
<b>Table 2: Process monitoring table</b>						
Process description	Parameter	Units	Frequency	Compliant (Yes/No)	Comment	
MSP final tailings disposal	Amount of MSP final tailings disposed at the 90-foot pit	tonnes	Monthly (cumulative)	Yes	Refer Table 2	
<b>Ambient environmental monitoring</b>						
7. The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 3, in the corresponding units, over the averaging period and at the frequency set out in that table.					Yes	Refer Table 3
<b>Table 3: Surface water monitoring table</b>						
Monitoring point reference	Parameter	Units	Averaging period	Monitoring frequency	Compliant (Yes/No)	Comment
Monitoring of ambient water quality within the 90-foot pit <sup>3</sup> and Scott's Dam	pH <sup>1</sup>	-		Monthly	Yes	Refer Table 3
	Electrical conductivity <sup>1,2</sup>	µs/cm		Quarterly	Yes	Refer Table 4
	Total dissolved solids	mg/L			Yes	
	Total titratable acidity				Yes	
	Total alkalinity				Yes	

Condition				Compliant (Yes/No)	Comment	
	Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate			6-monthly	Yes	Refer Table 5
	Metals and metalloids: aluminium, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (total), cobalt, copper, iron (total), lead, manganese, mercury (total), molybdenum, nickel, selenium, silver, uranium, vanadium, zinc				Yes	Refer Table 6
<i>Note 1: In-field, non-NATA accredited analysis permitted.</i> <i>Note 2: Referenced to 25°C.</i> <i>Note 3: The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.</i>				Yes	Refer 3.6.1	
8. The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 4, in the corresponding units, over the averaging period and at the frequency set out in that table.				Yes	Refer Table 14-17	

**Table 4: Groundwater monitoring**

Monitoring point reference	Parameter	Units	Averaging period	Monitoring frequency	Compliant (Yes/No)	Comment
YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029	pH <sup>1</sup>	-	Spot sample	Monthly	Yes	Refer Table 8
	Standing Water Level <sup>1,2</sup>	mAHD		Quarterly	Yes	Refer Table 9
	Electrical conductivity <sup>1,3</sup>	µs/cm			Yes	
	Total dissolved solids	mg/L			Yes	
	Total titratable acidity				Yes	Refer Table 16

Condition					Compliant (Yes/No)	Comment
YXP004, YXP005, YXP011, YXP013, YXP023, YXP024, YXP025, YXP026, YXP027, YXP028, YXP029	Total alkalinity				Yes	
	Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate				Yes	
	Metals and metalloids: aluminium, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (total), cobalt, copper, iron (total), lead, manganese, mercury (total), molybdenum, nickel, selenium, silver, uranium, vanadium, zinc			Annual	Yes	Refer Table 17
YXP024, YXP025, YXP028, YXP029	Radium-226, radium-228	mBq/L		6-monthly	Yes	Refer Table 18
<i>Note 1: In-field, non-NATA accredited analysis permitted.</i> <i>Note 2: SWL to be determined prior to the collection of other samples.</i> <i>Note 3: Referenced to 25°C.</i>					Yes	
<b>Records and reporting</b>						
9. All information and records required by the licence must:						
(a) Be legible;					Yes	
(b) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;					Yes	
(c) except for records listed in condition 12(d), be retained for at least 6 years from the date the records were made or until the expiry of the licence or any subsequent licence; and					Yes	
(d) for those following records, be retained until the expiry of the licence and any subsequent licence: (i) off-site environmental effects; or (ii) matters which affect the condition of the land or waters.					Yes	
10. The licence holder must:						
(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and					Yes	

Condition			Compliant (Yes/No)	Comment
(b) prepare and submit to the CEO, by no later than 31 March in each year, an annual audit compliance report in the approved form.			Yes	Appendix 3
11. The licence holder must implement a complaints management system that as a minimum record the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.			Yes	Refer Section 7.1
<b>Annual environmental report</b>				
12. The licence holder must submit to the CEO, by 31 March in each year, an annual environmental report which includes, but is not limited to:			Yes	This Report
(a) details of the calculation of fees payable in respect of this licence;			Yes	Refer Section 6
(b) a summary of the amount of MSP final tailings disposed at the 90-foot pit;			Yes	Refer Table 2
(c) monitoring reports required by conditions 6, 7 and 8 for the preceding annual period;			Yes	Refer Appendix 2
(d) a summary of any complaints received, and management actions taken for each complaint; and			Yes	Refer Section 7.1
(e) a summary of any environmental incidents and any action(s) taken.			Yes	Refer Section 7.1
13. The licence holder must ensure the report required by condition 12 includes:				
(a) an appraisal and trend analysis of the results against any baseline data and previous monitoring results; and			Yes	Refer Appendix 1
(b) time-series figures for all monitoring data, with axes presented on relevant scales.			Yes	Refer Appendix 1
<b>Notification</b>				
14. The licence holder must notify the CEO in accordance with the notification requirements specified in Table 5.				
<b>Table 5: Notification requirements table</b>				
Condition	Parameter	Notification requirement	Compliant (Yes/No)	Comment

Condition			Compliant (Yes/No)	Comment
-	Proposal to recommence mining and or mine dewatering operations	At least 3 months prior to the proposed commencement date	Yes	
7	Pit water quality monitoring indicates pH less than 5.5 or total alkalinity less than 30 mg/L	Within 7 days of becoming aware of pit water quality being pH less than 5.5 or total alkalinity less than 30 mg/L	Yes	No occurrences below trigger. Refer to Table 4 and Figure 14

### 3. ENVIRONMENTAL MANAGEMENT

#### 3.1 Waste and Radiation

Yoganup Extended Mine was placed into care and maintenance as an active mining facility in January 2007. Though mining is not currently active, the 90ft Pit mine void is continuing to be used as a production waste disposal site. The primary source of waste delivered to the mine void is from North Capel Separation Mill (NCSM) where physical separation occurs with magnets and electrostatics. Throughout 2025, the total dry weight disposal from North Capel was 2956.3 tonnes with a weighted average of 7.20 Bq/g activity, as shown in Table 2.

Deposited waste at the site is gradually covered with a protective layer of soil to prevent disturbance of the waste and/or dust generation. This will be covered by a minimum of five metres of neutral fill prior to rehabilitation.

Table 2 - Monthly Tonnes of Deposited Waste to 90ft Pit Void

Monthly Tonnes Deposited at 90ft Pit		
Monthly	Tonnes (t)	Activity (WA Bq/g)
January	1,098.6	7.49
February	165.3	7.49
March	-	0.00
April	1,386.0	6.87
May	220.8	7.49
June	-	0.00
July	-	0.00
August	-	0.00
September	-	0.00
October	-	0.00
November	85.6	7.49
December	-	0.00
<b>Total</b>	<b>2,956.30</b>	<b>7.20</b>

Management of all radioactive material is undertaken in compliance with the Iluka Radiation Management Plan (RMP) as approved by DLGRIS. An Annual Environmental Radiation Monitoring Report is also prepared each year for DLGRIS and the RCWA.

Monitoring of the groundwater quality for Radium 226 and Radium 228 (mBq/L) in proximity to the 90ft Pit void is discussed in Section 3.4 with results presented in Table 11.

#### 3.2 Emissions Monitoring - Surface Water

On completion of an extensive rehabilitation program in 2024, and with the removal in August 2024 of former Conditions 2 and 3 of the Operating Licence L6161/1988/13 (Part V, Environmental Protection Act 1986) relating to point source emissions to Surface water and emissions limits to surface water, water volumes are no longer recorded at the former YEDP emission point. The former YEDP now receives run-off water from the rehabilitated mine area, surrounding agricultural land and State Forest up-gradient of the mine site, and contributes to the Elgin Agricultural Drainage system. The CWD1 (YECWD) has been rehabilitated to final landform design, and riparian vegetation established. Dewatering infrastructure has been removed from site and no dewatering activities occurred in 2025.

### 3.3 Ambient Environmental Monitoring

#### 3.3.1 Surface Water Monitoring

Yoganup Extended 90ft Pit (YXTTNW) and Scott's Dam (YEDSS) are both monitored monthly for pH (Table 10), quarterly for EC, total dissolved solids (TDS), total titratable acidity (TTA) and total alkalinity (TA) (Table 11), as well as a biannual analysis suite (Table 5 and Table 6) as required under Table 6 (L6161-1988/13).

There were no instances where pit water quality monitoring indicated a pH less than 5.5 or total alkalinity less than 30 mg/L, and subsequently, no requirement to notify the CEO in accordance with Table 8 of L6161/1988/13.

Note 3 of Table 6 in L6161/1988/13, requires the spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, be sufficient to demonstrate any variation in both a horizontal and vertical direction across the body of water. An investigation was conducted in 2020 which demonstrated no significant evidence of spatial variation (stratification) and is summarised in Section 3.5.1 - 90 ft Pit Monitoring. This was discussed in further detail in the 2020 Annual Environmental Report (AER).

*Table 3 - Monthly Monitoring of Ambient Water Quality Within 90ft Pit and Scott's Dam*

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 6: Monitoring of ambient water quality within the 90-foot pit <sup>3</sup> and Scott's Dam; pH; Spot sample; Monthly]											
		<sup>3</sup> The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YEDSS	Comments				algae in water	algae in water	algae in water	algae in water	high water level	high water level			dam pumped out water level very low
	pH (Field)	8.95	8.32	7.37	8.54	7.23	8.72	8.44	7.20	7.49	7.17	6.90	6.99
YXTTNW (90ft Pit)	Comments						heavy rainfall						
	pH (Field)*	8.10	7.50	7.57	7.58	7.68	8.05	7.75	7.75	7.64	7.56	7.39	7.59

*\*Note: No values fell below the trigger level of 5.5 pH in the 90ft Pit (YXTTNW) during the reporting period.*

**Table 4 - Quarterly Monitoring of Ambient Water Quality Within the 90ft Pit and Scott's Dam**

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.			
Obligation/Requirement Summary		[Table 6: Monitoring of ambient water quality within the 90-foot pit <sup>3</sup> and Scott's Dam; EC (uS/cm), TDS, TTA and TA (mg/L); Spot sample; Quarterly].			
Obligation/Requirement Summary		<sup>3</sup> The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YEDSS (Scott's Dam)	Acidity (mg/L)	8.1	28	15	13
	Alkalinity (mg/L)	95	92	74	66
	Comments	-	algae in water	high water level	-
	EC (Field) (µs/cm)	960	967	822	749
	TDS (mg/L)	580	560	520	490
YXTTNW (90ft Pit)	Acidity (mg/L)	8.3	39	23	16
	Alkalinity (mg/L)*	109	111	104	101
	Comments	-	-	-	-
	EC (Field) (µs/cm)	1175	1167	1068	952
	TDS (mg/L)	720	750	660	600

\*Note: No values fell below the trigger level of 30mg/L Alkalinity in the 90ft Pit (YXTTNW)

**Table 5 - Biannual Monitoring of Ambient Water Quality 90ft Pit and Scott's Dam**

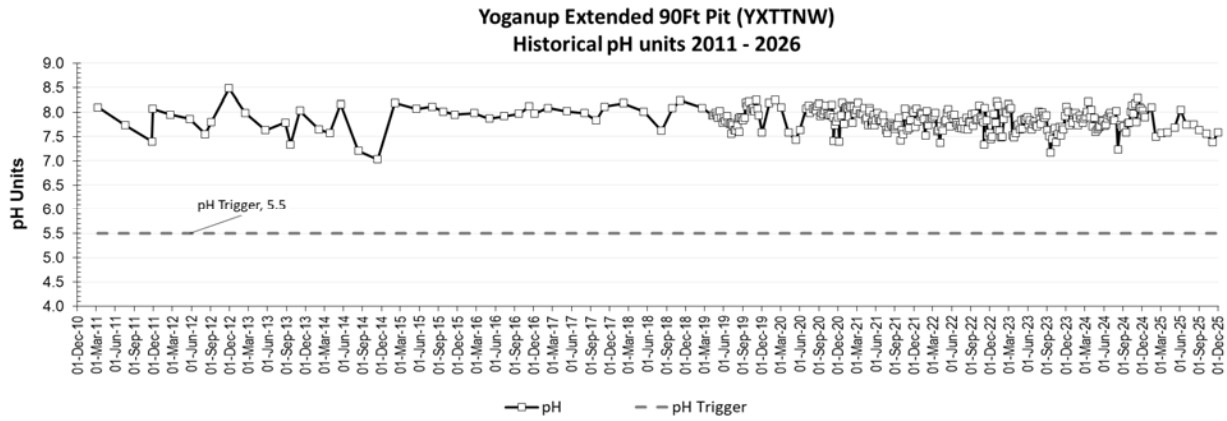
Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.			
Obligation/Requirement Summary		[Table 6: Monitoring of ambient water quality within the 90-foot pit <sup>3</sup> and Scott's Dam; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; six-monthly].			
Obligation/Requirement Summary		<sup>3</sup> The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YEDSS (Scott's Dam)	Ca (mg/L)	27	37	29	26
	Cl (mg/L)	203	186	143	137
	CO3 (mg/L)	13	8.3	<1	<1
	Comments	-	algae in water	high water level	-
	HCO3 (mg/L)	81	84	74	66
	K (mg/L)	4.5	5.8	4.3	5.1
	Mg (mg/L)	30	35	26	25
	Na (mg/L)	96	110	80	79
	NO3-N (mg/L)	<0.11	<0.11	<0.11	<0.11
	SO4 (mg/L)	136	123	92.5	93.3
YXTTNW (90ft Pit)	Ca (mg/L)	59	78	75	67
	Cl (mg/L)	225	210	176	168
	CO3 (mg/L)	<1	<1	<1	<1
	Comments	-	-	-	-

HCO3 (mg/L)	109	111	104	101
K (mg/L)	3.9	5.7	4.2	4.5
Mg (mg/L)	18	24	21	20
Na (mg/L)	91	120	96	93
NO3-N (mg/L)	0.14	<0.11	0.14	<0.11
SO4 (mg/L)	189	177	149	140

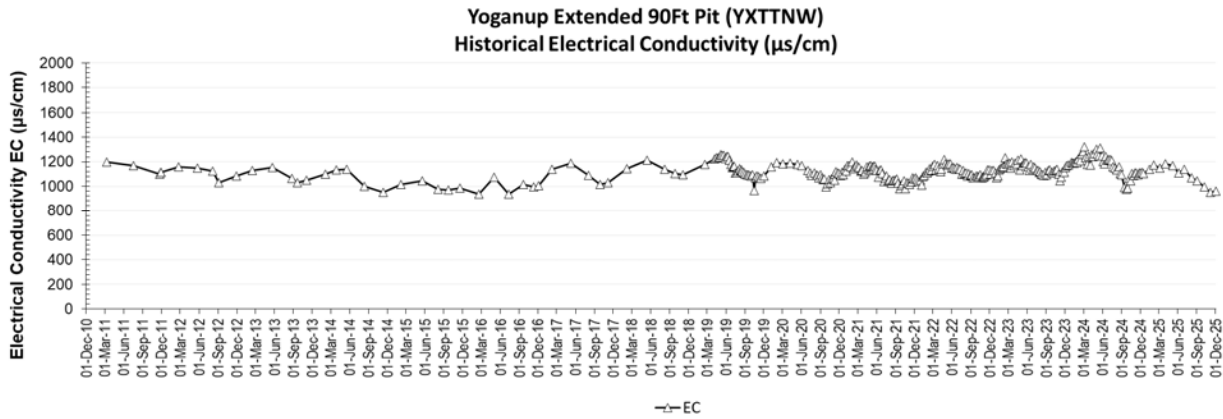
**Table 6 - Biannual Monitoring of Ambient Water Quality within the 90ft Pit and Scott's Dam – Metals and Metalloids (mg/L)**

<b>Obligation/Requirement Summary</b>		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.			
		[Table 6: Monitoring of ambient water quality within the 90-foot pit <sup>3</sup> and Scott's Dam; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; six-monthly].			
		<sup>3</sup> The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YEDSS (Scott's Dam)	Ag (mg/L)	<0.001	<0.001	<0.001	<0.001
	Al (mg/L)	0.031	<0.01	<0.01	<0.01
	As (mg/L)	<0.001	<0.001	<0.001	<0.001
	B (mg/L)	0.022	0.02	0.021	<0.02
	Ba (mg/L)	0.03	0.028	0.023	0.021
	Be (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005
	Cd (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001
	Co (mg/L)	<0.001	<0.001	<0.001	<0.001
	Comments	-	algae in water	high water level	-
	Cr_Tot (mg/L)	<0.001	<0.001	<0.001	<0.001
	Cu (mg/L)	<0.001	<0.001	<0.001	<0.001
	Fe_Tot (mg/L)	0.077	0.043	0.11	0.18
	Hg_Tot (mg/L)	<0.00005	<0.00005	<0.00005	<0.00005
	Mg (mg/L)	30	35	26	25
	Mn (mg/L)	0.0013	<0.001	0.0063	0.035
	Mo (mg/L)	<0.001	<0.001	<0.001	<0.001
	Ni (mg/L)	<0.001	<0.001	<0.001	<0.001
	Pb (mg/L)	<0.001	<0.001	<0.001	<0.001
	Sb (mg/L)	<0.001	<0.001	<0.001	<0.001
	Se (mg/L)	<0.001	<0.001	<0.001	<0.001
	Uranium (mg/L)	<0.001	<0.001	<0.001	<0.001
Vanadium (mg/L)	<0.001	<0.001	<0.001	<0.001	
Zn (mg/L)	0.0013	0.0016	<0.001	<0.001	

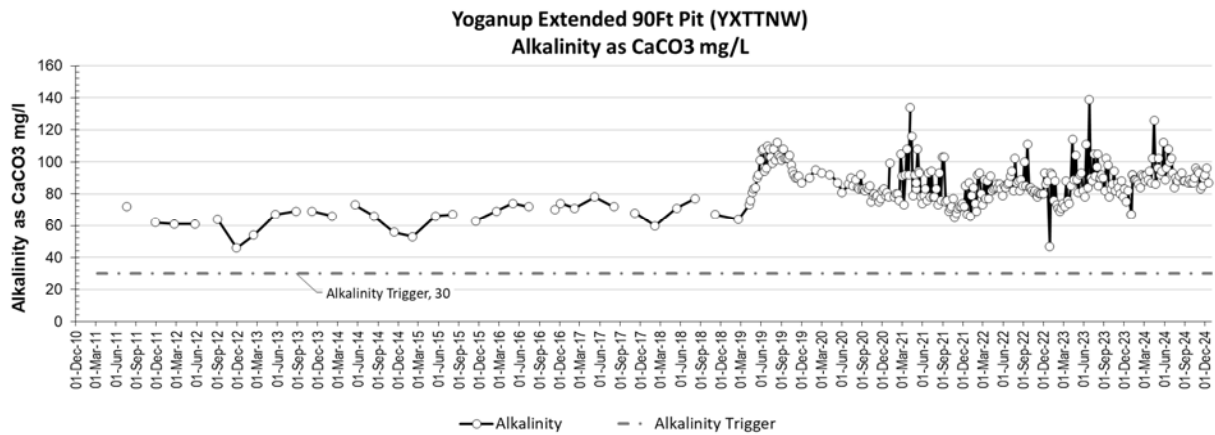
Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.			
		[Table 6: Monitoring of ambient water quality within the 90-foot pit <sup>3</sup> and Scott's Dam; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; six-monthly].			
		<sup>3</sup> The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YXTTNW (90ft Pit)	Ag (mg/L)	<0.001	<0.001	<0.001	<0.001
	Al (mg/L)	0.059	<0.01	<0.01	<0.01
	As (mg/L)	<0.001	<0.001	<0.001	<0.001
	B (mg/L)	0.25	0.23	0.2	0.18
	Ba (mg/L)	0.089	0.095	0.077	0.075
	Be (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005
	Ca (mg/L)	59	78	75	67
	Cd (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001
	Cl (mg/L)	225	210	176	168
	Co (mg/L)	<0.001	<0.001	<0.001	<0.001
	CO3 (mg/L)	<1	<1	<1	<1
	Comments	-	-	-	-
	Cr (mg/L)	<0.001	<0.001	<0.001	<0.001
	Cr_Tot (mg/L)	<0.001	<0.001	<0.001	<0.001
	Cu (mg/L)	<0.001	<0.001	<0.001	<0.001
	Fe_Tot (mg/L)	0.041	0.03	0.038	0.024
	HCO3 (mg/L)	109	111	104	101
	Hg_Tot (mg/L)	<0.00005	<0.00005	<0.00005	<0.00005
	K (mg/L)	3.9	5.7	4.2	4.5
	Mg (mg/L)	18	24	21	20
	Mn (mg/L)	<0.001	0.0015	<0.001	0.011
	Mo (mg/L)	<0.001	<0.001	<0.001	<0.001
	Na (mg/L)	91	120	96	93
	Ni (mg/L)	<0.001	<0.001	<0.001	<0.001
	NO3-N (mg/L)	0.14	<0.11	0.14	<0.11
	Pb (mg/L)	<0.001	<0.001	<0.001	<0.001
	Sb (mg/L)	<0.001	<0.001	<0.001	<0.001
	Se (mg/L)	<0.001	<0.001	<0.001	<0.001
	SO4 (mg/L)	189	177	149	140
	Uranium (mg/L)	0.0017	0.0021	0.0019	0.0018
Vanadium (mg/L)	<0.001	<0.001	<0.001	<0.001	
Zn (mg/L)	0.031	<0.001	0.0042	<0.001	



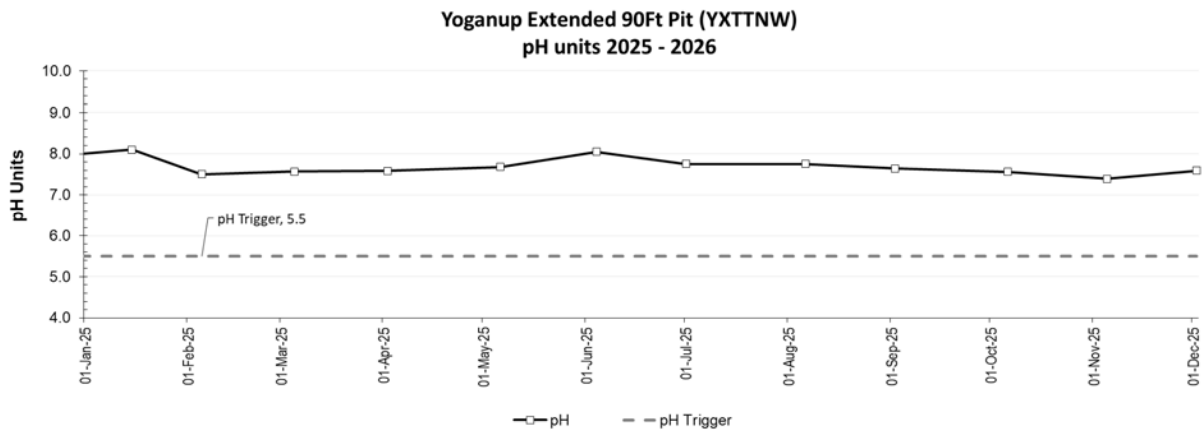
**Figure 9 - Historical pH of 90ft Pit Void Water From 2011 to 2025**



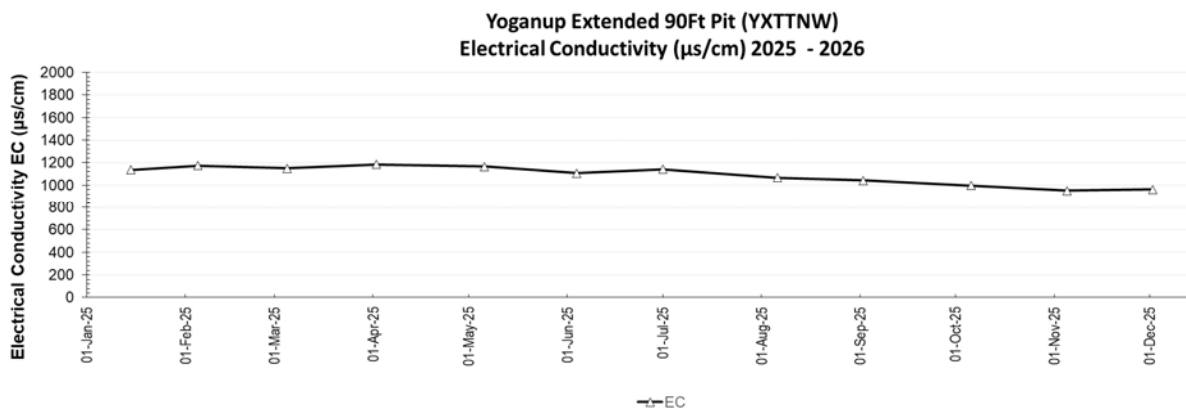
**Figure 10 - Historical Electrical Conductivity of 90ft Pit Void Water From 2011 to 2025**



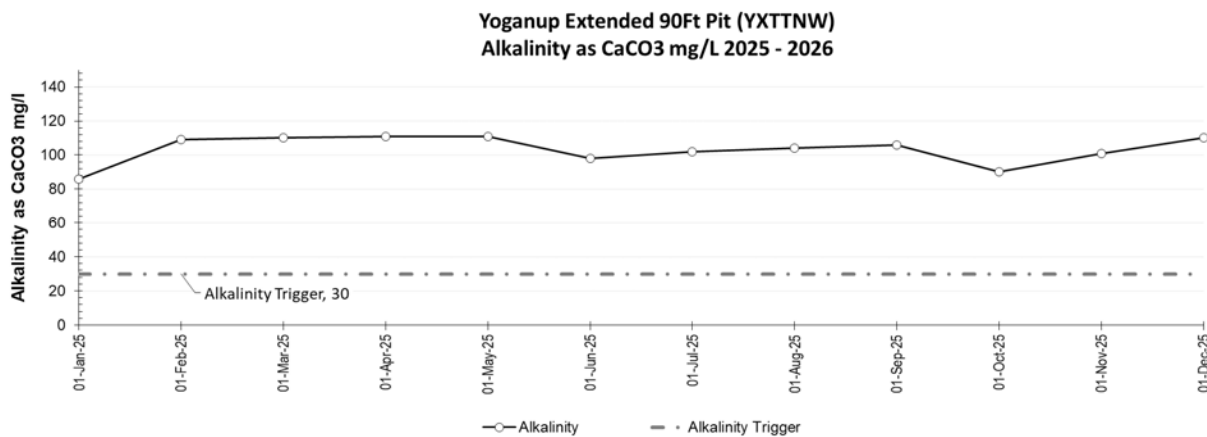
**Figure 11 - Historical Alkalinity of 90ft Pit Void Water From 2011 to 2025**



**Figure 12 - 90ft Pit Void Water pH sampled 2024**



**Figure 13 - Electrical Conductivity of 90ft Pit Void water sampled 2025**



**Figure 14 - Alkalinity of 90ft Pit Void water sampled 2025**

### 3.4 Groundwater

To satisfy *condition 16* of L6161/1988/13, an appraisal and trend analysis of the results against any baseline data and previous monitoring results using time-series figures for all monitoring data has been attached to **Appendix 1 - Time Series Figures 2007 – 2025**. Data required to be collected in 2025, is tabled below (**Table 7**) with database exported attached in **Appendix 2 - All Monitoring Data 2007-2026**.

In August and September 2025, the superficial bore YXP010S, monitored to a screen depth of 2 metres, returned a low pH field measurement of <4 with 3.76 and 3.97 respectively. On review, this piezometer has had pH < 4 on several occasions since 2009 and is in line with historical monitoring with no elevated metals present. This piezometer was discussed in further detail in the 2021 AER.

*Table 7 - Monitoring of Ambient Groundwater*

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 7 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; pH; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YXP004	Comments						inaccessible. Too boggy	inaccessible. Too boggy	Inaccessible. Too boggy	inaccessible. too boggy	inaccessible. Too boggy		
	pH (Field)	4.84	5.28	5.31	5.35	5.30	-	-	-	-	-	5.26	5.26
YXP005	Comments						inaccessible. too boggy	inaccessible. too boggy	Inaccessible. Too boggy	inaccessible. Too boggy	inaccessible. too boggy		
	pH (Field)	5.09	5.42	5.49	5.39	5.29	-	-	-	-	-	5.42	5.46
YXP007	Comments												
	pH (Field)	5.42	5.31	5.35	5.39	5.32	5.48	5.35	5.30	5.30	5.29	5.42	5.50
YXP008	Comments												
	pH (Field)	5.36	5.22	5.20	5.20	5.14	5.18	5.18	5.34	5.34	5.38	5.39	5.40
YXP010D	Comments												
	pH (Field)	4.66	5.11	5.13	5.28	5.20	5.13	5.08	5.07	5.38	5.07	5.13	5.18
YXP010S	Comments				ran dry. Good recharge								
	pH (Field)	4.76	5.06	4.95	5.41	5.09	4.84	4.27	3.76	3.97	4.04	4.12	4.32
YXP011D	Comments												
	pH (Field)	4.83	4.91	4.74	4.77	4.80	4.73	4.79	4.80	5.35	5.35	5.24	5.17
YXP011S	Comments	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
	pH (Field)	-	-	-	-	-	-	-	-	-	-	-	-

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 7 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; pH; Spot sample; Monthly.]											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YXP013D	Comments	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m
	pH (Field)	-	-	-	-	-	-	-	-	-	-	-	-
YXP013S	Comments	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
	pH (Field)	-	-	-	-	-	-	-	-	-	-	-	-
YXP014	Comments												
	pH (Field)	4.46	4.39	4.48	4.50	4.42	4.48	4.53	4.52	4.45	4.57	4.49	4.54
YXP015	Comments	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
	pH (Field)	-	-	-	-	-	-	-	-	-	-	-	-
YXP016	Comments	root blocked at 8.6m	root blocked at 8.6m	root blocked at 8.6m	root blocked at 8.6m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m
	pH (Field)	-	-	-	-	-	-	-	-	-	-	-	-
YXP017M	Comments												
	pH (Field)	5.76	5.73	5.61	5.55	5.46	5.41	5.40	5.48	6.12	5.99	5.94	5.92
YXP017S	Comments	not enough to sample	dry	dry	dry	dry	dry	dry	ran dry				
	pH (Field)	-	-	-	-	-	-	-	5.99	6.08	6.14	6.07	6.11
YXP018M	Comments			ran dry	ran dry	ran dry	ran dry	ran dry		ran dry	ran dry	ran dry	
	pH (Field)	5.82	5.80	5.88	5.91	5.86	5.91	5.87	5.88	5.80	5.69	5.75	5.74
YXP018S	Comments			ran dry. Cloudy	ran dry, murky	ran dry, murky	ran dry, Murky	ran dry, Murky					
	pH (Field)	5.51	5.21	5.47	5.64	5.41	5.43	4.79	5.06	5.12	5.01	5.13	5.01
YXP021	Comments												

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 7 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; pH; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	pH (Field)	5.71	5.59	5.69	5.70	5.65	5.61	5.66	5.62	5.67	5.62	5.62	5.63
YXP022	Comments						inaccessible. Too boggy	inaccessible. Too boggy					
	pH (Field)	5.74	5.88	5.83	5.93	5.78	-	-	6.03	5.98	5.98	5.87	5.93
YXP023	Comments												
	pH (Field)	4.93	5.34	5.33	5.44	5.39	5.34	5.34	5.38	5.37	5.44	5.50	5.45
YXP024	Comments												
	pH (Field)	6.12	6.27	6.31	6.52	6.32	6.24	6.30	6.25	6.15	6.36	6.20	6.42
YXP025	Comments												
	pH (Field)	4.88	4.77	5.10	4.66	4.71	4.62	4.63	4.95	4.72	4.77	4.83	4.77
YXP026	Comments												
	pH (Field)	5.00	5.41	5.50	5.42	5.42	5.37	5.42	5.38	5.38	5.41	5.44	5.49
YXP027	Comments						inaccessible. Too boggy	inaccessible. Too boggy	inaccessible. Too boggy	inaccessible. Too boggy	inaccessible. Too boggy		
	pH (Field)	5.02	5.01	5.06	5.28	5.11	-	-	-	-	-	5.21	5.06
YXP028	Comments												
	pH (Field)	4.90	5.26	5.18	5.21	5.23	5.23	5.21	5.25	5.31	5.26	5.27	5.26
YXP029	Comments												
	pH (Field)	4.52	4.63	4.68	4.63	4.75	4.69	4.68	4.81	4.75	4.74	4.75	4.77

**Table 8 - Monthly Monitoring of Ambient Groundwater**

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 8 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; EC, SWL; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YXP004	Comments						inaccessible. Too boggy	inaccessible. Too boggy	Inaccessible . Too boggy	inaccessible. too boggy	inaccessible. Too boggy		
	Depth SWL	38.83	38.77	38.76	38.71	38.86	-	-	-	-	-	39.53	39.27
	EC_Field	209	220	222	224	219	-	-	-	-	-	228	254
	Water Depth, m	1.17	1.23	1.24	1.29	1.14	-	-	-	-	-	0.47	0.73
YXP005	Comments						inaccessible. Too boggy	inaccessible. Too boggy	inaccessible . Too boggy	inaccessible. Too boggy	inaccessible. Too boggy		
	Depth SWL	31.48	31.43	31.32	31.29	31.55	-	-	-	-	-	32.09	31.81
	EC_Field	358	314	274	271	273	-	-	-	-	-	405	426
	Water Depth, m	1.92	1.97	2.08	2.11	1.85	-	-	-	-	-	1.31	1.59
YXP007	Comments												
	Depth SWL	30.35	30.04	29.71	29.44	29.39	29.24	29.78	31.95	32.38	32.32	32.10	31.59
	EC_Field	1,402	1,433	1,324	1,337	1,294	1,133	1,301	1,487	1,436	1,449	1,481	1,483
	Water Depth, m	4.25	4.56	4.89	5.16	5.21	5.36	4.82	2.65	2.22	2.28	2.50	3.01
YXP008	Comments												
	Depth SWL	32.89	32.59	32.30	32.16	32.01	31.76	32.11	34.33	34.92	34.82	34.60	34.12
	EC_Field	1,240	1,195	1,196	1,286	1,343	1,182	1,250	1,487	1,370	1,283	1,303	1,185
	Water Depth, m	3.91	4.21	4.50	4.64	4.79	5.04	4.69	2.47	1.88	1.98	2.20	2.68
YXP010D	Comments												
	Depth SWL	34.45	34.29	34.16	34.08	34.13	34.38	34.90	35.33	35.39	35.47	35.30	35.02
	EC_Field	228	231	226	266	235	222	219	240	247	236	234	259
	Water Depth, m	1.75	1.91	2.04	2.12	2.07	1.82	1.30	0.87	0.81	0.73	0.90	1.18

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 8 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; EC, SWL; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YXP010S	Comments				ran dry. Good recharge								
	Depth SWL	34.48	34.32	34.18	34.09	34.09	34.39	34.94	35.33	35.34	35.43	35.26	34.99
	EC_Field	486	543	564	630	633	496	561	793	563	513	550	471
	Water Depth, m	1.72	1.88	2.02	2.11	2.11	1.81	1.26	0.87	0.86	0.77	0.94	1.21
YXP011D	Comments												
	Depth SWL	38.34	38.25	38.09	38.00	37.93	37.94	38.02	38.16	38.51	38.87	39.10	38.98
	EC_Field	657	677	630	726	645	670	711	3,370	2,030	997	877	782
	Water Depth, m	7.66	7.75	7.91	8.00	8.07	8.06	7.98	7.84	7.49	7.13	6.90	7.02
YXP011S	Comments	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
	Depth SWL	-	-	-	-	-	-	-	-	-	-	-	-
	EC_Field	-	-	-	-	-	-	-	-	-	-	-	-
	Water Depth, m	-	-	-	-	-	-	-	-	-	-	-	-
YXP013D	Comments	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m
	Depth SWL	-	-	-	-	-	-	-	-	-	-	-	-
	EC_Field	-	-	-	-	-	-	-	-	-	-	-	-
	Water Depth, m	-	-	-	-	-	-	-	-	-	-	-	-
YXP013S	Comments	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
	Depth SWL	-	-	-	-	-	-	-	-	-	-	-	-
	EC_Field	-	-	-	-	-	-	-	-	-	-	-	-
	Water Depth, m	-	-	-	-	-	-	-	-	-	-	-	-

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 8 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; EC, SWL; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YXP014	Comments												
	Depth SWL	45.05	45.01	44.92	44.89	44.83	44.71	44.71	44.68	44.89	45.19	45.41	45.57
	EC_Field	309	333	328	334	358	319	342	380	322	298	320	310
	Water Depth, m	17.25	17.29	17.38	17.41	17.47	17.59	17.59	17.62	17.41	17.11	16.89	16.73
YXP015	Comments	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
	Depth SWL	-	-	-	-	-	-	-	-	-	-	-	-
	EC_Field	-	-	-	-	-	-	-	-	-	-	-	-
	Water Depth, m	-	-	-	-	-	-	-	-	-	-	-	-
YXP016	Comments	root blocked at 8.6m	root blocked at 8.6m	root blocked at 8.6m	root blocked at 8.6m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m	root blocked at 8.52m
	Depth SWL	-	-	-	-	-	-	-	-	-	-	-	-
	EC_Field	-	-	-	-	-	-	-	-	-	-	-	-
	Water Depth, m	-	-	-	-	-	-	-	-	-	-	-	-
YXP017M	Comments	-	-	-	-	-	-	-	-	-	-	-	-
	Depth SWL	44.22	44.04	43.84	43.76	43.71	43.59	43.75	44.15	44.70	45.03	45.09	45.10
	EC_Field	489	721	776	825	835	794	867	853	312	218	241	258
	Water Depth, m	6.68	6.86	7.06	7.14	7.19	7.31	7.15	6.75	6.20	5.87	5.81	5.80
YXP017S	Comments	not enough to sample	dry	dry	dry	dry	dry	dry	ran dry				
	Depth SWL	45.51	-	-	-	-	-	-	46.13	47.26	47.61	47.51	47.28
	EC_Field	-	-	-	-	-	-	-	658	369	255	294	306
	Water Depth, m	5.39	-	-	-	-	-	-	4.77	3.64	3.29	3.39	3.62

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 8 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; EC, SWL; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
YXP018M	Comments			ran dry	ran dry	ran dry	ran dry	ran dry		ran dry	ran dry	ran dry	
	Depth SWL	43.12	42.85	42.60	42.51	42.47	42.31	42.93	44.18	44.37	44.22	44.33	44.01
	EC_Field	758	781	724	695	730	652	744	831	828	838	932	904
	Water Depth, m	2.08	2.35	2.60	2.69	2.73	2.89	2.27	1.02	0.83	0.98	0.87	1.19
YXP018S	Comments			ran dry. Cloudy	ran dry, murky	ran dry, murky	ran dry. Murky	ran dry. Murky					
	Depth SWL	43.13	42.83	42.65	42.53	42.40	42.37	42.91	44.23	44.34	44.19	44.28	43.93
	EC_Field	9,960	9,720	8,130	8,740	7,740	6,860	5,590	6,880	6,600	6,800	4,450	4,300
	Water Depth, m	2.07	2.37	2.55	2.67	2.80	2.83	2.29	0.97	0.86	1.01	0.92	1.27
YXP021	Comments												
	Depth SWL	45.54	45.45	45.35	45.29	45.20	45.08	45.16	45.67	46.06	46.20	46.14	46.07
	EC_Field	603	629	601	679	610	553	594	605	592	581	580	558
	Water Depth, m	4.96	5.05	5.15	5.21	5.30	5.42	5.34	4.83	4.44	4.30	4.36	4.43
YXP022	Comments						Inaccessible. Too boggy	Inaccessible. Too boggy					
	Depth SWL	39.58	39.43	39.27	39.20	39.06	-	-	40.14	40.41	40.53	40.52	40.31
	EC_Field	589	654	635	675	733	-	-	697	681	643	664	698
	Water Depth, m	4.92	5.07	5.23	5.30	5.44	-	-	4.36	4.09	3.97	3.98	4.19
YXP023	Comments												
	Depth SWL	38.77	38.64	38.51	38.40	38.34	38.39	38.65	39.20	39.52	39.70	39.72	39.56
	EC_Field	354	365	354	371	375	366	374	385	388	374	355	363
	Water Depth, m	4.53	4.66	4.79	4.90	4.96	4.91	4.65	4.10	3.78	3.60	3.58	3.74
YXP024	Comments												
	Depth SWL	37.99	37.86	37.72	37.60	37.56	37.70	38.03	38.54	38.73	38.82	38.83	38.68

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.											
		[Table 8 Groundwater monitoring table. YXP004, YXP005, YXP007, YXP008, YXP010, YXP011, YXP013, YXP014, YXP015, YXP016, YXP017, YXP018, YXP021, YXP022, YXP023, YXP025, YXP026, YXP027, YXP028, YXP029; EC, SWL; Spot sample; Monthly.											
MONITORING POINT	ANALYTE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	EC_Field	881	896	833	843	877	943	928	673	572	513	531	554
	Water Depth, m	4.53	4.66	4.80	4.90	4.94	4.80	4.47	3.96	3.77	3.68	3.67	3.82
YXP025	Comments												
	Depth SWL	37.14	37.03	36.92	36.85	36.86	36.97	37.31	37.63	37.73	37.78	37.63	37.18
	EC_Field	569	581	543	564	570	581	573	580	593	593	580	571
	Water Depth, m	5.53	5.64	5.75	5.82	5.81	5.70	5.36	5.04	4.94	4.89	5.04	5.49
	Comments												
YXP026	Depth SWL	38.71	38.59	38.46	38.36	38.30	38.37	38.52	39.18	39.47	39.73	39.68	39.50
	EC_Field	475	487	468	478	466	482	527	510	495	485	470	464
	Water Depth, m	2.28	2.40	2.53	2.63	2.69	2.62	2.47	1.81	1.52	1.26	1.31	1.49
	Comments												
YXP027	Comments						inaccessible. Too boggy	inaccessible. too boggy	inaccessible. Too boggy	inaccessible. Too boggy	inaccessible. Too boggy		
	Depth SWL	29.30	29.11	28.83	28.69	28.73	-	-	-	-	-	30.56	30.06
	EC_Field	535	552	536	554	571	-	-	-	-	-	558	548
	Water Depth, m	8.59	8.78	9.06	9.20	9.16	-	-	-	-	-	7.33	7.83
YXP028	Comments												
	Depth SWL	39.64	39.51	39.35	39.17	39.07	39.10	39.37	40.27	40.68	40.95	40.76	40.46
	EC_Field	591	618	585	601	596	600	604	618	610	605	597	584
	Water Depth, m	8.01	8.14	8.30	8.43	8.53	8.50	8.23	7.33	6.92	6.65	6.84	7.14
YXP029	Comments												
	Depth SWL	40.13	40.03	39.88	39.79	39.68	39.68	39.77	40.17	40.85	41.33	41.30	40.96
	EC_Field	557	580	564	588	579	585	587	605	573	551	520	526
	Water Depth, m	13.23	13.33	13.48	13.61	13.72	13.72	13.63	13.23	12.55	12.07	12.10	12.44

**Table 9 - Quarterly Monitoring of Ambient Groundwater**

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.			
		[Table 9 Groundwater monitoring table. YXP004, YXP005, YXP011, YXP013, YXP023, YXP024, YXP025, YXP026, YXP027, YXP028, YXP029; TTA; TA; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; Quarterly].			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YXP004	Acidity	51.00	26.00	-	35.00
	Alkalinity	26.00	36.00	-	20.00
	Ca	0.57	0.59	-	0.73
	Cl	49.00	42.00	-	49.10
	CO3	<1	<1	-	<1
	Comments	-	-	inaccessible. too boggy	-
	HCO3	26.00	36.00	-	20.00
	K	0.90	0.97	-	1.30
	Mg	2.70	2.90	-	3.50
	Na	29.00	27.00	-	32.00
	NO3_N	<0.11	<0.11	-	0.20
	SO4	22.80	19.00	-	18.30
YXP005	Acidity	35.00	45.00	-	54.00
	Alkalinity	22.00	38.00	-	15.00
	Ca	0.88	0.89	-	1.30
	Cl	80.50	63.00	-	92.20
	CO3	<1	<1	-	<1
	Comments			inaccessible. Too boggy	
	HCO3	22.00	38.00	-	15.00
	K	2.60	3.50	-	4.20
	Mg	5.30	5.40	-	8.60
	Na	37.00	34.00	-	42.00
	NO3_N	0.52	0.45	-	0.43
	SO4	11.90	9.70	-	11.50
YXP011D	Acidity	73.00	105.00	89.00	96.00
	Alkalinity	11.00	26.00	21.00	17.00
	Ca	2.00	2.00	16.00	2.20
	Cl	205.00	178.00	1,040.00	235.00
	CO3	<1	<1	<1	<1
	HCO3	11.00	26.00	21.00	17.00
	K	1.40	1.60	4.50	1.80
	Mg	12.00	13.00	100.00	17.00
	Na	87.00	97.00	530.00	110.00
	NO3_N	<0.11	<0.11	<0.11	<0.11
	SO4	23.40	17.30	81.90	20.40

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table. [Table 9 Groundwater monitoring table. YXP004, YXP005, YXP011, YXP013, YXP023, YXP024, YXP025, YXP026, YXP027, YXP028, YXP029; TTA; TA; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; Quarterly].			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YXP011S	Acidity	-	-	-	-
	Alkalinity	-	-	-	-
	Ca	-	-	-	-
	Cl	-	-	-	-
	CO3	-	-	-	-
	Comments	dry	dry	dry	dry
	HCO3	-	-	-	-
	K	-	-	-	-
	Mg	-	-	-	-
	Na	-	-	-	-
	NO3_N	-	-	-	-
SO4	-	-	-	-	
YXP013D	Acidity	-	-	-	-
	Alkalinity	-	-	-	-
	Ca	-	-	-	-
	Cl	-	-	-	-
	CO3	-	-	-	-
	Comments	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m	root blocked at 10.25m
	HCO3	-	-	-	-
	K	-	-	-	-
	Mg	-	-	-	-
	Na	-	-	-	-
	NO3_N	-	-	-	-
SO4	-	-	-	-	
YXP013S	Acidity	-	-	-	-
	Alkalinity	-	-	-	-
	Ca	-	-	-	-
	Cl	-	-	-	-
	CO3	-	-	-	-
	Comments	dry	dry	dry	dry
	HCO3	-	-	-	-
	K	-	-	-	-
	Mg	-	-	-	-
	Na	-	-	-	-
	NO3_N	-	-	-	-
SO4	-	-	-	-	

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table. [Table 9 Groundwater monitoring table. YXP004, YXP005, YXP011, YXP013, YXP023, YXP024, YXP025, YXP026, YXP027, YXP028, YXP029; TTA; TA; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; Quarterly].			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YXP023	Acidity	47.0	45.0	67.0	37.0
	Alkalinity	27.0	38.0	33.0	26.0
	Ca	2.3	2.2	2.4	2.4
	Cl	90.0	91.1	94.8	90.8
	CO3	<1	<1	<1	<1
	HCO3	27.0	38.0	33.0	26.0
	K	3.4	3.4	3.0	3.4
	Mg	6.4	6.1	6.4	6.6
	Na	44.0	44.0	50.0	46.0
	NO3_N	0.3	0.3	0.3	0.3
	SO4	5.6	5.2	4.6	5.0
YXP024	Acidity	28.0	36.0	37.0	23.0
	Alkalinity	80.0	71.0	66.0	73.0
	Ca	59.0	64.0	39.0	31.0
	Cl	151.0	146.0	106.0	82.7
	CO3	<1	<1	<1	<1
	HCO3	80.0	71.0	66.0	73.0
	K	3.5	3.8	2.3	2.4
	Mg	22.0	24.0	17.0	13.0
	Na	82.0	90.0	62.0	48.0
	NO3_N	0.6	0.6	0.8	1.3
	SO4	150.0	150.0	88.2	66.3
YXP025	Acidity	36.00	37.00	36.00	47.00
	Alkalinity	12.00	28.00	26.00	4.90
	Ca	1.10	1.20	1.10	1.20
	Cl	139.00	143.00	135.00	140.00
	CO3	<1	<1	<1	<1
	HCO3	12.00	28.00	26.00	4.90
	K	3.50	3.90	3.10	3.90
	Mg	12.00	14.00	13.00	13.00
	Na	74.00	81.00	74.00	74.00
	NO3_N	0.52	0.52	0.38	0.45
	SO4	31.70	32.80	35.40	37.70
YXP026	Acidity	46.00	41.00	81.00	61.00
	Alkalinity	34.00	51.00	36.00	32.00
	Ca	5.90	5.40	5.70	5.40
	Cl	120.00	116.00	126.00	117.00
	CO3	<1	<1	<1	<1
	HCO3	34.00	51.00	36.00	32.00
	K	2.90	2.80	2.60	3.10

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table. [Table 9 Groundwater monitoring table. YXP004, YXP005, YXP011, YXP013, YXP023, YXP024, YXP025, YXP026, YXP027, YXP028, YXP029; TTA; TA; Major ions: bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, sulfate (mg/L); Spot sample; Quarterly].			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
	Mg	7.80	7.20	8.00	8.10
	Na	64.00	61.00	67.00	66.00
	NO3_N	0.84	0.93	0.63	1.13
	SO4	6.10	6.10	5.80	5.90
YXP027	Acidity	35.00	49.00	-	53.00
	Alkalinity	18.00	30.00	-	11.00
	Ca	3.20	3.80	-	3.70
	Cl	112.00	97.40	-	93.00
	CO3	<1	<1	-	<1
	HCO3	18.00	30.00	-	11.00
	K	3.50	3.90	-	4.20
	Mg	20.00	23.00	-	22.00
	Na	61.00	65.00	-	54.00
	NO3_N	0.41	0.36	-	0.36
SO4	97.60	95.20	-	99.00	
YXP028	Acidity	58.00	44.00	99.00	47.00
	Alkalinity	29.00	46.00	37.00	32.00
	Ca	3.90	3.70	3.60	3.90
	Cl	187.00	163.00	161.00	160.00
	CO3	<1	<1	<1	<1
	HCO3	29.00	46.00	37.00	32.00
	K	5.10	5.10	4.40	5.10
	Mg	10.00	9.80	9.30	10.00
	Na	84.00	81.00	77.00	81.00
	NO3_N	0.14	0.14	0.14	0.18
SO4	5.70	4.60	4.20	4.30	
YXP029	Acidity	47.00	68.00	87.00	69.00
	Alkalinity	10.00	35.00	15.00	13.00
	Ca	1.10	1.10	1.10	0.95
	Cl	175.00	158.00	152.00	139.00
	CO3	<1	<1	<1	<1
	HCO3	10.00	35.00	15.00	13.00
	K	1.90	2.00	1.90	1.90
	Mg	9.90	9.90	9.40	9.50
	Na	80.00	79.00	75.00	72.00
	NO3_N	0.18	0.11	0.14	0.23
SO4	19.10	15.90	14.30	12.70	

**Table 10 - 2025 Annual Monitoring of Ambient Groundwater**

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient groundwater at the locations and for the parameters listed in Table 7, in the corresponding units, over the averaging period and at the frequency set out in that table.																				
		[Table 10 Groundwater monitoring table. YXP004, YXP005, YXP011, YXP013, YXP023, YXP024, YXP025, YXP026, YXP027, YXP028, YXP029; Metals and metalloids: aluminium, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (total), cobalt, copper, iron (total), lead, manganese, mercury (total), molybdenum, nickel, selenium, silver, uranium, vanadium, zinc (mg/L); Spot sample; Annually].																				
MONITORING POINT	Comments	Ag	Al	As	B	Ba	Be	Cd	Co	Cr Total	Cu	Fe Total	Hg Total	Mn	Mo	Ni	Pb	Sb	Se	U	V	Zn
YXP004		<0.001	<0.015	<0.003	0.012	0.006	<0.0005	<0.0001	<0.001	<0.0001	<0.001	0.043	<0.00005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.001	0.002
YXP005		<0.001	<0.015	<0.003	0.012	0.037	<0.0005	<0.0001	<0.001	0.001	<0.001	0.143	<0.00005	0.005	<0.001	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.001	0.003
YXP011D		<0.001	0.037	<0.003	<0.001	0.022	<0.0005	<0.0001	<0.001	0.003	0.005	1.108	0.00001	<0.001	<0.001	<0.0003	<0.001	<0.001	<0.0015	<0.001	<0.001	0.005
YXP011S	Dry all year - No sample taken																					
YXP013D	Dry all year. Root blocked at 10.78m																					
YXP013S	Dry all year - No sample taken																					
YXP023		<0.001	<0.015	<0.003	0.039	0.047	<0.0005	<0.0001	<0.001	0.003	0.001	<0.01	<0.00005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.001	0.002
YXP024		<0.001	<0.015	<0.003	0.013	0.020	<0.0005	<0.0001	<0.001	0.001	<0.001	<0.002	<0.00005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.001	<0.0005
YXP025		<0.001	0.052	<0.003	0.033	0.082	<0.0005	<0.0001	0.001	<0.0001	0.005	<0.01	<0.00005	<0.001	<0.001	0.002	0.001	<0.001	<0.0015	<0.001	<0.001	0.005
YXP026		<0.001	<0.015	<0.003	0.022	0.255	<0.0005	<0.0001	0.004	0.000	0.001	0.034	<0.00005	0.006	<0.001	0.004	<0.001	<0.001	<0.0015	<0.001	<0.001	0.010
YXP027		<0.001	0.035	<0.003	<0.02	0.143	<0.0005	<0.0001	<0.001	0.001	0.002	0.022	<0.00005	0.007	<0.001	0.002	<0.001	<0.001	<0.0015	<0.001	<0.001	0.005
YXP028		<0.001	<0.015	<0.003	0.001	0.034	<0.0005	<0.0001	<0.001	0.001	0.002	<0.01	<0.00005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.001	0.001
YXP029		<0.001	0.084	<0.003	<0.02	0.078	<0.0005	<0.0001	0.002	0.001	0.005	0.220	<0.00005	0.077	<0.001	0.002	<0.001	<0.001	<0.0015	<0.001	<0.001	0.008

**Table 11 - 2025 Annual Monitoring of Radionuclides in Groundwater**

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.			
Obligation/Requirement Summary		[Table 11 Groundwater monitoring table. YXP024, YXP025, YXP026, YXP027, YXP028, YXP029; Radium-226, Radium-228 (mBq/L); Spot sample; six-monthly]. *Utilising the Liquid Scintillation Method by ALS Laboratories			
MONITORING POINT	ANALYTE	Q1	Q2	Q3	Q4
YXP024	Comments	-	-	-	-
	Ra-226 (mBq/L)	10	<10	<10	<5
	Ra-228 (mBq/L)	<80	<80	<80	<40
YXP025	Comments	-	-	-	-
	Ra-226 (mBq/L)	90	60	50	20
	Ra-228 (mBq/L)	180	140	160	80
YXP026	Comments	-	-	-	-
	Ra-226 (mBq/L)	60	30	40	20
	Ra-228 (mBq/L)	200	210	240	100
YXP027	Comments	-	-	inaccessible. Too boggy	-
	Ra-226 (mBq/L)	90	90	0	40
	Ra-228 (mBq/L)	140	160	0	100
YXP028	Comments	-	-	-	-
	Ra-226 (mBq/L)	40	30	30	30
	Ra-228 (mBq/L)	100	<80	<80	<40
YXP029	Comments	-	-	-	-
	Ra-226 (mBq/L)	20	10	10	20
	Ra-228 (mBq/L)	<80	<80	<80	<40
YEDSS (Scott's Dam)	Comments	-	-	-	-
	Ra-226 (mBq/L)	<10	<40	<10	<5
	Ra-228 (mBq/L)	<80	<320	<80	<40
YXTTNW (90ft Pit)	Comments	-	-	-	-
	Ra-226 (mBq/L)	10	<10	<10	<10
	Ra-228 (mBq/L)	<80	<80	<80	<80

### 3.5 90 ft Pit Monitoring

#### 3.5.1 90ft Pit Stratification Investigation

*Table 12 - Summary of Section 10, L6161/1988/13 - Surface Water Obligations for 90ft Pit*

10. Ambient Environmental Monitoring
<p><i>The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.</i></p>
<p><b>Note 3:</b> The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.</p>

An investigation was undertaken in 2020, relating to the quality of water and potential for stratification in the Yoganup Extended 90ft Pit void (90ft Pit YXTTNW). The investigation in 2020 has been discussed in previous AERs and provided evidence that minimal stratification is occurring. The full report was provided in the 2020 AER.

Four samples are taken monthly at existing fixed surface water monitoring points illustrated in **Figure 15**, being YXTTSW, YXTTW, YXTTNW and YXTTE. **Table 13** below demonstrates data collected in 2025, with little evidence of significant variations in water quality within the 90ft Pit. Some minor impacts (Fe, Mn) can be seen at YXTTNW, which shows slight variations due to localised activities of backfill within the pit.

Iluka moved to quarterly sampling of YXTTSW, YXTTW, YXTTE, as of Q2, 2022. YXTTNW as 90ft Pit and Scott's Dam will remain as monthly as required under *Section 10, L6161/1988/13*.

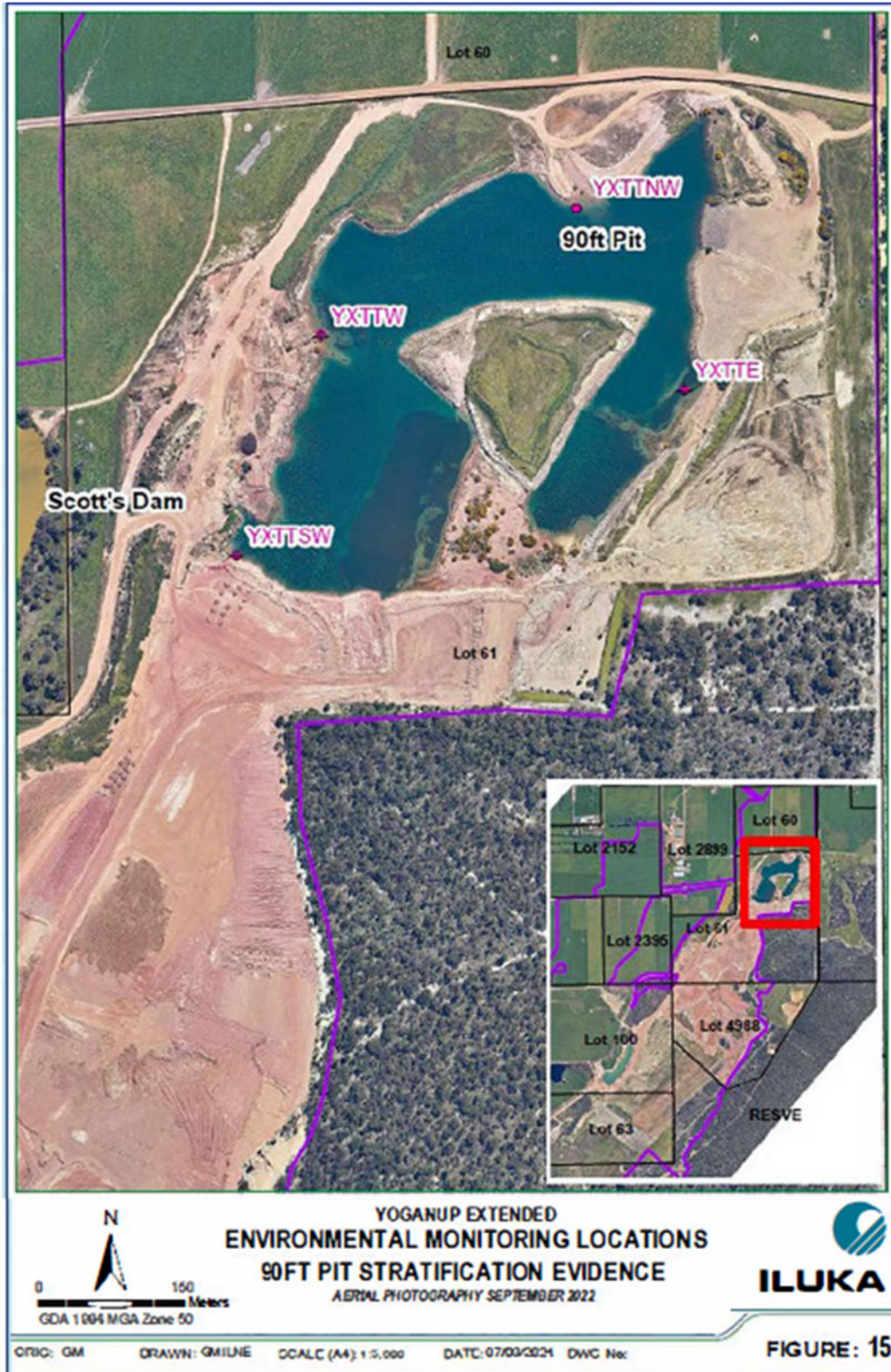


Figure 15 - Environmental Monitoring Locations – 90ft Pit

**Table 13 - Spatial distribution monitoring of water quality data in the 90ft Pit 2025**

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table.																							
		Note 3: The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.																							
MONTH	Monitoring Point	Acidity	Ag	Al	Al_Tot	Alkalinity	As	B	Ba	Be	Ca	Cd	Cl	Co	CO3	Cr	Cr_Tot	Cu	ECfield	ECLab	Fe	Fe_Tot	HCO3	Hg	
JANUARY	YXTTE	21.0		0.010		86.0					70.0		205		0.5				1139	1160	0.060		86.0		
	YXTTNW	21.0		0.010		86.0					69.0		205		0.5				1138	1160	0.050		86.0		
	YXTTSW	19.0		0.010		88.0					69.0		206		0.5				1145	1170	0.025		88.0		
	YXTTW	17.0		0.010		80.0					68.0		206		0.5				1142	1160	0.025		80.0		
	MEAN + 1xSTDEV	21.4		0.010		88.5					69.8		206		0.5				1144	1168	0.058		88.5		
	MEAN - 1xSTDEV	17.6		0.010		81.7				68.2		205		0.5				1139	1159	0.022		81.7			
FEBRUARY	YXTTE	7.4	0.0005	0.005	0.037	109.0	0.0005	0.25	0.10	0.00025	59.0	0.00005	218	0.0005	0.5	0.0005	0.0005	0.0005	1179	1210	0.024	0.071	109.0	0.000025	
	YXTTNW	8.3	0.0005	0.059	0.018	109.0	0.0005	0.25	0.09	0.00025	59.0	0.00005	225	0.0005	0.5	0.0005	0.0005	0.0005	1175	1210	0.017	0.041	109.0	0.000025	
	YXTTSW	6.6	0.0005	0.005	0.016	110.0	0.0005	0.25	0.10	0.00025	80.0	0.00005	208	0.0005	0.5	0.0005	0.0005	0.0005	1222	1220	0.022	0.038	110.0	0.000025	
	YXTTW	6.7	0.0005	0.005	0.018	107.0	0.0005	0.23	0.09	0.00025	70.0	0.00005	202	0.0005	0.5	0.0005	0.0005	0.0005	1182	1220	0.022	0.044	107.0	0.000025	
	MEAN + 1xSTDEV	8.0	0.0005	0.046	0.032	110.0	0.0005	0.26	0.10	0.00025	77.1	0.00005	223	0.0005	0.5	0.0005	0.0005	0.0005	1211	1221	0.024	0.064	110.0	0.000025	
	MEAN - 1xSTDEV	6.5	0.0005	0.001	0.014	107.6	0.0005	0.24	0.09	0.00025	62.2	0.00005	203	0.0005	0.5	0.0005	0.0005	0.0005	1175	1213	0.018	0.035	107.6	0.000025	
MARCH	YXTTE	12.0		0.010		114.0					81.0		207		0.5				1153	1250	0.025		114.0		
	YXTTNW	15.0		0.010		110.0					81.0		203		0.5				1151	1250	0.025		110.0		
	YXTTSW	11.0		0.010		112.0					81.0		206		0.5				1158	1250	0.025		112.0		
	YXTTW	11.0		0.010		115.0					83.0		206		0.5				1163	1250	0.025		115.0		
	MEAN + 1xSTDEV	14.1		0.010		115.0					82.5		207		0.5				1162	1250	0.025		115.0		
	MEAN - 1xSTDEV	10.7		0.010		110.6				80.8		204		0.5				1153	1250	0.025		110.6			
APRIL	YXTTE	20.0		0.010		125.0					73.0		209		0.5				1191	1260	0.110		125.0		
	YXTTNW	17.0		0.010		111.0					73.0		213		0.5				1185	1220	0.025		111.0		
	YXTTSW	11.0		0.010		98.0					74.0		213		0.5				1190	1230	0.025		98.0		
	YXTTW	12.0		0.010		97.0					72.0		221		0.5				1194	1230	0.025		97.0		
	MEAN + 1xSTDEV	19.2		0.010		120.9					73.8		219		0.5				1194	1252	0.089		120.9		
	MEAN - 1xSTDEV	10.9		0.010		95.3				72.3		212		0.5				1186	1219	0.009		95.3			
MAY	YXTTE	38.0	0.0005	0.005	0.005	107.0	0.0005	0.14	0.05	0.00025	13.0	0.00005	210	0.0005	0.5	0.0005	0.0005	0.0005	1151	1270	0.027	0.024	107.0	0.000025	
	YXTTNW	39.0	0.0005	0.005	0.012	111.0	0.0005	0.23	0.10	0.00025	78.0	0.00005	210	0.0005	0.5	0.0005	0.0005	0.0005	1167	1280	0.005	0.030	111.0	0.000025	
	YXTTSW	21.0	0.0005	0.005	0.061	114.0	0.0005	0.21	0.09	0.00025	89.0	0.00005	218	0.0005	0.5	0.0005	0.0005	0.0012	1184	1230	0.022	0.044	114.0	0.000025	
	YXTTW	18.0	0.0005	0.005	0.012	113.0	0.0005	0.23	0.09	0.00025	90.0	0.00005	218	0.0005	0.5	0.0005	0.0005	0.0005	1181	1230	0.013	0.030	113.0	0.000025	
	MEAN + 1xSTDEV	40.0	0.0005	0.005	0.048	114.3	0.0005	0.25	0.10	0.00025	104.2	0.00005	219	0.0005	0.5	0.0005	0.0005	0.0010	1186	1279	0.026	0.040	114.3	0.000025	
	MEAN - 1xSTDEV	17.9	0.0005	0.005	0.008	111.6	0.0005	0.21	0.09	0.00025	79.5	0.00005	212	0.0005	0.5	0.0005	0.0005	0.0004	1171	1226	0.007	0.029	111.6	0.000025	
JUNE	YXTTE	14.0		0.010		91.0					67.0		200		0.5				1068	1170	0.060		91.0		
	YXTTNW	15.0		0.010		98.0					70.0		207		0.5				1107	1210	0.060		98.0		
	YXTTSW	17.0		0.010		96.0					68.0		205		0.5				1094	1190	0.060		96.0		
	YXTTW	12.0		0.010		93.0					71.0		210		0.5				1112	1210	0.070		93.0		
	MEAN + 1xSTDEV	16.6		0.010		97.6					70.8		210		0.5				1115	1214	0.068		97.6		
	MEAN - 1xSTDEV	12.9		0.010		93.9				68.6		206		0.5				1098	1195	0.059		93.9			

MONTH	Monitoring Point	Acidity	Ag	Al	Al_Tot	Alkalinity	As	B	Ba	Be	Ca	Cd	Cl	Co	CO3	Cr	Cr_Tot	Cu	ECfield	ECLab	Fe	Fe_Tot	HCO3	Hg	
JULY	YXTTE	15.0		0.010		103.0					64.0		211		0.5				1154	1170	0.025		103.0		
	YXTTNW	14.0		0.010		102.0					62.0		206		0.5				1141	1180	0.025		102.0		
	YXTTSW	16.0		0.010		101.0					66.0		207		0.5				1143	1180	0.025		101.0		
	YXTTW	15.0		0.010		102.0					66.0		206		0.5				1142	1180	0.025		102.0		
	MEAN + 1xSTDEV	15.8		0.010		102.8					66.4		210		0.5					1151	1183	0.025		102.8	
	MEAN - 1xSTDEV	14.3		0.010		101.2					63.0		205		0.5					1140	1179	0.025		101.2	
AUGUST	YXTTE	13.0	0.0005	0.005	0.041	102.0	0.0005	0.21	0.08	0.00025	75.0	0.00005	180	0.0005	0.5	0.0005	0.0005	0.0005	1058	1110	0.005	0.049	102.0	0.000025	
	YXTTNW	23.0	0.0005	0.005	0.039	104.0	0.0005	0.20	0.08	0.00025	75.0	0.00005	176	0.0005	0.5	0.0005	0.0005	0.0005	1068	1110	0.005	0.038	104.0	0.000025	
	YXTTSW	16.0	0.0005	0.005	0.043	104.0	0.0005	0.21	0.08	0.00025	74.0	0.00005	177	0.0005	0.5	0.0005	0.0005	0.0005	1075	1110	0.005	0.039	104.0	0.000025	
	YXTTW	12.0	0.0005	0.005	0.038	103.0	0.0005	0.21	0.08	0.00025	74.0	0.00005	176	0.0005	0.5	0.0005	0.0005	0.0005	1071	1110	0.005	0.030	103.0	0.000025	
	MEAN + 1xSTDEV	21.0	0.0005	0.005	0.042	104.2	0.0005	0.21	0.08	0.00025	75.1	0.00005	179	0.0005	0.5	0.0005	0.0005	0.0005	1075	1110	0.005	0.047	104.2	0.000025	
	MEAN - 1xSTDEV	13.0	0.0005	0.005	0.038	103.3	0.0005	0.20	0.08	0.00025	73.9	0.00005	176	0.0005	0.5	0.0005	0.0005	0.0005	1069	1110	0.005	0.032	103.3	0.000025	
SEPTEMBER	YXTTE	9.7		0.010		106.0					62.0		171		0.5				1033	1060	0.025		106.0		
	YXTTNW	12.0		0.010		106.0					60.0		171		0.5				1044	1050	0.025		106.0		
	YXTTSW	23.0		0.010		109.0					64.0		173		0.5				1043	1060	0.025		109.0		
	YXTTW	11.0		0.010		98.0					63.0		171		0.5				1031	1060	0.025		98.0		
	MEAN + 1xSTDEV	20.0		0.010		109.5					64.0		173		0.5				1044	1063	0.025		109.5		
	MEAN - 1xSTDEV	10.6		0.010		100.3					60.9		171		0.5				1034	1053	0.025		100.3		
OCTOBER	YXTTE	24.0		0.010		92.0					61.0		170		0.5				997	1010	0.025		92.0		
	YXTTNW	13.0		0.010		90.0					61.0		170		0.5				997	1010	0.025		90.0		
	YXTTSW	16.0		0.010		99.0					61.0		170		0.5				999	1020	0.025		99.0		
	YXTTW	11.0		0.010		92.0					61.0		170		0.5				1004	1020	0.025		92.0		
	MEAN + 1xSTDEV	21.7		0.010		97.2					61.0		170		0.5				1003	1021	0.025		97.2		
	MEAN - 1xSTDEV	10.8		0.010		90.3					61.0		170		0.5				997	1013	0.025		90.3		
NOVEMBER	YXTTE	8.3	0.0005	0.005	0.012	105.0	0.0005	0.19	0.08	0.00025	66.0	0.00005	168	0.0005	0.5	0.0005	0.0005	0.0005	929	1040	0.005	0.023	105.0	0.000025	
	YXTTNW	16.0	0.0005	0.005	0.014	101.0	0.0005	0.18	0.08	0.00025	67.0	0.00005	168	0.0005	0.5	0.0005	0.0005	0.0005	952	1040	0.005	0.024	101.0	0.000025	
	YXTTSW	9.0	0.0005	0.005	0.042	98.0	0.0005	0.18	0.08	0.00025	70.0	0.00005	172	0.0005	0.5	0.0005	0.0005	0.0005	972	1010	0.005	0.033	98.0	0.000025	
	YXTTW	7.7	0.0005	0.005	0.022	99.0	0.0005	0.19	0.08	0.00025	68.0	0.00005	169	0.0005	0.5	0.0005	0.0005	0.0005	973	1010	0.005	0.027	99.0	0.000025	
	MEAN + 1xSTDEV	14.1	0.0005	0.005	0.036	103.8	0.0005	0.19	0.08	0.00025	69.5	0.00005	171	0.0005	0.5	0.0005	0.0005	0.0005	977	1042	0.005	0.031	103.8	0.000025	
	MEAN - 1xSTDEV	7.7	0.0005	0.005	0.016	97.9	0.0005	0.18	0.08	0.00025	67.2	0.00005	168	0.0005	0.5	0.0005	0.0005	0.0005	957	1008	0.005	0.025	97.9	0.000025	
DECEMBER	YXTTE	14.0		0.020		90.0					56.0		171		1.0				948	1030	0.050		90.0		
	YXTTNW	8.5		0.020		96.0					59.0		171		1.0				962	1020	0.050		96.0		
	YXTTSW	8.5		0.020		92.0					60.0		170		1.0				967	1020	0.050		67.0		
	YXTTW	8.9		0.020		94.0					61.0		170		1.0				966	1020	0.050		73.0		
	MEAN + 1xSTDEV	12.7		0.020		95.6					61.2		171		1.0				970	1028	0.050		95.2		
	MEAN - 1xSTDEV	7.6		0.020		92.6					59.3		170		1.0				963	1018	0.050		67.8		

Obligation/Requirement Summary		The licence holder must undertake monitoring of ambient surface water quality at the locations and for the parameters listed in Table 6, in the corresponding units, over the averaging period and at the frequency set out in that table. Note 3: The spatial distribution of sampling locations, and sampling depth at each location within the 90-foot pit, must be sufficient to demonstrate the variation in both a horizontal and vertical direction across the body of water.																								
MONTH	Monitoring Point	K	Mg	Mn	Mn_Tot	Na	Ni	NO2-N	NO3-N	OH	Pb	pHField	pHLab	PO4-P	Ra-226	Ra-228	Sb	Se	SO4	TDS	Thorium	TSS	TURBIDITY	Uranium	Zn	
JANUARY	YXTTE	4.8	20	0.010		97		0.075	0.055	0.5		7.96	8.10	0.16					178	740		0.5	4.99			
	YXTTNW	4.8	20	0.010		98		0.075	0.055	0.5		8.10	8.17	0.16					178	730		2.0	3.88			
	YXTTSW	4.7	20	0.010		93		0.075	0.055	0.5		8.19	8.21	0.16					180	730		2.0	3.36			
	YXTTW	4.7	19	0.010		92		0.075	0.055	0.5		8.13	8.22	0.16					177	740		2.0	3.47			
	MEAN + 1xSTDEV	4.8	20	0.010		98		0.075	0.055	0.5		8.19	8.23	0.16					180	741		2.4	4.67			
MEAN - 1xSTDEV	4.7	19	0.010		92		0.075	0.055	0.5		8.00	8.12	0.16					177	729		0.9	3.18				
FEBRUARY	YXTTE	4.1	17	0.002	0.022	86	0.0005	0.075	0.055	0.5	0.0005	7.78	8.08	0.16				0.0005	0.0005	179	730	0.00025	5.0	14.00	0.002	0.005
	YXTTNW	3.9	18	0.001	0.022	91	0.0005	0.075	0.140	0.5	0.0005	7.50	8.01	0.16	5	40		0.0005	0.0005	189	720	0.00025	4.0	12.300	0.002	0.031
	YXTTSW	6.2	26	0.002	0.018	130	0.0005	0.075	0.055	0.5	0.0005	7.83	8.15	0.16				0.0005	0.0005	170	730	0.00025	3.0	9.47	0.002	0.019
	YXTTW	4.6	22	0.001	0.021	110	0.0005	0.075	0.055	0.5	0.0005	7.82	8.16	0.16				0.0005	0.0005	165	740	0.00025	6.0	11.60	0.002	0.011
	MEAN + 1xSTDEV	5.7	25	0.002	0.023	124	0.0005	0.075	0.119	0.5	0.0005	7.89	8.17	0.16				0.0005	0.0005	186	738	0.00025	5.8	13.72	0.002	0.028
MEAN - 1xSTDEV	3.7	17	0.001	0.019	84	0.0005	0.075	0.034	0.5	0.0005	7.58	8.03	0.16				0.0005	0.0005	165	722	0.00025	3.2	9.97	0.002	0.005	
MARCH	YXTTE	5.4	25	0.010		106		0.075	0.110	0.5		7.75	8.06	0.16					170	730		0.5	5.80			
	YXTTNW	5.4	25	0.010		96		0.075	0.110	0.5		7.57	8.08	0.16					168	730		4.0	4.30			
	YXTTSW	5.4	25	0.010		103		0.075	0.055	0.5		7.73	8.13	0.16					176	700		0.5	8.50			
	YXTTW	5.6	25	0.010		100		0.075	0.055	0.5		7.94	8.16	0.16					170	730		0.5	4.70			
	MEAN + 1xSTDEV	5.6	25	0.010		106		0.075	0.114	0.5		7.90	8.15	0.16					174	738		3.1	7.72			
MEAN - 1xSTDEV	5.4	25	0.010		97		0.075	0.051	0.5		7.60	8.06	0.16					168	708		-0.4	3.93				
APRIL	YXTTE	5.4	21	0.130		109		0.075	0.055	0.5		7.52	8.15	0.16					178	800		2.0	5.10			
	YXTTNW	5.2	22	0.010		113		0.075	0.055	0.5		7.58	8.21	0.16					182	750		0.5	8.21			
	YXTTSW	5.1	22	0.010		113		0.075	0.055	0.5		7.50	8.26	0.16					182	750		0.5	8.53			
	YXTTW	5.1	21	0.010		113		0.075	0.055	0.5		7.79	8.25	0.16					189	760		0.5	6.47			
	MEAN + 1xSTDEV	5.3	22	0.100		114		0.075	0.055	0.5		7.73	8.27	0.16					187	789		1.6	8.68			
MEAN - 1xSTDEV	5.1	21	-0.020		110		0.075	0.055	0.5		7.46	8.17	0.16					178	741		0.1	5.48				
MAY	YXTTE	24.0	73	0.004	0.004	670	0.0011	0.075	0.055	0.5	0.0005	7.45	8.12	0.16				0.0005	0.0018	175	710	0.00025	0.5	8.86	0.001	0.011
	YXTTNW	5.7	24	0.002	0.005	120	0.0005	0.075	0.055	0.5	0.0005	7.68	8.09	0.16	5	40		0.0005	0.0005	177	750	0.00025	2.0	12.20	0.002	0.001
	YXTTSW	6.1	26	0.002	0.004	130	0.0005	0.075	0.055	0.5	0.0005	7.59	8.04	0.16				0.0005	0.0005	181	720	0.00025	5.0	19.20	0.002	0.008
	YXTTW	6.1	26	0.001	0.004	130	0.0005	0.075	0.160	0.5	0.0005	7.81	8.03	0.16				0.0005	0.0005	183	720	0.00025	0.5	9.51	0.002	0.003
	MEAN + 1xSTDEV	19.5	61	0.003	0.005	534	0.0010	0.075	0.134	0.5	0.0005	7.78	8.11	0.16				0.0005	0.0015	183	742	0.00025	4.1	17.17	0.003	0.010
MEAN - 1xSTDEV	1.5	13	0.001	0.004	-9	0.0004	0.075	0.029	0.5	0.0005	7.48	8.03	0.16				0.0005	0.0002	175	708	0.00025	-0.1	7.71	0.001	0.001	
JUNE	YXTTE	5.1	21	0.010		103		0.075	0.055	0.5		7.83	8.00	0.16					164	670		7.0	35.70			
	YXTTNW	5.4	22	0.010		110		0.075	0.160	0.5		8.05	8.13	0.16					172	700		0.5	10.20			
	YXTTSW	5.2	21	0.010		105		0.075	0.055	0.5		8.04	8.14	0.16					170	680		0.9	88.70			
	YXTTW	5.4	22	0.010		110		0.075	0.055	0.5		8.06	8.19	0.16					173	700		2.0	18.40			
	MEAN + 1xSTDEV	5.4	22	0.010		111		0.075	0.134	0.5		8.11	8.20	0.16					174	703		8.7	73.52			
MEAN - 1xSTDEV	5.1	21	0.010		103		0.075	0.029	0.5		7.88	8.03	0.16					166	673		0.6	2.98				

MONTH	Monitoring Point	K	Mg	Mn	Mn_Tot	Na	Ni	NO2-N	NO3-N	OH	Pb	pHField	pHLab	PO4-P	Ra-226	Ra-228	Sb	Se	SO4	TDS	Thorium	TSS	TURBIDITY	Uranium	Zn	
JULY	YXTTE	4.6	20	0.010		91		0.075	0.055	0.5		7.65	7.94	0.16					197	700		3.0	24.30			
	YXTTNW	7.0	18	0.010		84		0.061	0.005	0.5		7.83	7.96	0.13					190	730		6.4	11.17			
	YXTTSW	4.9	21	0.010		99		0.075	0.055	0.5		7.94	8.03	0.16					197	740		3.0	18.90			
	YXTTW	4.8	20	0.010		94		0.075	0.055	0.5		7.91	8.03	0.16					199	720		2.0	15.80			
	MEAN + 1xSTDEV	6.5	21	0.010		98		0.079	0.068	0.5		7.96	8.04	0.17						200	740		5.5	23.06		
	MEAN - 1xSTDEV	4.2	18	0.010		86		0.064	0.018	0.5		7.70	7.94	0.14						192	705		1.7	12.03		
AUGUST	YXTTE	4.7	21	0.001	0.002	100	0.0005	0.003	0.092	0.5	0.0005	8.03	8.04	0.00				0.0005	0.0005	200	730	0.00025	0.5	5.80	0.002	0.002
	YXTTNW	4.3	20	0.008	0.005	93	0.0005	0.030	0.118	0.5	0.0005	7.90	8.01	0.07	5	40		0.0005	0.0005	199	730	0.00025	20.4	8.97	0.002	0.001
	YXTTSW	4.7	21	0.001	0.002	100	0.0005	0.003	0.110	0.5	0.0005	8.01	8.03	0.00				0.0005	0.0005	200	760	0.00025	0.5	10.10	0.002	0.005
	YXTTW	4.7	22	0.001	0.002	100	0.0005	0.003	0.110	0.5	0.0005	8.09	8.10	0.00				0.0005	0.0005	200	790	0.00025	0.5	8.47	0.002	0.003
	MEAN + 1xSTDEV	4.8	22	0.006	0.004	102	0.0005	0.023	0.119	0.5	0.0005	8.09	8.08	0.05				0.0005	0.0005	200	781	0.00025	15.4	10.16	0.002	0.004
	MEAN - 1xSTDEV	4.4	20	-0.001	0.001	94	0.0005	-0.004	0.096	0.5	0.0005	7.93	8.01	-0.01				0.0005	0.0005	199	724	0.00025	-4.5	6.51	0.002	0.001
SEPTEMBER	YXTTE	4.5	19	0.010		93		0.075	0.180	0.5		7.41	7.92	0.16					190	700		0.5	13.30			
	YXTTNW	4.5	19	0.010		91		0.075	0.075	0.5		7.44	7.98	0.16					184	728		0.5	7.67			
	YXTTSW	4.6	19	0.010		93		0.075	0.160	0.5		7.83	8.02	0.16					190	710		0.5	3.56			
	YXTTW	4.6	19	0.010		93		0.075	0.140	0.5		7.75	7.93	0.16					191	710		0.5	8.71			
	MEAN + 1xSTDEV	4.6	19	0.010		93		0.075	0.184	0.5		7.82	8.01	0.16					192	723		0.5	12.31			
	MEAN - 1xSTDEV	4.5	19	0.010		92		0.075	0.093	0.5		7.40	7.92	0.16					186	700		0.5	4.31			
OCTOBER	YXTTE	4.1	17	0.010		84		0.075	0.140	0.5		7.35	8.04	0.16					171	660		4.0	4.42			
	YXTTNW	4.3	19	0.010		92		0.075	0.038	0.5		7.56	8.06	0.16					177	698		0.1	6.21			
	YXTTSW	4.4	19	0.010		90		0.075	0.140	0.5		7.79	8.16	0.16					170	710		4.0	4.70			
	YXTTW	4.1	18	0.010		88		0.075	0.140	0.5		7.74	8.18	0.16					173	700		3.0	3.93			
	MEAN + 1xSTDEV	4.4	19	0.010		92		0.075	0.166	0.5		7.81	8.18	0.16					176	714		4.6	5.79			
	MEAN - 1xSTDEV	4.1	17	0.010		85		0.075	0.063	0.5		7.41	8.04	0.16					170	670		0.9	3.83			
NOVEMBER	YXTTE	5.3	21	0.003	0.005	110	0.0005	0.075	0.250	0.5	0.0005	7.42	7.99	0.16				0.0005	0.0005	199	720	0.00025	4.0	5.24	0.002	0.018
	YXTTNW	4.8	21	0.003	0.012	100	0.0005	0.075	0.055	0.5	0.0005	7.70	8.10	0.16	5	40		0.0005	0.0005	189	726	0.00025	1.2	8.40	0.002	0.001
	YXTTSW	5.1	20	0.002	0.003	110	0.0005	0.075	0.055	0.5	0.0005	7.92	8.09	0.16				0.0005	0.0005	193	720	0.00025	6.0	3.61	0.002	0.005
	YXTTW	5.0	21	0.001	0.004	110	0.0005	0.075	0.055	0.5	0.0005	7.75	8.06	0.16				0.0005	0.0005	192	710	0.00025	1.0	4.46	0.002	0.002
	MEAN + 1xSTDEV	5.3	21	0.003	0.010	113	0.0005	0.075	0.201	0.5	0.0005	7.90	8.11	0.16				0.0005	0.0005	197	726	0.00025	5.4	7.52	0.002	0.014
	MEAN - 1xSTDEV	4.9	20	0.001	0.002	102	0.0005	0.075	0.006	0.5	0.0005	7.49	8.01	0.16				0.0005	0.0005	189	712	0.00025	0.7	3.34	0.002	-0.001
DECEMBER	YXTTE	5.3	22	0.010		108		0.075	0.055	0.5		7.96	7.89	0.16					191	710		2.0	9.08			
	YXTTNW	5.1	21	0.003		106		0.075	0.055	0.5		7.95	8.00	0.16					183	713		0.2	5.78			
	YXTTSW	5.2	22	0.010		106		0.075	0.055	1.0		8.16	7.95	0.16					189	730		0.5	4.49			
	YXTTW	5.1	22	0.010		102		0.075	0.055	1.0		8.17	7.98	0.16					190	730		2.0	7.54			
	MEAN + 1xSTDEV	5.3	22	0.012		108		0.075	0.055	1.0		8.18	8.00	0.16					192	732		2.1	8.73			
	MEAN - 1xSTDEV	5.1	22	0.005		103		0.075	0.055	0.5		7.94	7.91	0.16					184	710		0.2	4.72			

## 4. REHABILITATION AND CLOSURE PLANNING

### 4.1 Rehabilitation

No rehabilitation earthworks were undertaken in 2025. Ongoing monitoring and improvement activities will continue through to site closure. Rehabilitated paddocks are returned to the landowner where possible. 90ft Pit remained active as a production waste disposal facility.

The current rehabilitation programme has returned disturbed land to pasture in accordance with the Mine Closure Plan (excluding the 90ft Pit).



*Plate 2 – Stockpiled material for future capping of 90ft Pit.*

### 4.2 Weed Management

Weed management continued and included planned spray programs and opportunistic hand-removal of weeds [specifically Cottonbush (*Gomphocarpus fruticosus*) and Scotch thistle (*Silybum marianum*)] by Environmental Technicians when conducting site inspections and undertaking monitoring.

### 4.3 Closure Plan

Iluka Resources submitted a Mine Closure Plan (MCP) in March 2019. The plan was prepared in accordance with the “Guidelines for Mining Proposals in Western Australia” document (DMP, 2016). The MCP underwent a partial review, and the next update is not required until 2028.

## **5. FUTURE WORK PROGRAMME**

Future work program for Yoganup Extended includes:

- Monitoring and assessment to determine any remediation requirements.
- Develop strategy to revegetate and manage state forest areas.

## 6. DETAILS OF THE CALCULATION OF FEES PAYABLE

Details of flow (Oct 2023 – Oct, 2024) of discharge through the Licenced Yoganup Extended Discharge Point (YEDP) and the summation of water discharge components for fees payable in respect of this licence, have been tabled below in Table 14.

Table 14 - Calculation of Fees for Environmental Protection Act Licence L6161/1988/13

VALUES CALCULATED USING ½ LOR														0.0025 INDICATES "<" Laboratory Detection Result (calculated to 1/2 ABS LDL)	
Monitoring Point	Sampling Date	Comments	Al (mg/L)	As (mg/L)	Cd (mg/L)	Cr (mg/L)	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	Mn (mg/L)	Ni (mg/L)	Pb (mg/L)	TSS (mg/L)	Zn (mg/L)	
		LABORATORY DETECTION LIMITS	0.01	0.001	0.0002	0.0005	0.001	0.10	0.00005	0.02	0.0010	0.0010	1.0	0.005	
YEDP	8/10/2024	flowing	0.06	0.0025	0.0025	0.0025	0.01	0.39	0.001	0.04	0.0025	0.005	5.0	0.0025	
	14/10/2024	flowing	0.07					0.48		0.08			4.0		
	21/10/2024	flowing	0.06					0.47		0.01			2.0		
	29/10/2024	flowing	0.06					0.28		0.06			2.0		
	4/11/2024	Only just a trickle	0.05	0.025	0.005	0.005	0.005	0.73	0.000025	0.07	0.010	0.015	4.0	0.01	
	11/11/2024	flowing - small flow	0.01					0.43		0.11			10.0		
	19/11/2024	not discharging. Very little flow	0.01					0.43		0.18			29.0		
	25/11/2024	not discharging. Not dewatering	0.01					0.31		0.13			9.0		
	3/12/2024	not discharging. Not dewatering	0.02	0.0025	0.0025	0.0025	0.0200	0.2	0.001	0.01	0.0025	0.005	2.0	0.0025	
	9/12/2024	not discharging. No flow	0.03					0.3		0.03			9.0		
	16/12/2024	not discharging no flow													
		**** Licence Amendment 28/08/2024 - removed surface water conditions													

FLOW DATA	
2023/2024	Volume (m3)
October	2,779.8
November	736.3
December	146.1
January	No Licence Requirement
February	
March	
April	
May	
June	
July	
August	
September	

TOTALS	
Total m <sup>3</sup>	3,662
L	3,662,210
mg to kg	1,000,000
days	365

ANALYTE	Al	As	Cd	Cr	Cu	Fe	Hg	Mn	Ni	Pb	TSS	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average adjusted for MDL [MDL/2]	0.038	0.01	0.0033	0.0033	0.0117	0.402	0.0007	0.0723	0.005	0.0083	7.6	0.005
mg/yr	139,164	36,622	12,207	12,207	42,726	1,472,208	2,472	264,778	18,311	30,518	27,832,796	18,311
mg/day	381.27	100.33	33.44	33.44	117.06	4,033.45	6.77	725.42	50.17	83.61	76,254.24	50.17
kg/day	0.00038	0.0001	0.000033	0.000033	0.00012	0.004	0.000007	0.00073	0.00005	0.000084	0.0763	0.00005

## **7. OTHER INFORMATION**

### **7.1 Environmental Incidents and Community Complaints**

Iluka Resources Limited operates an electronic incident management system (Cintellate) where environmental, health and safety incidents and hazards are captured, and necessary controls are actions managed. Throughout 2025, no environmental incidents occurred at Yoganup Extended. Five incidents were related to site security and property damage. No community related complaints were received.

## **8. REGULATOR NOTIFICATIONS**

There were no regulator notifications required in 2025.

## 9. APPENDICES

*Appendix 1: Time Series Figures 2007 – 2026*  
Attached

*Appendix 2: All Monitoring Data tables 2007 - 2025*  
Attached

### Appendix 3: Annual Audit Compliance Report



Government of Western Australia  
 Department of Water and Environmental Regulation

#### Annual Audit Compliance Report Form

*Environmental Protection Act 1986, Part V Division 3*

Once completed, please submit this form either via email to [info@dwer.wa.gov.au](mailto:info@dwer.wa.gov.au), or to the below postal address:

Department of Water and Environmental Regulation  
 Locked Bag 10  
 Joondalup DC WA 6919

Section A – Licence details	
Licence number:	L6161/1988/13
Licence file number:	DER2016/000794
Licence holder name:	Iluka Resources Limited
Trading as:	Iluka Resources Limited
ACN:	34 008 675 018
Registered business address:	Level 17,240 St Georges Terrace, Perth WA 6000
Reporting period:	01/01/2025 to 31/12/2025

Section B – Statement of compliance with licence conditions
Did you comply with all of your licence conditions during the reporting period? (please tick the appropriate box)
<input checked="" type="checkbox"/> Yes – please complete: <ul style="list-style-type: none"> <li>• section C;</li> <li>• section D (if required); and</li> <li>• sign the declaration in Section F.</li> </ul>
<input type="checkbox"/> No – please complete: <ul style="list-style-type: none"> <li>• section C;</li> <li>• section D (if required);</li> <li>• section E; and</li> <li>• sign the declaration in Section F.</li> </ul>

Section C – Statement of actual production	
Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.	
Prescribed premises category	Actual production quantity
8	2956t

Section D – Statement of actual Part 2 waste discharge quantity	
Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.	
Prescribed premises category	Actual Part 2 waste discharge quantity

Department of Water and Environmental Regulation

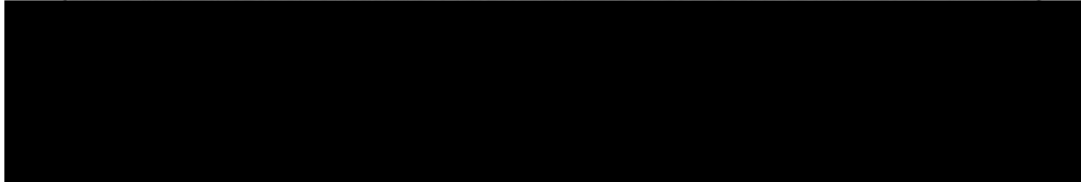
Section E – Details of non-compliance with licence condition	
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.	
Condition no:	Date(s) of non-compliance:
Details of non-compliance:	
<p>What was the actual (or suspected) environmental impact of the non-compliance?</p> <p><b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>	
Cause (or suspected cause) of non-compliance:	
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:	
Was this non-compliance previously reported to DWER?	
<input type="checkbox"/> Yes, and	
<input type="checkbox"/> Reported to DWER verbally	Date: / /
<input type="checkbox"/> Reported to DWER in writing	Date: / /

Department of Water and Environmental Regulation

**Section F – Declaration**

I / We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>1</sup>.

I / We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.



Date:	23/2/2026	Date:	
Seal (if signing under seal):			

<sup>1</sup> It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

<sup>2</sup> AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.