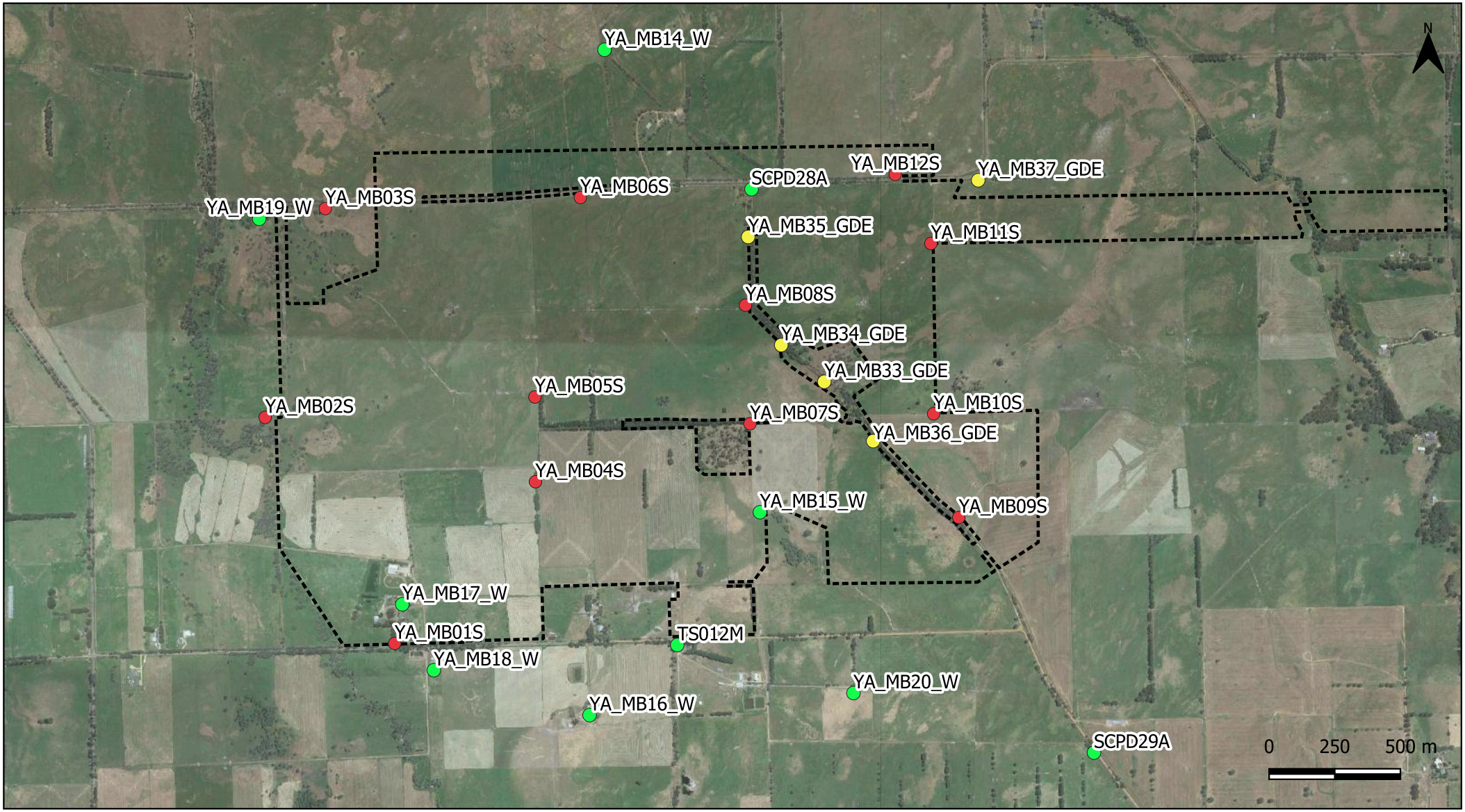
APPENDIX 1

GROUNDWATER MONITORING LOCATIONS



Location Map

Doral Superficial Monitoring Bores

Doral GDE Superficial Monitoring Bores

Other Users Superficial Monitoring Bores

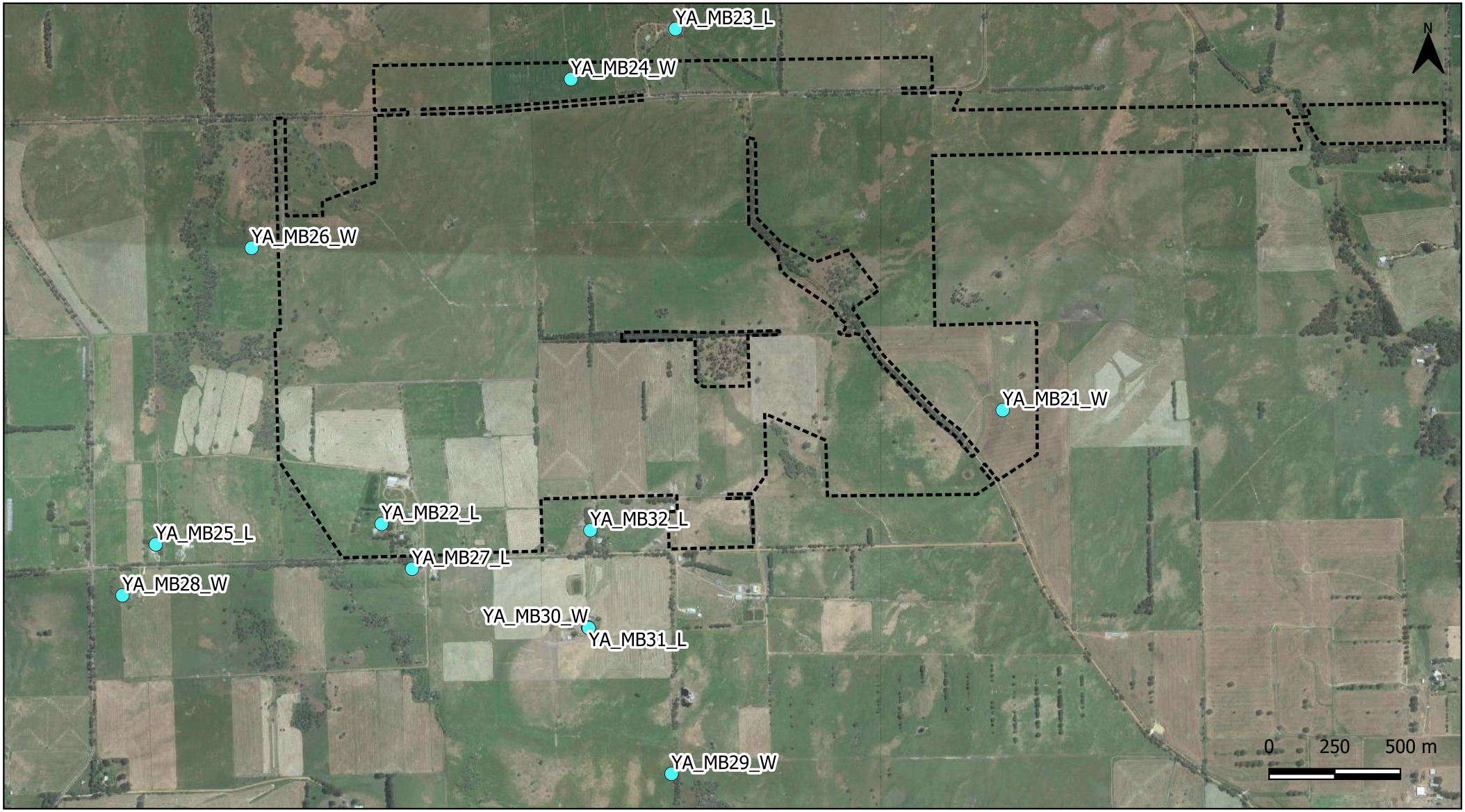
Potenital Disturbance Boundary

AQ2

Figure 7:

LOCATION OF SUPERFICIAL AQUIFER GROUNDWATER MONITORING BORES

AUTHOR: BDK	REPORT No: 023	Notes and Data Sources:
DRAWN: BDK	JOB No: 136	
DATE: 3/9/2021	Coordinates: MGA94 Zone 50	



Location Map

Potenital Disturbance Boundary

Leederville Baseline Monitoring Bores

AUTHOR: BDK

DRAWN: BDK

DATE: 3/9/2021

REPORT No: 023

JOB No: 136

Coordinates: MGA94 Zone 50

Notes and Data Sources:

AQ2

Figure 8:

LOCATION OF LEEDERVILLE AQUIFER GROUNDWATER MONITORING BORES

APPENDIX 2

LIME PRODUCT SPECIFICATION SHEET

Optima LIME
Better Yields – Faster

Ph: (08) 9241 1155 Fax: (08) 9244 2071

PO Box 1544, Osborne Park WA 6916
43 Hector Street, Osborne Park WA 6017

Email: info@optimalime.com.au
Web: www.optimalime.com.au

Lime Product Specification Sheet

Date: *December 2022*

Product: *Lime Sand*

Product Source: *Boranup, Western Australia*

Availability: *Year Round*

SPECIFIC PRODUCT INFORMATION			
PIT NAME	Neil's Pit	**DATE OF ANALYSIS**	1st December 2022
LOCATION	Caves Road Boranup WA	**LABORATORY #**	22S-395_1_NV 22S-395_1_LI
PRODUCT DESCRIPTION	Lime Sand	**PRODUCT SCREENED**	As Required
WEIGH SYSTEM	Loadrite Loader Scales*	**SCREEN SIZE (MM)**	10mm

**we use an accredited weighing system verified by the department of consumer protection*

INDEPENDENT LABORATORY DATA (Australian Standard: *AS1289.3.6.1)*			
SIEVE TYPE	**PARTICLE DIAMETER**	**% OF PARTICLES**	**NEUTRALISING VALUE**
Wash Sieve	+1.00mm	0.3	N/A
Wash Sieve	0.5mm-1.00mm	10.9	69.2
Wash Sieve	0.25mm-0.50mm	48.2	86.6
Wash Sieve	0.15mm-0.25mm	32.0	92.0
Wash Sieve	0.075mm-0.15mm	6.9	89.0
Wash Sieve	<0.075mm	1.7	N/A

BULK NV	**88.1%**

PHYSICAL PROPERTY TABLE	
pH ($CaCl_2$)	**8.5**
Available Lime	**0.10%**

MINERAL TABLE	
Total Calcium %	**35.3**
Total Magnesium %	**1.8**
Total Sodium%	**0.27**

New World Laboratories
62-64 Wittenberg Drive
CANNING VALE WA 6155
WWW.NWLABS.COM.AU

The NV, particle sizing and element % test results have been analysed and reported by New World Laboratories, an independent, NATA accredited laboratory in Australia.

NATA Accredited for compliance with ISO/IEC 17025 - Testing
Site Number 25290
Accreditation Number 21093

APPENDIX 7

GROUNDWATER DEPENDENT ECOSYSTEM PERFORMANCE REPORT

2023 GROUNDWATER DEPENDENT ECOSYSTEMS PERFORMANCE REPORT

YALYALUP MINERAL SANDS PROJECT

Ministerial Statement 1168

AUGUST 2023

Table of Contents

1. SUMMARY

The Yalyalup Mineral Sands Project was approved by the Department of Water and Environmental Regulation (DWER, formerly the Office of the Environmental Protection Authority) on the 17th May 2021 and Ministerial Statement 1168 was issued. Ground disturbing activities commenced 15th November 2021 and active dewatering commenced 28th February 2022.

As per Condition 10-4, this Groundwater Dependent Ecosystem Performance Report has been developed to demonstrate that no deleterious changes to health of the western ringtail possum has occurred and that condition 10-1 has been met.

The Groundwater Dependent Ecosystem Management Plan (GDEMP) was developed to minimise impacts to the Threatened Ecological Communities along the McGibbon Track, particularly habitat of the western ringtail possum (Pseudocheirus occidentalis). The GDEMP contains monitoring regimes, trigger values, thresholds and actions to mitigate potential impacts caused by mining activities.

This report details:

(1) monitoring results against trigger criteria and threshold criteria to demonstrate that condition 10-1 has been met;

(2) detail whether the groundwater dependent ecosystems (GDE) are showing signs of deleterious health;

(3) detail impacts to known groundwater dependent ecosystems related to western ringtail possum habitat where trigger threshold criteria have been exceeded and provide an analysis of changes to vegetation health, particularly noting deleterious changes to health; and

(4) detail any changes to groundwater pH in proximal locations to groundwater dependent ecosystems.

The summer of 2022/2023 was particularly hot and dry. No rainfall was recorded at Busselton Airport (Station 9603), located approximately 7km west of the McGibbon Track, between 27th November 2022 and 2nd March 2023. Mean maximum monthly temperatures December 2022 – March 2023 were also slightly above the historical average. Groundwater levels at GDE monitoring bores YAMB 33 – 37 stayed above trigger levels from the beginning of the reporting period through to the end of January 2023. The trigger level was reached at YAMB 35 1st February 2023, at YAMB08S 23rd February 2023, and at YAMB 34 21st March 2023. Groundwater levels stayed below the trigger level at these sites throughout the remainder of the reporting period. Dewatering was active in the vicinity of the McGibbon Track at Block 71 15th – 20th February 2023, and at Block 72 1st March – 28th April 2023. A supplementation system has been installed adjacent to the GDE to mitigate potential impacts. Due to supply and contractor staffing issues, the installation of the pumps was delayed. Alternative supplementation methods via the use of watercarts were implemented prior to the first trigger level being exceeded 1st February 2023. The supplementation system was operational from February 2023 however delivering the required volume of water to maintain groundwater levels proved difficult in the summer months. Delivered water has been observed pooling at surface without flooding. Doral continue to work with consulting hydrogeologists (AQ2) to explore alternative delivery methods.

The Water Potential and Visual Health Monitoring at McGibbon Track Report (Appendix 1) demonstrates that there was minimal health impacts caused by the operation during the 2022-2023 reporting period.

2 ENVIRONMENTAL CONDITIONS

2.1 Rainfall

Total rainfall recorded at Busselton Airport during the 2022/2023 reporting period is shown below in Figure 1 and indicates below average rainfall November 2022 through to February 2023 (15.8mm), relative to Busselton Airport historical readings for the same period (52.2mm). Below average rainfall was also recorded May and June 2022.

Above average rainfall was recorded July – October 2022 and March and April 2023.

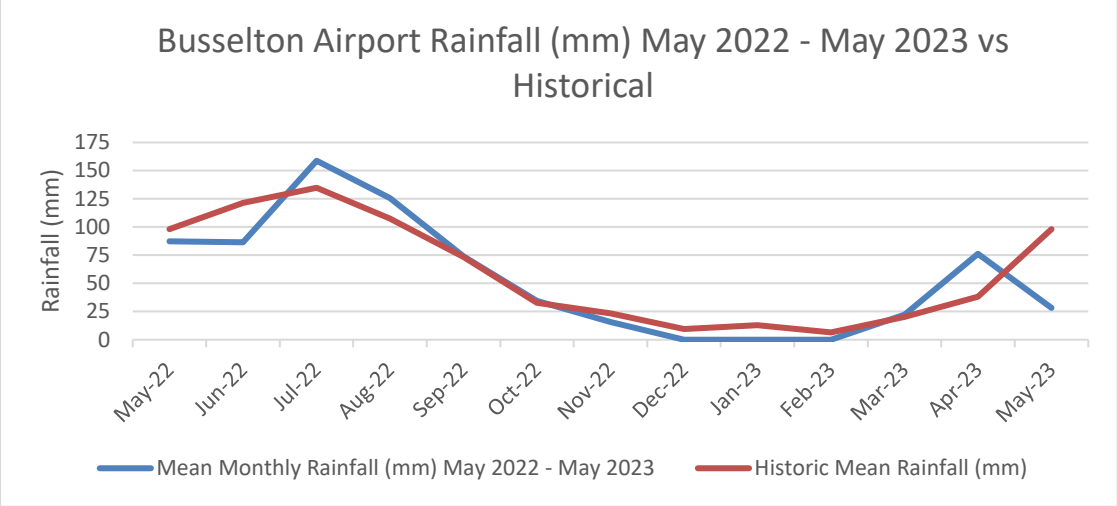


Figure 1 - 2022/2023 Rainfall vs Historical Busselton Airport

2.2 Temperature

Temperatures recorded at Busselton Airport during the 2022/2023 reporting period are shown below in Figure 2. The mean maximum temperatures during the warmest months of the year (December 2022 – March 2023) were above the historical average. The average highest maximum temperatures were similar to historical levels during the same period, higher in February 2023, as well as November 2022, and lower in December 2022 and January and March 2023.

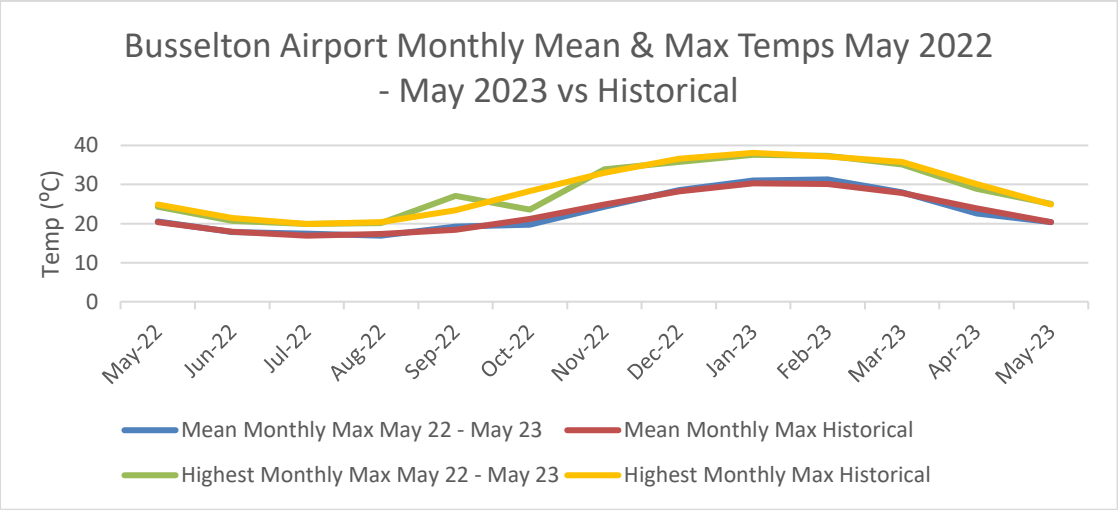


Figure 2 -2022/2023 Monthly Mean and Max Temperatures vs Historical Busselton Airport

3 RESULTS

3.1 Ground Water Levels

Groundwater levels had recovered to a level above the trigger level at YAMB 35 when measured 26th May 2022. Levels had been below the trigger level before this since 28th February 2022. Levels were measured monthly June – November 2022 as active dewatering was not being conducted in the vicinity of the McGibbon Track and levels were above triggers at all monitoring sites. Weekly monitoring of groundwater levels commenced 20th December 2022 to monitor levels closely due to hot and dry conditions and a decline in the level at YAMB 35. Active dewatering was conducted adjacent to YAMB 35 in Blocks 71 and 72 15th February – 28th April 2023. Trigger levels were exceeded at YAMB 35 1st February 2023, at YAMB08S 23rd February 2023, and at YAMB 34 21st March 2023, with levels staying below the trigger at these sites throughout the remainder of the reporting period despite supplementation. Trigger levels were not exceeded at the other monitoring sites. One instance at YAMB 33 24th January 2023 was investigated and determined to be human error or equipment issues, as levels were at least 25cm higher either side of this date. Monitoring bore locations can be found in Appendix 1.

3.1.1 YAMB 33

YAMB33 levels did not fall below the trigger of 2.36m below ground level (mbgl) throughout the reporting period except for one instance 24th January 2023 which a subsequent investigation attributed to human error or equipment issues. See Figure 3.

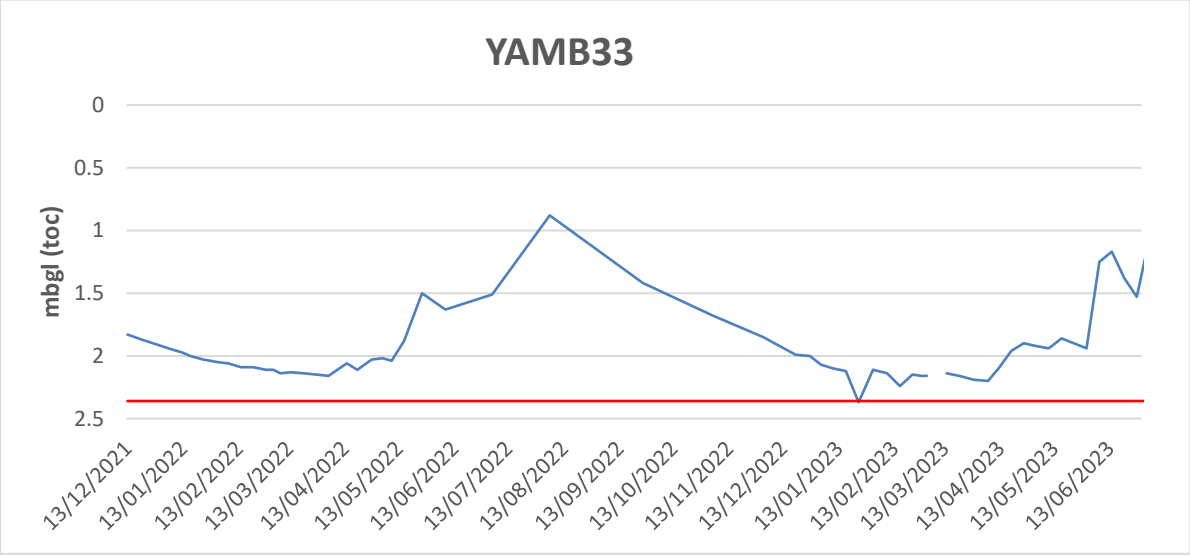


Figure 3 - YAMB33 Groundwater Levels

3.1.2 YAMB 34

YAMB 34 exceeded the trigger level of 3.72mbgl 21st March 2023. Initial decline in the groundwater level was likely due to extreme weather conditions, then continued to decline due to dewatering adjacent to McGibbon Track. Despite supplementation efforts, the delivery of sufficient water to maintain groundwater levels above trigger levels has proven difficult through the summer months. Supplementation continued until seasonal rainfall commenced. See Figure 4.

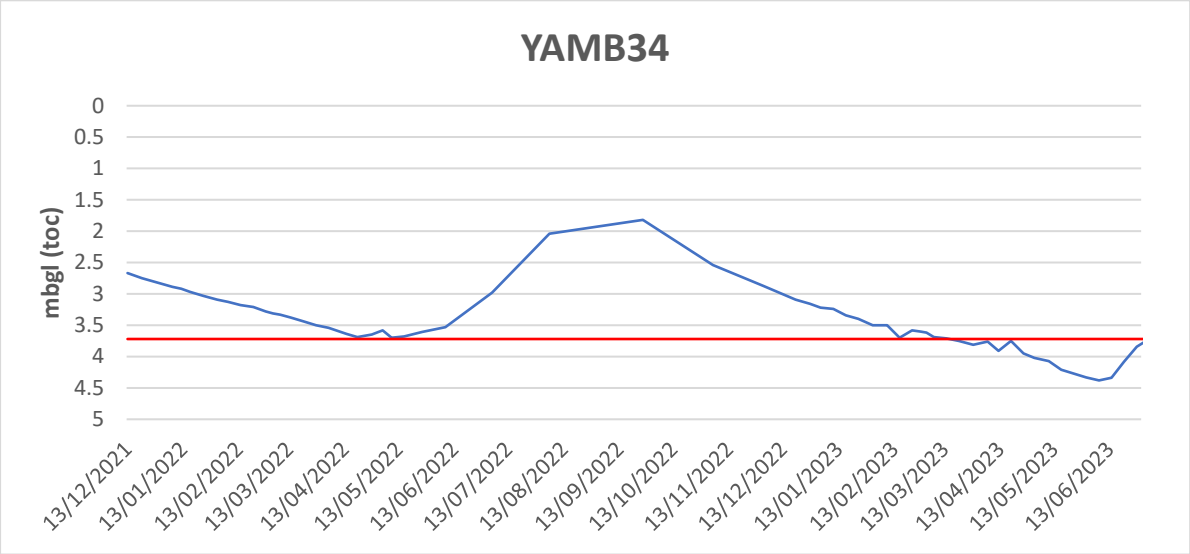


Figure 4 - YAMB 34 Groundwater Levels

3.1.3 YAMB 35

YAMB 35 exceeded the trigger level of 2.38mbgl 1st February 2023. Like YAMB 34, initial decline in the groundwater level was likely due to extreme weather conditions, then continued to decline due to dewatering adjacent to McGibbon Track. Despite supplementation efforts, the delivery of sufficient water to maintain groundwater levels above trigger levels has proven difficult through the summer months. Levels recovered quickly once dewatering ceased in the vicinity of McGibbon Track 28th April 2023. See Figure 5.

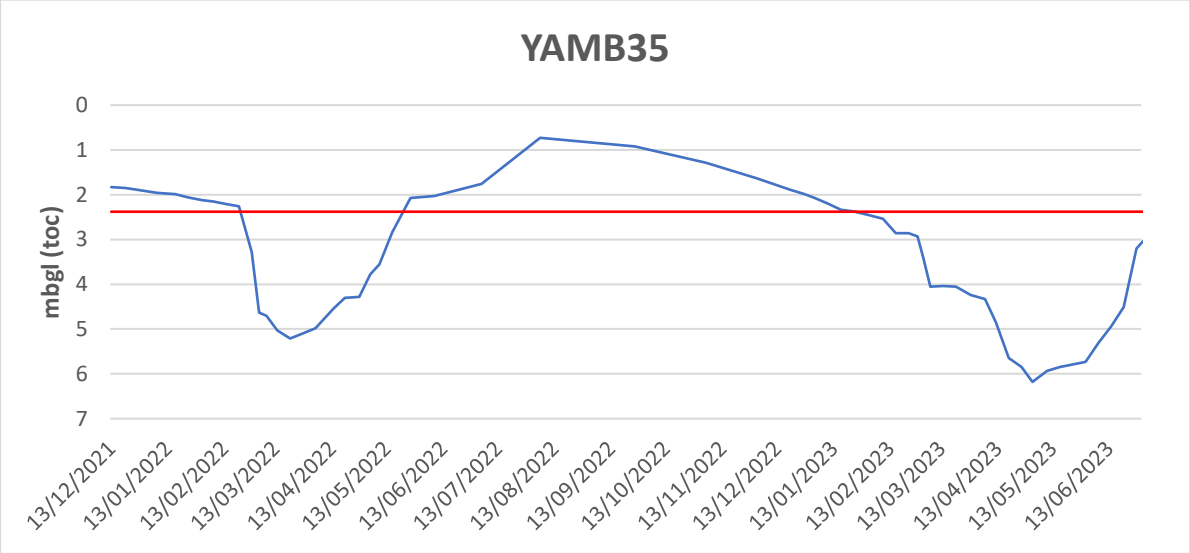


Figure 5 - YAMB 35 Groundwater Levels

3.1.4 YAMB 36

YAMB 36 levels did not fall below the trigger of 2.5mbgl throughout the reporting period. Levels reached 2.49m twice 6th and 19th April 2023. As dewatering was not conducted adjacent to this location, declining groundwater levels could be attributed to extreme weather conditions. See Figure 6.

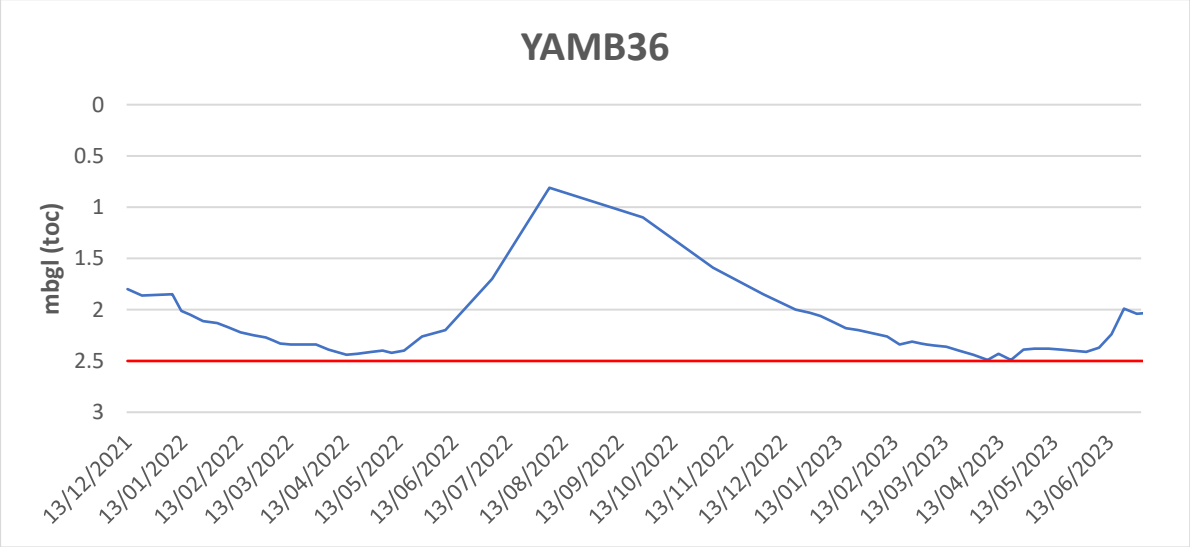


Figure 6 - YAMB 36 Groundwater Levels

3.1.5 YAMB 37

YAMB 37 is a monitoring bore alongside the planted community of Verticordia plumosa on the Princefield Rd reserve. Doral committed to monitoring these individuals as they are listed as endangered by both DBCA and under the EPBC Act. They are not on the McGibbon track so are not located within the supplementation zone. Levels did not reach the trigger level of 1.87mbgl during the reporting period. Dewatering activities were conducted approximately 1km southwest of the monitoring bore. See Figure 7.

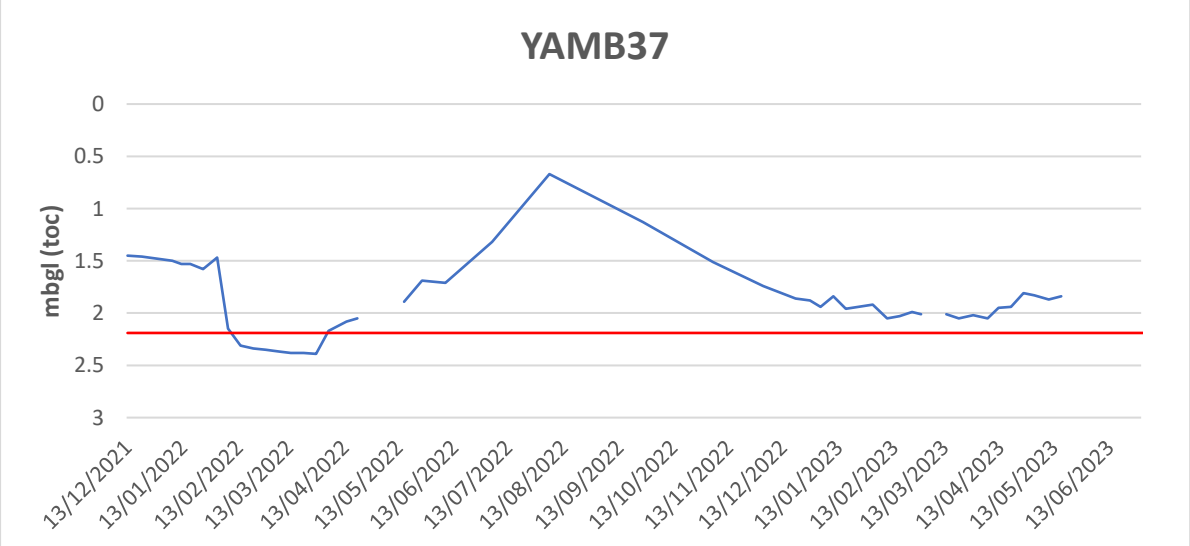


Figure 7 - YAMB 37 Groundwater Levels

3.1.6 YAMB 08S

YAMB 08S exceeded the trigger level of 2.15mbgl 23rd February 2023. Like YAMB 34 and YAMB 35, initial decline in the groundwater level was likely due to extreme weather conditions, then continued to decline due to dewatering adjacent to McGibbon Track. Despite supplementation efforts, the delivery of sufficient water to maintain groundwater levels above trigger levels has proven difficult through the summer months. Levels recovered quickly once dewatering ceased in the vicinity of McGibbon Track 28th April 2023. See Figure 8.

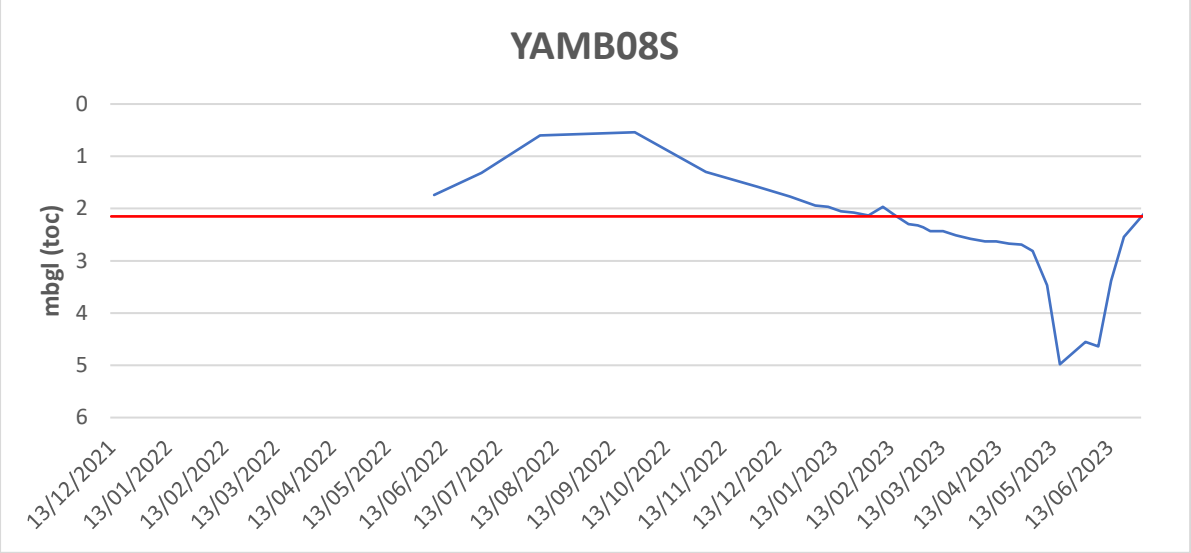


Figure 8 - YAMB 08S Groundwater Levels

3.2 GDE Vegetation Health and Leaf Water Potential

Doral Mineral Sands require background information on the current water status and stress level in the Southern Wet Shrubland ("Wet Shrubland") community and Ironstone Shrubland at McGibbon Track within the Yalyalup mineral sands mine site. Monitoring mid-day water potential in selected shrubs and trees commenced in December 2019 and is continuing. This report presents the data for the period September 2020 to May 2023, during which plant water potential (PWP) was measured and visual health (VH) was assessed.

The species being monitored are listed below: Southern Wet Shrubland species being monitored:

1. Acacia saligna

2. Hakea ceratophylla

3. Banksia littoralis (tree)

Ironstone Shrubland species being monitored:

1. Acacia saligna

2. Calothamnus quadrifidus subsp. teretifolius and

3. Eucalyptus rudis (tree)

Rainfall for the calendar year at the nearby Busselton airport was higher in 2021 (787 mm) than the 25-year average (682mm). There was also a comparatively wet first five months of 20211 (270 mm) compared to the same period in 2020 (103 mm). This greater amount of rainfall resulted in generally higher (less -ve) values in the monitored plants, especially in two Ironstone Shrubland species, Eucalyptus rudis and Calothamnus quadrifidus. Rainfall in May, July, September, and October 2021

was higher than average however rainfall was below average in the first half of 2022 (February, March, April and May). May 2023 was very dry compared to the previous year and the long-term average. There was no rainfall recorded at all at Busselton airport from 27 November 2022 – 3 March 2023.

As expected, the pre-dawn WP scores were higher (less -ve) than the midday monitoring results. Generally, there were no abnormal results over time indicating there is still enough ground water available for the plants. Normally, the plants are more stressed (higher -ve pressure) in the drier, hotter months February, March and April and showing less signs of stress after rainfall.

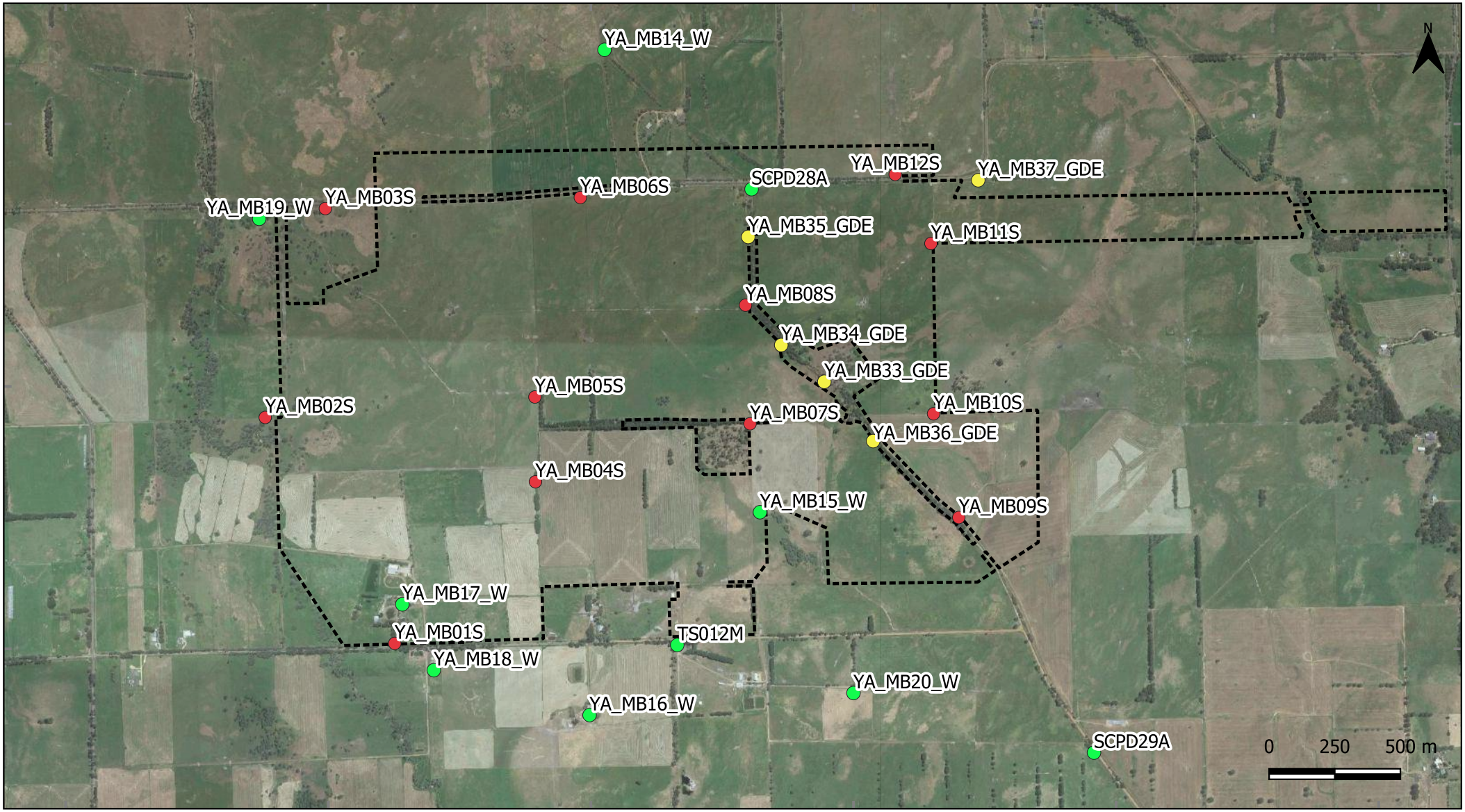
All plants are showing a VH score of 3.5 or above except for two Banksia littoralis, BL02 has died (recorded dead on 22/3/202) and BL03 has a score of 2.5, recorded on 22 March 2023. These plants are at the northern end of McGibbon Track, adjacent the mining. Doral's irrigation system is also set up in this area, so inspection of the plants will be important in October (after the cooler weather and winter rains).

There have been two weeds of significance found along McGibbon Track - Arum Lily and Bridal Creeper. These two weeds are targeted by Doral in the annual weed control program. The rest of the area is mostly covered by kikuyu grass.

Refer to Appendix 3 of the 2023 Compliance Assessment Report (CAR).

APPENDIX 1

WATER MONITORING LOCATIONS



Location Map

Doral Superficial Monitoring Bores

Doral GDE Superficial Monitoring Bores

Other Users Superficial Monitoring Bores

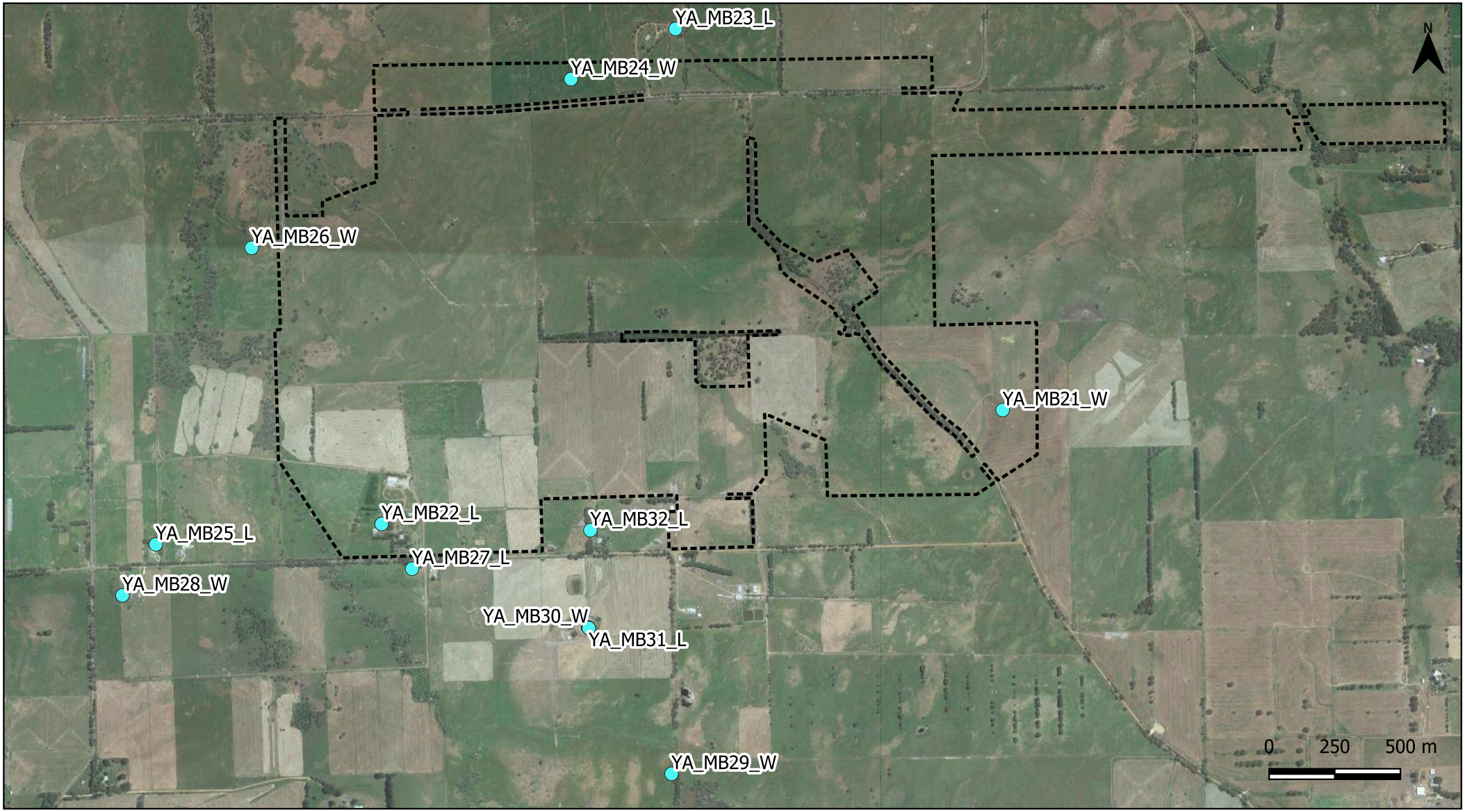
Potenital Disturbance Boundary

AQ2

Figure 7:

LOCATION OF SUPERFICIAL AQUIFER GROUNDWATER MONITORING BORES

AUTHOR: BDK	REPORT No: 023	Notes and Data Sources:
DRAWN: BDK	JOB No: 136	
DATE: 3/9/2021	Coordinates: MGA94 Zone 50	



Location Map

Potenital Disturbance Boundary

Leederville Baseline Monitoring Bores

AUTHOR: BDK

DRAWN: BDK

DATE: 3/9/2021

REPORT No: 023

JOB No: 136

Coordinates: MGA94 Zone 50

Notes and Data Sources:

AQ2

Figure 8:

LOCATION OF LEEDERVILLE AQUIFER GROUNDWATER MONITORING BORES

APPENDIX 8

ABBA RIVER SECTION 18 REPORT BACK REPORT

Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

REPORT TO REGISTRAR OF ABORIGINAL SITES FOR SECTION 18 CONSENT

Section 18 Consent Reference Number: 69-20647

Applicant: Doral Mineral Sands

Purpose/Project: Yalyalup Mineral Sands Project

Parcel(s) of Land: Lot 820

Date of Consent Letter: 12 August 2020

Complete the following table for all sites nominated in the above consent.

Site Number	**Site Name**	**Description of impact to date. For example:** • Fully destroyed • Partially impacted (attach a shape file and detail what has been destroyed and what remains) • Salvaged (when, what, who was present, where re-located, results of any analysis). Note a salvage report is not required. • Results of any required monitoring Attach additional information if required (i.e. photos, maps) and clearly label which site it refers to.	**Proposed future impact** (include estimated date)
17354	Abba River	As per condition 1 of the Section 18 consent, Doral invited two representatives of the South West Boojarah to be present during ground disturbing activities. Wayne Webb and Barry Pell were first invited for a site visit on the 13th September 2021. Wayne Webb was unable to attend last minute due to a family emergency. Barry Pell also attended site on the 12th and 15th October 2021 prior to advising that he had walked the site and saw no need to attend on site on any further days.	
17354	Abba River	Minimal impact - Doral's approach was to undertake flood studies and install a temporary bridge which spanned beyond the river extent so as to not impede flow and did not require disturbing the river beds or banks. Scour protection was installed over the river bank to ensure erosion reduction. The location of the bridge was chosen due to lack of native vegetation, therefore further reducing impact to the river	Nil

Figure 1: Abba River prior to bridge installation

Figure 2: Abba River post bridge installation with rock pitching

Figure 3: 23m of bitument installed either side of bridge